

Monograph on
 α -designs

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PREAMBLE

It gives me a great pleasure to write a few lines about this monograph which is concerned with certain resolvable incomplete block designs, called Alpha (α -) designs. As the brief introduction below shows, such designs have a great utility. Indeed, here, the application has motivated this effort.

In designed experiments the two main sources of variability in the data generated are the *treatments* and the *experimental material*. Variability due to treatments arises because several treatments are tried in the experiment and it is expected that the treatment effects are different. This is a deliberate attempt on the part of the experimenter to generate variability. If all the treatments were expected to be same, then the experimenter would not run the experiment. However, the other major component of variability needs to be explained through the model. This can be explained by way of designing the experiment properly.

It has been observed that in many crop improvement programs conducted in the National Agricultural Research System (NARS), initial varietal trials and advanced varietal trials are generally conducted using a Randomized Complete Block (RCB) design. The analysis of the data generated reveals that the percent coefficient of variation (CV) in a large number of such experiments is high and consequently the precision of treatment comparisons is low. This amounts to saying that the error sum of squares is large compared to the sum of squares attributable to the model. Hence, small treatment differences may not be detected as significant.

Because of the above, in practice, a large number of trials get rejected because of high CV, resulting in a tremendous loss of resources and time. Generally in these experiments the block mean squares are small as compared to error mean squares meaning thereby that the blocking has not been effective in the sense that the blocks have not been formed properly. In field trials, the formation of blocks, size and shape of plots should be preceded by uniformity trials to determine the fertility pattern through a contour map. In most situations, particularly in the plains, the contour maps show the variations in the fertility in patches rather than a uniform pattern. Therefore, there is a need for effective control of the variation in the experimental material through proper blocking.

Incomplete block designs (like balanced incomplete block (BIB) design, partially balanced incomplete block (PBIB) design, cyclic design, etc.) are useful in such situations. However, one may argue that in these designs the demonstration of a varietal effect in the field cannot be done as all the treatments are not appearing in adjacent pieces of land. To overcome this problem, resolvable block designs with smaller block sizes may be used.

Resolvable block designs offer a great deal of flexibility in the sense that, by using them, experiments can be conducted with one replication at a time, with different replications applied at different places or at different points of time. For example, field trials with large number of crop varieties cannot always be laid out in a single location or in a single season. Therefore, it is desired that variation due to location or time periods may also be controlled along with controlling variation within location or within time period. This can be handled by using resolvable block designs. Here, locations or time periods may be taken as replications and the variation within a location or a time period can be taken care of by blocking within the replication.

In an agricultural field experiment, the land may be divided into a number of large areas corresponding to the replications and then each area may be subdivided into incomplete blocks. These designs are also quite useful for varietal trials conducted in the NARS and help in improving the precision of treatment comparisons.

Square Lattice Design and the Rectangular Lattice Design are resolvable PBIB designs. These designs are very useful to the experimenters for conducting their experiments and can be used both in initial and in advanced varietal trials. These designs, however, demand that the number of treatments v satisfy the restriction $v = s^2$ or $v = s(s-1)$, where s is a prime number. A more general class of resolvable incomplete block designs is α -designs. These designs are available for $v = pq$, p and q being positive integers. Thus, α -designs are available whenever the number of treatments is a composite number. Square Lattice and Rectangular Lattice designs are special cases of α -designs.

A big stumbling block to the experimenters in the adoption of these designs is the fact that the layout of these designs is not readily available. The experimenters also feel that the analysis of the data generated from these designs and interpretation of results may be a problem. However, with the advent of statistical software packages, the analysis of data generated from any designed experiment is no longer a problem.

There is, therefore, a need to prepare a catalogue of alpha designs giving the layout of the design so that the experimenters can make use of these important designs in their experiments. These designs are incomplete block designs and their generation is not unique. It is, therefore, important to generate an alpha design that has some optimality property or has high efficiency. The authors have addressed this problem also and have reported designs with high A-efficiency.

The authors do not claim that the designs presented are the most efficient. Indeed it may be possible to generate an α -design with more A-efficiency than a corresponding design included in this monograph. However, the designs reported have relatively high A-efficiency.

The present monograph on α -designs is an attempt by the authors to provide a good catalog of nice α -designs. The authors have provided a ready-made solution to the experimenters for planning and designing their experiments. The designs included in the monograph are, however, restricted to the case where the number of treatments is smaller than 150, the number of replications is smaller than 5, and the block size is smaller than 10. As mentioned before, the designs have high A-efficiency.

The authors have to be congratulated for doing a nice job which is sure to be very helpful to experimenters and practicing statisticians.

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FOREWORD

The Indian Agricultural Statistics Research Institute is a premier Institute in the discipline of Agricultural Statistics and Computer Applications in the country. The Institute has been engaged in conducting research and organizing teaching and training programmes in Agricultural Statistics with special emphasis on Experimental Designs, Sampling Techniques, Statistical Genetics, Crop Forecasting Techniques, Econometrics, Statistical Computing and Computer Applications. For disseminating the research in Agricultural Statistics and Computer Applications to the scientists of the National Agricultural Research System for helping them improve the quality of agricultural research, the Institute has taken a lead in developing Statistical Software Packages for generating designs and analysis of data.

Designing an experiment is an essential component of every scientific investigation in agriculture and allied sciences. It is through the data collected from designed experiments that valid inferences are drawn. The institute has made many significant contributions in the field of experimental designs. In order to make research globally competitive, it is essential that sound statistical methodologies be adopted for the collection and analysis of data.

The Institute has established itself in the world of Statistics so far as research in Experimental Designs is concerned. Many notable contributions have been made in the field of experimental designs at this Institute and a number of research papers have appeared in international statistical journals of repute. As many as 4 textbooks and one handbook on Design of Experiments have been published by the scientists of this Institute. An electronic book on Design and Analysis of Agricultural Experiments has also been developed. The scientists of the Institute have also developed a website 'DESIGN RESOURCES' for the benefit of scientists all over the world (<http://www.iasri.res.in/design>). The main objective of this design resources server is to develop a WEB DESIGN in NARS.

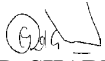
The Institute has also become a veteran in rigorously undertaking the consultancy and advisory services for the agricultural research personnel. The Institute has a vast experience of organizing several training programmes for the scientists of National Agricultural research System (NARS) with a view to improve the experimentation by adopting efficient, cost effective and robust designs and to use sound, sophisticated analytical techniques for the statistical analysis of data.

Encouraged with the adoption of efficient designs and sophisticated analytical techniques, we have thought of bring out monographs on topics of current interest. To make research in agricultural sciences more meaningful using sophisticated statistical methodologies for analyses, user friendly monographs are very useful.

The present monograph on α -designs is a valiant attempt in providing the layout of the resolvable designs to the experimenters and practicing statistician. The α -designs are resolvable block designs and are quite useful for controlling the heterogeneity in the experimental material and simultaneously retaining the demonstration property of the treatment response in agricultural field experiments especially in varietal trials. Seeing the high percentage of the experiments with smaller block mean squares as compared to error mean square and high CV in the National Agricultural Research System. This monograph on α -designs will be quite useful for improving the status of experimentation in National Agricultural Research System.

This monograph will serve as a ready reckoner to the experimenters and practicing statisticians. I take this opportunity to congratulate the authors for doing a wonderful job.

New Delhi
February 17, 2007


(S.D. SHARMA)
Director, IASRI

PREFACE

This monograph on α -designs is an outcome of the various discussions held and advisory services provided to scientists in the National Agricultural Research System. During a workshop of the All India Co-ordinated Research Project on Rapeseed and Mustard; National Research Centre on Rapeseed and Mustard, Bharatpur, held at Pant Nagar, through the presentations and the discussions held, it was realized that α -designs would be very useful for the experiments conducted on Rapeseed and Mustard varietal trials. In fact these designs will be very useful for any varietal trial. α -designs are essentially resolvable designs with each resolvable group a complete replicate. But each replicate comprises of several blocks and randomization of treatments is made within each block in the resolvable group. On the face of it, these designs look like Randomized Complete Block (RCB) designs, but these are not matter-of-factly RCB designs. In RCB design, the randomization of treatments is done within each of the blocks in the replication. A large number of experiments are conducted in this fashion, but the randomization of treatments is not done as per the requirement of the α -designs. However, if the experimenters modify the randomization process of treatments, they can derive a lot of useful information from such experiments and improve the precision of comparisons reducing thereby considerably the coefficient of variation (CV) of the experiment. Discussions on the usefulness of these designs were held during the meeting of the Committee constituted to finalize evaluation of Bt. Cotton entries into AICRP's. As a follow up action scientists from Division of Crop Improvement, Central Institute of Cotton Research, Nagpur, were advised on the designing of four experiments to be conducted with cotton varieties. First two of these experiments are to be conducted to morphologically characterize varieties and hybrids with respect to about 45 morphological characters both qualitative and quantitative and document the database as a part of Distinctness, Uniformity and Stability (DUS) testing.

However, it may not be possible for the experimenters to lay their hands on these α -designs. The construction of these designs is not easy. An experimenter has to get associated with a statistician to get a randomized layout of this design. For the benefit of the experimenters, we got motivated to prepare a catalogue of α -designs for reasonable number of treatments and replications. In this catalogue we have restricted to number of treatments less than or equal to 150, number of replications less than or equal to 5 and the block size less than or equal to 10. For the benefit of experimenters, complete layout of the designs is given. These designs have been generated by using an intelligent computer algorithm. The designs reported are highly efficient. Indeed it is possible to generate a design for given parameters with a better efficiency than that of the design reported. Many designs generated are already known in the literature.

The authors wish to thank all the scientists of NARS with whom we had several useful discussions. It is expected that this catalogue will prove to be of immense value to the experimenters in their experimentation. The authors are also indebted to all the scientists, students and research associates who have helped directly or indirectly in the preparation of this monograph. The authors also wish to thank Dr. SD Sharma, Director, IASRI for providing facilities and encouraging us to prepare this monograph.

Any suggestions for improvement of the presentation of the material are welcome.

-Authors

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α -Designs

1. Introduction

Block designs are useful in one-way elimination of heterogeneity settings. A block design is said to be complete, if it contains every treatment once in each block. A block design is said to be incomplete if it has at least one block that does not contain all the treatments. Most commonly used block designs are randomized complete block (RCB) designs, balanced incomplete block (BIB) designs, partially balanced incomplete block (PBIB) designs, lattice designs, etc. In block designs, the idea is to form blocks in a manner such that experimental units within a block are as homogeneous as possible, so that between block variations can be isolated from the error component. This results into reduction of the error component, which in turn enhances the precision of the comparison of treatment effects.

Another useful concept in the context of incomplete block designs is that of resolvability wherein, the blocks can be grouped such that within each group, every treatment appears exactly once. This concept is due to Bose (1942) who defined it for BIB designs. Resolvable block designs have a lot of practical significance as these designs allow performing an experiment one replication at a time. For example, field trials with large number of crop varieties cannot always be laid out in a single location or a single season. Therefore, it is desired that variation due to location or time periods may also be controlled alongwith controlling within location or time period variation. This can be handled by using resolvable block designs. Here, locations or time periods may be taken as replications and the variation within a location or a time period can be taken care of by blocking. In some experimental situations, it may not be feasible to run the entire experiment in one session. The experiment may have to be run in different sessions. Resolvable designs become useful in this situation. A single replication may be run in one session. If an experiment has to be discontinued at any point of time then all the treatments would have occurred equally often (provided the design is connected upto that session). Accuracy will also be increased if the experimental material can be arranged so that replicates are relatively homogeneous. In an agricultural experiment, for example, the land may be divided into a number of large areas corresponding to the replications and then each area is subdivided into blocks.

In National Agricultural Research System (NARS), a large number of experiments are conducted for improvement of crop varieties. A large number of varieties in these trials are fixed, *i.e.*, not at the choice of statistician, and are large enough to require use of incomplete block designs or some other method of controlling the variability in the experimental units. Number of replications are also fixed based on the availability of land and other experimental resources. Further, it has been seen that in many crop improvement programmes, initial varietal trials and advanced varietal trials are generally conducted using a RCB design. The analysis of the data reveals that the coefficient of variation (CV) in many of these experiments is high and as a consequence, the precision of treatment comparisons is low. This amounts to saying that the error sum of squares is large compared to the sum of squares attributable to the model and hence, small treatment differences may not be detected as significant. A large number of trials are rejected due to high CV.

It is hypothesized that the fundamental problem in these experiments is that the between block variations are non-significant in a large number of the cases. In any experimentation, non-significance of block effects or a high value of CV may arise due to:

1. Bad management of the controllable factors during experimentation (managerial aspects)
2. Faulty formation of blocks (designing)
3. Lack of identification of ancillary information that could have been used as covariate (analysis of covariance).

The first point may be taken care of if the experimenter is very cautious and experienced. Analysis of covariance is an analytical procedure and is very effective in controlling the experimental error although it has nothing to do with the designing of the experiment. The most important point which has to be taken care of during the allocation of treatments to different experimental units is to adopt proper blocking techniques. In field trials, the formation of blocks, *i.e.*, shape and size should be preceded by uniformity trials to determine the fertility pattern through a contour map. In most situations particularly in the plains, the contour maps show the variations in the fertility patches rather than in a single direction. Therefore, there is a need to effectively control the variation through blocking.

This necessitates the use of incomplete block designs like BIB designs, PBIB designs, cyclic designs, etc. One may, however, argue that in these designs the purpose of demonstration of a variety effect in the field cannot be done as all the treatments are not appearing in adjacent piece of land. To overcome this problem, it is recommended that resolvable block designs with smaller block sizes may be used. We now give some definitions and examples relating to resolvable block designs.

Definition 1.1: [Bose, (1942)]. A BIB design is called **resolvable** if the b blocks of a BIB design can be divided into r groups such that each of the v treatments occur exactly once in each group. Clearly, $b/r = x$, where x is the number of blocks in each resolvable group.

The concept of resolvability was extended to other block designs like PBIB designs and cyclic designs. In general, a proper block design is said to be resolvable if its b blocks can be grouped into r sets of blocks, each set containing $b/r = x$ blocks, such that every treatment appears in each set precisely once.

Example 1.1: Following BIB design with parameters $v = 4$, $b = 6$, $r = 3$, $k = 2$, $\lambda = 1$ is resolvable. The columns represent blocks and the symbols within blocks are treatments in the block.

Replication I		Replication II		Replication III	
Block-I	Block-II	Block-I	Block-II	Block-I	Block-II
1	3	1	2	1	2
2	4	3	4	4	3

Example 1.2: Following group divisible design with parameters $v = b = 4$, $r = k = 2$, $\lambda_1 = 0$, $\lambda_2 = 1$, $m = 2$, $n = 2$ is resolvable. The columns represent blocks and the symbols within blocks are treatments in the block.

Replication-I		Replication-II	
Block-I	Block-II	Block-I	Block-II
1	3	1	2
2	4	3	4

Example 1.3: An experimenter is interested in comparing 12 genotypes. A total of 36 experimental units are available that can be arranged in 6 blocks of 6 plots each. A resolvable block design with block contents is:

Replication-I		Replication-II		Replication -III	
Block-I	Block-II	Block-I	Block-II	Block-I	Block-II
1	3	1	2	1	2
2	4	3	4	4	3
7	5	6	5	6	5
8	6	8	7	7	8
9	10	11	9	9	11
11	12	12	10	10	12

Resolvable block designs have been studied by various authors in the literature. Lattice designs introduced by Yates (1936) especially for varietal trials are resolvable. Lattice designs are available for a limited number of varieties and block sizes. The simple ($r = 2$) and triple lattices ($r = 3$) require v , the number of varieties, to be of the order s^2 , the number of blocks in each replication and the block size k is s . Further conditions are imposed on v in quadruple and higher order lattices. Harshbarger (1949) extended the principle of square lattice designs to simple and triple rectangular lattice designs with $v = s(s-1)$ and $k = s-1$.

Bose and Nair (1962) have described and tabulated a series of two-replicate resolvable designs. These designs usefully augment the simple, square and rectangular lattices. David (1967) observed that cyclic designs are also resolvable designs but under the restrictions that k is multiple of r . For an excellent literature on cyclic and computer generated designs a reference may be made to John and Williams (1995) and references cited therein.

Kageyama (1972) gave a list of resolvable BIB designs. Clatworthy (1973) provided information on the resolvability of the two associate PBIB designs. Parsad et al. (2000) provided a comprehensive list of resolvable binary balanced block designs including BIB designs. Nigam et al. (2006) gave the catalogues of resolvable BIB designs and binary balanced block designs for $v \leq 10$ alongwith their block contents. They have also shown that resolvable block designs are very useful for on-farm trials.

In agricultural experiments, particularly concerning varietal trials, a large number of varieties are to be tested simultaneously, thus increasing the size of experimentation. For efficient experimentation it is desirable to conduct these trials using resolvable block designs. As number of varieties is not fixed and experimenter has to choose number of replications as per experimental resources, several efficient designs such as Lattice designs, BIB designs, cyclic designs etc. may not meet the requirements of the experimenter.

To meet up the requirements of the experimenter, it is desirable to generate special kind of resolvable designs, called α -designs, given by Patterson and Williams (1976). It is a wide class of resolvable block designs for which v and b have common integer multiple $s \geq 2$. Clearly $v = ks$ and $b = rs$, k , r and s are the parameters of α -design. In the sequel we describe the construction of α -designs.

2. Construction of α -designs

For constructing α -designs for $v = ks$ treatments, in r replications we start with $k \times r$ array called α -array with element integer modulo s . An α -design is completely determined by an $k \times r$ α -array. By each column of this array we develop one replication of s -blocks each of size k . Therefore, we have r -replications of rs -blocks of size k each. For the sake of completeness, we define the following:

Array: Arrangement of elements in rows and columns is called array. An array taken for developing designs is called generating array.

Reduced array: Generating array with all elements equal to zero in the first row and first column is called as the reduced array.

Under a suitable relabelling or permutation of elements, all arrays can be represented as reduced arrays, thereby restricting the search of designs to reduced arrays only. For example, consider the following generating array for $s = 3$

$$\begin{array}{ccc} 1 & 0 & 1 \\ 2 & 2 & 1 \\ 0 & 1 & 1 \\ 1 & 0 & 2 \end{array}$$

First add 2 to the elements of columns 1 and 3 reducing the sum to modulo 3 when necessary. We get the following array.

$$\begin{array}{ccc} 0 & 0 & 0 \\ 1 & 2 & 0 \\ 2 & 1 & 0 \\ 0 & 0 & 1 \end{array}$$

Now add 2 to the elements in row 2 and 1 to those in row 3 and reduce each element modulo 3 when necessary. The resulting array is the reduced array used for this example. The reduced array can be generated by arbitrary allocation of symbols in a $k \times r$ array modulo s by fixing the entries in the first row and first column as zero. As far as possible all the $r-1$ columns of $k-1$ size each should be distinct. The design obtainable from this array may then be checked for A-efficiency. If the A-efficiency is poor, then one can select another reduced array, till the design with desired A-efficiency is obtained. Indian Agricultural Statistics Research Institute (IASRI) has developed a computer algorithm based on exchange and interchange procedure to generate efficient α -designs. The designs presented here are obtained through the computer algorithm, trial and error solutions or from the arrays available in the literature. The procedure of generation of α -designs from reduced α -array and terminology involved are described in the sequel.

1. **α -array:** It is an $k \times r$ array of elements consisting of residue class of s , *i.e.*, the elements can be $0, 1, 2, \dots, s-1$. If the first row and first column of that array consists of zeros as elements, then that array is called reduced array. We will describe the construction of the α -designs by the help of the reduced array. We can determine the concurrences of the different treatment pairs by the α -array.
2. **Intermediate Array:** Construction of that intermediate array is the intermediate step to develop α -design. One can have $(s-1)$ new columns from a column of α -array by developing the column cyclically modulo s . By this way we can construct $r(s-1)$ new columns by cyclically developing each column of the α -array modulo s . This arrangement of $k \times sr$ array is called intermediate array.
3. **α -Design:** Now, take the intermediate array and add $(1 + (j - 1)s)$ to the elements of j^{th} row of that array ($j = 1, 2, \dots, k$). This gives us an array of size $(k \times sr)$. Now taking one to one correspondence between the treatments and the elements of the final array, we get an α -design with the parameters $v = ks, b = rs, r, k$.

The steps of construction are described with the help of following example:

Example 2.1: Consider the construction of an α -design for $v = 12, b = 12, r = 3, k = 3, s = 4$. The generating array α for this design is

0	0	0
0	2	3
0	3	1

Given this generating array, develop the intermediate array α^* by cyclically developing each column modulo s . The intermediate array α^* is

0	1	2	3	0	1	2	3	0	1	2	3
0	1	2	3	2	3	0	1	3	0	1	2
0	1	2	3	3	0	1	2	1	2	3	0

Now add $(1 + (j - 1)s)$ to the elements of j^{th} row of that array ($j = 1, 2, \dots, k$). The α -design with columns as blocks is

Replication-I				Replication-II				Replication-III			
B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12
1	2	3	4	1	2	3	4	1	2	3	4
5	6	7	8	7	8	5	6	8	5	6	7
9	10	11	12	12	9	10	11	10	11	12	9

B#: denotes the block number

We are developing α -design from the α -array by cyclically developing modulo s the initial blocks corresponding to a column of α -array and adding $1 + (j - 1)s$ to the j^{th} place of each of

the developed blocks. Therefore, some of the concurrences, at least $k \binom{s}{2}$ are zero. To be clearer, consider the following example:

Example 2.2: Consider an 3×4 α -array with $k = 3, r = 4, s = 3$ as

$$\begin{array}{cccc} 0 & 0 & 0 & 0 \\ 0 & 1 & 2 & 2 \\ 0 & 2 & 1 & 2 \end{array}$$

Take 3rd column as initial set: then developing cyclically modulo 3 we get

$$\begin{array}{ccc} 0 & 1 & 2 \\ 2 & 0 & 1 \\ 1 & 2 & 0 \end{array}$$

Now add $1+(j-1)s = 1+3(j-1)$ to the elements in the j^{th} row for $j = 1, 2, 3$:

$$\begin{array}{ccc} 1 & 2 & 3 \\ 6 & 4 & 5 \\ 8 & 9 & 7 \end{array}$$

The treatments 1, 2, 3; 4, 5, 6 and 7, 8, 9 will appear in different blocks in any of the replications and hence never occur together in a block.

In some cases, the replications get repeated in α -designs. The conditions for repeated replications in α -designs are described in the sequel. A typical α -design is generated by using the reduced array or α -array. In that array, the first row and first column is a zero-vector. The α -array constitutes the residue class of s as elements. Therefore, we have to choose $(k-1)$ elements from s -elements to form a column of the α -array. Distinct choice of these columns gives different replications.

Let number of distinct columns of size $(k-1)$ produced from the modulo residue s be $m = s^{\binom{k-1}{1}}$. Out of these total number of distinct columns, one column will be of all zeroes that is already taken as the first column of the α -array. Therefore, we have to select $(r-1)$ distinct columns out of remaining $(m-1)$ columns. Therefore, if $r-1 > m-1$ or $r > m$, repetition of a column in the α -array is must.

To be clearer, consider the following example:

Example 2.3: Consider a α -design with parameters $v = 6, b = 10, r = 5, k = 3$ to be obtained from 3×5 α -array having elements of modulo class 2, *i.e.*, $s = 2$. The elements of modulo class 2 are 0 and 1. Each replication of the array is obtained from columns of the α -array. In a column of an α -array the first element is always 0. Therefore, from the remaining $(k-1) = 2$ elements

we have to choose out of $s = 2$ elements, *i.e.*, $\{0, 1\}$. Different choices of such is $s^{k-1} = 2^2 = 4$, *i.e.*, $(0,0)$; $(0,1)$; $(1,0)$; $(1,1)$. Now we can get 4-distinct replications by choosing the 4-columns of the α -arrays as

$(0,0)$	$(0,1)$	$(1,0)$	$(1,1)$
0	0	0	0
0	0	1	1
0	1	0	1

Each of the above column is used to get different replications of the α -design. Now 5th column of the α -array can be either one of them. Therefore, one replication always gets repeated to construct 5-replicate α -design for $k=3$ and $s = 2$.

Dual of an α -design

It is interesting to note that the dual of an α -design is also an α -design. Williams (1975) has shown that the dual of an α -design obtained through an $k \times r$, α -array can be obtained by generating an $r \times k$ array from $k \times r$ α -array with elements as $s - \alpha(q, p)$ modulo s , where $\alpha(p, q)$ are the elements of the generating array α . To make the exposition clear, consider the following example.

Example 2.4: Consider the 3×4 α -array with $k = 3$, $r = 4$, $s = 3$ given in Example 2.2 as

0	0	0	0
0	1	2	2
0	2	1	2

Now dual of this array is a 4×3 array with $k^* = 4$, $r^* = 3$, $s^* = 3$ with elements as

0	0	0
0	2	1
0	1	2
0	1	1

3. Randomization of α -design

For an α -design, there are four stages of randomization viz.

- i) Randomize the treatments, *i.e.*, Random allocation of treatments to treatment numbers.
- ii) Randomize the replications
- iii) Randomize the blocks within each replication. Separate randomization should be done for each replication.
- iv) Randomize the treatments to experimental units within each block. Separate randomization should be done for each of the blocks.

The randomization of the α -design is done by generating random numbers or by the random number tables. This is explained through the randomization of α -design given in Example 2.1.

Step 1: Assume that the treatments have been numbered randomly.

Step 2: Randomize the replicates.

Generate random numbers 1 to 3. Let the numbers be {2, 1 and 3}. Then arrange the replication 2 as replication 1; replication 1 as replication 2 and replication 3 as replication 3. The layout of the design after implementation of this step is:

Replication-I				Replication-II				Replication-III			
B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12
1	2	3	4	1	2	3	4	1	2	3	4
7	8	9	6	5	6	7	8	8	5	6	7
12	9	10	11	9	10	11	12	10	11	12	9

Step 3: Randomize the blocks.

Generate 3 sets of 4-distinct random numbers less than equal to 4. Let the numbers be {3, 1, 2, 4}, {3, 2, 4, 1} and {4, 1, 2, 3}. Randomize each of the blocks by these sets of the random numbers. Use first set to randomize the blocks within replication 1, second set to randomize the blocks of replication 2 and use third set to randomize the blocks within replication 3. The resulting layout of the design is:

Replication-I				Replication-II				Replication-III			
B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12
3	1	2	4	3	2	4	1	4	1	2	3
9	7	8	6	7	6	8	5	7	8	5	6
10	12	9	11	11	10	12	9	9	10	11	12

Step 4: Randomize the treatments within each block.

Generate 12 sets of 3-random numbers each. Let the sets be {1, 3, 2}; {3, 1, 2}; {3, 2, 1}; {2, 1, 3}; {1, 2, 3}; {3, 1, 2}; {2, 3, 1}; {3, 2, 1}; {3, 2, 1}; {2, 1, 3}; {1, 3, 2}; {3, 1, 2}. Use these sets to randomize the treatments within blocks.

Replication-I				Replication-II				Replication-III			
B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12
3	12	9	6	3	10	8	9	9	8	2	12
10	1	8	4	7	2	12	5	7	1	11	3
9	7	2	11	11	6	4	1	4	10	5	6

At the end of the step 4 we get randomized layout plan of the α -design. This plan can now be implemented for experimentation.

4. Lower bounds to A- and D-efficiency of the designs

Different α -designs with given parameters v , k , r can be obtained from different generating arrays. The designs would have different A- and D-efficiencies. The choice of an appropriate design can thus be based on the lower bound to the average efficiency of the designs.

Let $\mathbf{D}(v, b, k)$ denotes the class of connected block designs in which v treatments are arranged in b blocks each of size k . A design $d^* \in \mathbf{D}(v, b, k)$ is said to be A-optimal if it has minimum value of trace of variance-covariance matrix of the best linear unbiased estimate (BLUE) of treatment contrasts of interest over all possible combinatorial solutions of designs $\mathbf{D}(v, b, k)$. Similarly a design $d^* \in \mathbf{D}(v, b, k)$ is said to be D-optimal if it minimizes the determinant of the variance-covariance matrix of BLUE of treatment contrasts of interest.

Resolvable block designs have a nested blocking structure, *i.e.*, the incomplete blocks within each replicate are randomized separately for each replicate. Such randomization process is appropriate for an experimental layout where the replicates are separate entities. Thus, the blocks of one replicate have no relation to those of another. However, for computation of efficiency, we can make use of the results of general block designs. We shall now discuss the concept of lower bound of the A-[D-] efficiency due to Rathore (2004) and Rathore *et al.* (2006). They obtained lower bound to A-[D-] efficiency of $d \in \mathbf{D}(v, b, k)$; the class of connected block designs in which v treatments are arranged in b blocks each of size k . These bounds are obtained on the lines of Cheng and Wu (1981).

It can easily be shown that the problem of obtaining an A-[D-] optimal design for making all possible pairwise treatment comparisons is equivalent to the problem of obtaining an A-[D-] optimal design for a complete set of orthonormal treatment contrasts $\mathbf{P}'\boldsymbol{\tau}$; $\mathbf{P}'\mathbf{P} = \mathbf{I}_{v-1}$, $\mathbf{P}\mathbf{P}' = \mathbf{I}_v - \mathbf{1}\mathbf{1}'/v$. For inferring on complete set of orthonormal treatment contrasts, a design is said to be A-optimal if it minimizes the sum of reciprocals of the non-zero eigenvalues of the C-matrix over $\mathbf{D}(v, b, k)$ and is said to be D-optimal if it minimizes the inverse of the product of the nonzero eigenvalues of C-matrix over $\mathbf{D}(v, b, k)$. For a connected block design d ,

let $\theta_1, \theta_2, \dots, \theta_{v-1}$ be the non-zero eigenvalues of C. Now define $\phi_A(d) = \sum_{i=1}^{v-1} \theta_i^{-1}$ and

$\phi_D(d) = \prod_{i=1}^{v-1} \theta_i^{-1}$. Then, a design is A- [D-] optimal if it minimizes the $\phi_A(d)[\phi_D(d)]$ over \mathbf{D}

(v, b, k) . The A-efficiency $\{e_A(d)\}$ and D-efficiency $\{e_D(d)\}$ of any design d over $\mathbf{D}(v, b, k)$ is defined as

$$e_A(d) = \frac{\phi_A(d_A^*)}{\phi_A(d)} \text{ and } e_D(d) = \left[\frac{\phi_D(d_D^*)}{\phi_D(d)} \right]^{1/(v-1)} \quad (3.1)$$

where, d_A^* and d_D^* are the A-optimal and D-optimal design over $\mathbf{D}(v, b, k)$, respectively.

Using the arithmetic, harmonic and geometric means inequality, and following the lines of Cheng and Wu (1981), the A-efficiency $\{e_A(d)\}$ and D-efficiency $\{e_D(d)\}$ of any design d over $\mathbf{D}(v, b, k)$ are given by

$$e'_A(d) = \frac{(v-1)^2}{\{b(k-1)\phi_A(d)\}} \quad \text{and} \quad (3.2)$$

$$e'_D(d) = \frac{(v-1)}{[b(k-1)\{\phi_D(d)\}^{1/(v-1)}]} \quad (3.3)$$

It may be noted here that Cheng and Wu (1981) obtained lower bounds to the A- and D-efficiencies in the class of connected binary proper block designs but here the lower bounds correspond to the class of connected proper block designs. This is because for any proper block design d , $\text{trace}(\mathbf{C}_d) \leq b(k-1)$.

If the given design d is a BIB design, then, $\phi_A(d) = k(v-1)/\lambda v$ and $\phi_D(d) = (k/\lambda v)^{(v-1)}$. For a BIB design, $\lambda = r(k-1)/(v-1)$ and $vr = bk$. Therefore, $\phi_A(d) = k(v-1)^2/\{vr(k-1)\} = (v-1)^2/\{b(k-1)\}$ and $\phi_D(d) = \{k(v-1)/vr(k-1)\}^{(v-1)} = ((v-1)/b(k-1))^{(v-1)}$. Clearly for a BIB design both e'_A and e'_D are equal to 1.0000.

5. Catalogue of α -designs

Here, the α -designs with high values of lower bounds to A-efficiency and D-efficiency in the class $\mathbf{D}(v, b, k)$ are obtained and presented. We have prepared a comprehensive list of α -designs for $v \leq 150, k \leq 10, r \leq 5$ and $s \leq 15$ along with lower bounds to A- and D-efficiencies; concurrences and generating arrays. The layout of these designs along with block contents has also been prepared. The distribution of designs in different efficiency ranges is:

Frequency Class	<0.8000	0.8000-0.8500	0.8500-0.9000	0.9000-0.9500	0.9500-0.9750	0.9750-0.9900	>0.9900	Total
A-Efficiency	18	17	43	116	151	102	1	448
D-Efficiency	0	5	10	49	123	203	58	448

The catalogue of parameters of α -designs along with lower bounds to A- and D-efficiencies and concurrences is given in Table 1 (Appendix). The generating α -arrays are given in Table 2 (Appendix). The block contents of the designs are given in Table 3 (Appendix). In Tables 1 and 3, the resolvable partially balanced incomplete block designs with 2-associate classes {PBIB(2)} designs of Clatworthy (1973); Square Lattice designs and Rectangular Lattice designs that have equal lower bounds to A- and D-efficiencies to that of corresponding α -designs are also given in remarks column.

5.1 Comparison of the new designs with existing designs

The designs obtained have been compared with corresponding square lattice designs, rectangular lattice designs, resolvable PBIB(2) designs given in Clatworthy (1973) and the α -designs obtainable from basic arrays given by Patterson et al. (1978) and from dualization of these basic arrays. The more efficient designs have been marked with *** in Tables 1 and 3.

Eleven designs are more efficient than the corresponding resolvable PBIB (2) designs (S11, S38, S69, S114, LS8, LS30, LS54, LS76, LS89, LS126 and LS140). These PBIB(2) designs are given at serial numbers 1 to 11 in Table 4 (Appendix). It is interesting to note here that for the PBIB(2) designs based on Latin square association scheme the concurrences of the treatments were 0 or 2 and for singular group divisible designs the concurrences were either 1 or 5. Further all the designs LS8, LS30, LS54, LS76, LS89, LS126 and LS140 were obtained by taking two copies of a design with 2-replications.

Patterson et al. (1978) gave 11 basic arrays which provide 33 α -designs for $v = 25, k = 5, r = 2, 3, 4$; $v = 36, k = 6, r = 2, 3, 4$; $v = 49, k = 7, r = 2, 3, 4$; $v = 64, k = 8, r = 2, 3, 4$; $v = 81, k = 9, r = 2, 3, 4$; $v = 99, k = 9, r = 2, 3, 4$; $v = 96, k = 8, r = 2, 3, 4$; $v = 91, k = 7, r = 2, 3, 4$; $v = 98, k = 7, r = 2, 3, 4$ and $v = 90, k = 6, r = 2, 3, 4$.

The designs with $r = 4$ can be obtained from the basic array itself. The designs with $r = 3$ ($r = 2$) can be obtained by taking any of the 3 columns (2 columns) of the basic arrays. We obtained designs with all possible combinations and listed designs with highest lower bound to A-efficiency for each of the parametric combinations. These listed designs were then compared with the designs generated in the present investigation. 10 designs were found to be more efficient than the designs obtainable from basic arrays. Less efficient α -designs designs are given from serial numbers 12 to 21 in Table 4.

Further 88 more α -designs with $k = 3$ and $k = 4$ can be obtained from dual of these 11 basic arrays. To generate α -design for $k = 4$ from the dual of the basic array of Patterson et al. (1978), we have taken first 5 rows to generate 5-replicate designs, first 4-rows to generate 4-replicate designs, first 3-rows to generate 3-replicate designs and first 2-rows of the dual of the array to get 2-replicate designs.

To get efficient α -designs for $k = 3$, we have taken most efficient combination of 3-columns out of 4-columns of the subset of the basic array that is used to generate α -design for $k = 4$. 48 designs (29 with $k = 4$ and 19 with $k = 3$) are more efficient than the designs obtainable by dualization of basic arrays. These designs are given at serial numbers from 22 to 69 in Table 4.

25 designs have been obtained for which no corresponding resolvable solution of PBIB(2) designs is available in literature. The list of corresponding PBIB(2) designs is S28, S86, SR18, SR41, SR52, SR58, SR66, SR75, SR80, R42, R70, R97, R109, R139, T14, T16, T20, T44, T48, T49, T72, T73, T86, T87 and M16. The parameters of the non-resolvable PBIB (2) designs are given in Table 5 (Appendix). The α -designs corresponding to these designs are also marked as \$ in Tables 1 and 3.

There are 32 resolvable designs available in the literature (18 PBIB(2) designs, 10 square lattice designs and 4 rectangular lattice designs) that are more efficient than the corresponding α -designs. The parameters of the more efficient resolvable block designs are given in Table 6 (Appendix).

Throughout Tables 1, 3, 4, 5 and 6, the designs X# denotes the design of Type X at serial number # in Clatworthy (1973).

6. Discussion

In some cases, the treatments may be partitioned into two sets. The one set consists of the new treatments/varieties/entries or new material called test treatments and other set may consists of the already existing treatments or check varieties, called control treatments. The experimenter is interested in verifying whether or not any of the test treatments can replace the control treatments. Initial varietal trials (IVT) and advanced varietal trial-I (AVT-I) are common examples of such trials. In IVT the material/entry from the breeders is taken and is compared with already released varieties or check varieties. Material that is found superior to the check varieties is promoted to AVT-I. Again in AVT-I, the entries promoted to AVT-I are compared with best performing check. For such experimental situations, one may take an α -design in test treatments or new entries and reinforce each block of the design by the control treatments or check varieties. Such designs are known as reinforced α -designs.

For multi-location trials, if there are some entries which are common to all environments and there are some additional entries then one may select an α -design for the number of entries that are common to all the environments and reinforcing the additional environment specific additional entries to all the blocks within an environment.

7. Analysis

The analysis of α -designs can be performed as per procedure of general block designs. The only change with respect to analysis is that the block sum of squares will be bifurcated into sum of squares due to replications and sum of squares between blocks within replications. As replications versus blocks (within replications) and replications versus treatments classifications

are orthogonal, therefore, sum of squares due to replications is given by $\sum_{j=1}^r \frac{R_j^2}{v} - CF$, where r is

the number of replications. Blocks within replication sum of squares can be obtained by subtraction and both these classifications are tested against mean square error. An outline of the analysis of variance Table is given as

ANOVA

Source of Variation	Degrees of Freedom
Replications	$r - 1$
Blocks within replications	$r(s-1)$
Treatments	$v-1$ or $sk-1$
Error	$rsk-sk-rs+1$
Total	$vr-1$ or $rsk-1$

All possible pairwise treatment (entries) comparisons can be made easily. The entries that are significantly different from the check and have higher adjusted means are promoted to the next stage.

Summary

α -designs are essentially resolvable block designs. In a resolvable block design, the blocks can be grouped such that in each group, every treatment appears exactly once. Resolvable block designs allow performing an experiment one replication at a time. For example, field trials with large number of crop varieties cannot always be laid out in a single location or a single season. Therefore, it is desired that variation due to location or time periods may also be controlled along with controlling within location or time period variation. This can be handled by using resolvable block designs. Here, locations or time periods may be taken as replications and the variation within a location or a time period can be taken care of by blocking. In an agricultural experiment, for example, the land may be divided into a number of large areas corresponding to the replications and then each area is subdivided into blocks. These designs are also quite useful for varietal trials conducted in the NARS and will help in improving the precision of treatment comparisons. A critical look at the experimentation in the NARS reveals that alpha designs have not found much favour from the experimenters. It may possibly be due to the fact that the experimenters may find it difficult to lay their hands on these α -designs. The construction of these designs is not easy. An experimenter has to get associated with a statistician to get a randomized layout of this design. For the benefit of the experimenters, a comprehensive catalogue of α -designs for $6 \leq v(=sk) \leq 150$, $2 \leq r \leq 5$, $3 \leq k \leq 10$ and $2 \leq s \leq 15$ has been prepared along with lower bounds to A- and D- efficiencies and generating arrays.

The layout of these designs along with block contents has also been prepared. The designs obtained have been compared with corresponding Square Lattice, Rectangular Lattice, Resolvable two-associate Partially Balanced Incomplete Block {PBIB (2)} designs and the α -designs obtainable from basic arrays given by Patterson et al. (1978). Eleven designs are more efficient than the corresponding resolvable PBIB (2) designs (S11, S38, S69, S114, LS8, LS30, LS54, LS76, LS89, LS126 and LS140). It is interesting to note here that for the PBIB (2) designs based on Latin square association scheme, the concurrences of the treatments were 0 or 2 and for singular group divisible designs the concurrences are either 1 or 5. Further all the designs LS8, LS30, LS54, LS76, LS89, LS126 and LS140 were obtained by taking two copies of a design with 2-replications. 10 designs were found to be more efficient than the designs obtainable from basic arrays. 48 designs (29 with $k = 4$ and 19 with $k = 3$) are more efficient than the designs obtainable by dualization of basic arrays. 25 designs have been obtained for which no corresponding resolvable solution of PBIB(2) designs is available in literature. The list of corresponding resolvable PBIB(2) designs is S28, S86, SR18, SR41, SR52, SR58, SR66, SR75, SR80, R42, R70, R97, R109, R139, T14, T16, T20, T44, T48, T49, T72, T73, T86, T87 and M16. Here X# denotes the design of type X at serial number # in Clatworthy(1973).

Lkkj ka k

यह मोनोग्राफ एक विशेष प्रकार की रिजॉल्वेबल अपूर्ण ब्लॉक अभिकल्पनाओं से संबंधित है जिन्हें एल्फा अभिकल्पनाएँ कहते हैं। रिजॉल्वेबल ब्लॉक अभिकल्पना एक ऐसी ब्लॉक अभिकल्पना होती है जिसमें ब्लॉकों को इस तरह से वर्गीकृत किया जा सकता है कि ब्लॉकों के प्रत्येक समूह में प्रत्येक ट्रीटमेंट केवल एक ckj $vkrc$ gSA रिजॉल्वेबल ब्लॉक अभिकल्पनाओं की सहायता से एक पुनरावृत्ति को एक बार लेकर भी परीक्षण किये जा सकते हैं। उदाहरणतया, कृषि खेत परीक्षणों में फसलों की बड़ी संख्या में प्रजातियों को एक ही स्थान या एक ही मौसम में लगा पाना सम्भव नहीं होता है। अतः यह वांछनीय है कि स्थान अथवा समयावधि के अन्तर्गत विचरण नियन्त्रण के साथ-साथ स्थान अथवा समयावधि के कारण होने वाले विचरण को भी नियंत्रित किया जाए। यह रिजॉल्वेबल ब्लॉक अभिकल्पनाओं के उपयोग द्वारा सम्भव हो सकता है। यहाँ पर, स्थान व समयावधि को पुनरावृत्ति के रूप में लिया जा सकता है तथा स्थान अथवा एक समयावधि के अन्तर्गत विचरण को ब्लॉकिंग द्वारा नियंत्रित किया जा सकता है। एक कृषि खेत परीक्षण में भूमि को पुनरावृत्ति आकार के अनुसार बड़े भूखण्डों में बाँटकर, प्रत्येक भूखण्ड को ब्लॉकों में उपविभाजित

कर एल्फा अभिकल्पनाओं का उपयोग किया जा सकता है। ये अभिकल्पनाएँ राष्ट्रीय कृषि अनुसंधान प्रणाली के अन्तर्गत किये जाने वाले परीक्षणों विशेषकर प्रजाति संबंधी परीक्षणों के लिए बहुत उपयोगी हैं साथ ही ये रिज़ॉल्वेबल ब्लॉक अभिकल्पनाएँ, ट्रीटमेन्ट्स की तुलनाओं की परिष्कृता में सुधार लाने के लिए भी उपयोगी होंगी। राष्ट्रीय कृषि अनुसंधान प्रणाली में परीक्षणों के अवलोकन से ज्ञात होता है कि परीक्षणकर्ताओं ने एल्फा अभिकल्पनाओं को अधिक नहीं अपनाया है। इन अभिकल्पनाओं की संरचना सुलभ न होना इसका एक कारण हो सकता है। परीक्षणकर्ता को इन अभिकल्पनाओं का यादृच्छिकृत लेआउट तैयार करने में कठिनाई होना इसका दूसरा कारण हो सकता है। इसलिए परीक्षणकर्ताओं एवं सांख्यिकीविदों की सुविधा के लिए ए- एवं डी-दक्षताओं के लोअर बाउंड्स तथा एल्फा अरेज़ तैयार करने के साथ-साथ ट्रीटमेन्ट्स की संख्या 6 से 150, पुनरावृत्ति संख्या 5 से कम और ब्लॉक आकार 3 से 10 के बीच की एल्फा अभिकल्पनाओं का एक कैटालॉग तैयार किया गया है। इन अभिकल्पनाओं की सम्पूर्ण लेआउट (ब्लॉक कंटैन्ट सहित) तैयार कर परीक्षणकर्ताओं के लाभार्थ इस मोनोग्राफ में दी गई है।

इन अभिकल्पनाओं की तुलना वर्ग जालक, आयताकार जालक, रिज़ॉल्वेबल टू-एसोसिएट क्लास पार्शियली बैलेन्ड अपूर्ण ब्लॉक {पी.बी.आई.बी (2)} अभिकल्पनाओं तथा पैटर्सन, विलियम्स एवं हंटर (1978, जनरल ऑफ एग्रीकल्चरल साईंस, 90, 395-499) द्वारा दी गई बेसिक एल्फा अरेज़ से प्राप्त एल्फा अभिकल्पनाओं के साथ की गई। रिज़ॉल्वेबल पी.बी.आई.बी (2) (S11, S38, S69, S114, LS8, LS30, LS54, LS76, LS89, LS126 and LS140) अभिकल्पनाओं की तुलना में 11 एल्फा अभिकल्पनाएँ अधिक दक्ष पाई गई। 10 अभिकल्पनाएँ बेसिक अरेज़ से प्राप्त अभिकल्पनाओं की तुलना में अधिक दक्ष पाई गई। 48 अभिकल्पनाएँ (29, ब्लॉक आकार = 4 एवं 19, ब्लॉक आकार = 3) बेसिक अरेज़ के ड्यूलाईजेशन द्वारा प्राप्त अभिकल्पनाओं की तुलना में अधिक दक्ष हैं। 25 ऐसी एल्फा अभिकल्पनाएँ प्राप्त की गई जिनके लिए उन्हीं प्राचलों वाली पी.बी.आई.बी (2) अभिकल्पनाओं (S28, S86, SR18, SR41, SR52, SR58, SR66, SR75, SR80, R42, R70, R97, R109, R139, T14, T16, T20, T44, T48, T49, T72, T73, T86, T87 एवं M16) के रिज़ॉल्वेबल हल नहीं हैं। यहां पर S#, SR#, R#, T#, LS#, कलेटवर्दी(1973) में क्रम संख्या # पर क्रमशः सिन्थूलर गुप डिविजिबल, सैमीरेगुलर गुप डिविजिबल, रेगुलर गुप डिविजिबल, ट्राईन्यूलर एवं लैटिन वर्ग टाईप अभिकल्पना को दर्शाता है।

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Table 1: α -designs for $6 \leq \nu \leq 150$, $2 \leq r \leq 5$, $3 \leq k \leq 10$ and $2 \leq s \leq 15$ along with lower bounds to A- and D-efficiency (where $\nu = sk$)

S.No.	ν	b	r	k	A-Efficiency	D-Efficiency	Remarks
1	6	4	2	3	0.8333	0.9253	$\alpha(0,1,2)$ \$
2	6	6	3	3	0.9294	0.9651	$\alpha(0,1,2)$ \$
3	6	8	4	3	0.9615	0.9801	$\alpha(0,2)$, SR19
4	6	10	5	3	0.9466	0.9737	$\alpha(0,2,3)$
5	9	6	2	3	0.8889	0.9428	$\alpha(0,1)$, LS7, Square-Lattice
6	9	9	3	3	0.9697	0.9837	$\alpha(0,1)$, SR23, Square-Lattice
7	9	12	4	3	0.9412	0.9710	$\alpha(0,1,2)$
8	9	15	5	3	0.9552	0.9768	$\alpha(0,1,2)$
9	12	8	2	3	0.8176	0.9123	$\alpha(0,1)$, Rect.-Lattice
10	12	12	3	3	0.9241	0.9628	$\alpha(0,1)$
11	12	16	4	3	0.9513	0.9753	$\alpha(0,1,2)$
12	12	20	5	3	0.9592	0.9788	$\alpha(0,1,2)$ \$
13	15	10	2	3	0.7645	0.8914	$\alpha(0,1)$;
14	15	15	3	3	0.9067	0.9533	$\alpha(0,1)$ \$;
15	15	20	4	3	0.9554	0.9767	$\alpha(0,1)$ \$;
16	15	25	5	3	0.9800	0.9890	$\alpha(0,1)$;, SR28
17	18	12	2	3	0.7410	0.8799	$\alpha(0,1)$;
18	18	18	3	3	0.8915	0.9459	$\alpha(0,1)$;
19	18	24	4	3	0.9386	0.9689	$\alpha(0,1)$;
20	18	30	5	3	0.9644	0.9816	$\alpha(0,1)$;
21	21	14	2	3	0.7353	0.8741	$\alpha(0,1)$;
22	21	21	3	3	0.8856	0.9421	$\alpha(0,1)$;
23	21	28	4	3	0.9351	0.9660	$\alpha(0,1)$ **;
24	21	35	5	3	0.9559	0.9773	$\alpha(0,1)$ \$;
25	24	16	2	3	0.7110	0.8651	$\alpha(0,1)$;
26	24	24	3	3	0.8712	0.9361	$\alpha(0,1)$;
27	24	32	4	3	0.9264	0.9619	$\alpha(0,1)$ ***
28	24	40	5	3	0.9488	0.9738	$\alpha(0,1)$ ***
29	27	18	2	3	0.6916	0.8580	$\alpha(0,1)$;
30	27	27	3	3	0.8607	0.9315	$\alpha(0,1)$ ***
31	27	36	4	3	0.9243	0.9603	$\alpha(0,1)$;
32	27	45	5	3	0.9436	0.9711	$\alpha(0,1)$ ***
33	30	20	2	3	0.6734	0.8519	$\alpha(0,1)$ ***
34	30	30	3	3	0.8511	0.9276	$\alpha(0,1)$;
35	30	40	4	3	0.9170	0.9571	$\alpha(0,1)$ **;
36	30	50	5	3	0.9401	0.9692	$\alpha(0,1)$ ***
37	33	22	2	3	0.6542	0.8462	$\alpha(0,1)$;
38	33	33	3	3	0.8471	0.9253	$\alpha(0,1)$;
39	33	44	4	3	0.9108	0.9544	$\alpha(0,1)$;
40	33	55	5	3	0.9364	0.9674	$\alpha(0,1)$ ***
41	36	24	2	3	0.6509	0.8434	$\alpha(0,1)$ ***
42	36	36	3	3	0.8403	0.9225	$\alpha(0,1)$ ***
43	36	48	4	3	0.9052	0.9520	$\alpha(0,1)$;
44	36	60	5	3	0.9334	0.9658	$\alpha(0,1)$ ***
45	39	26	2	3	0.6458	0.8406	$\alpha(0,1)$;
46	39	39	3	3	0.8343	0.9202	$\alpha(0,1)$ ***
47	39	52	4	3	0.9011	0.9502	$\alpha(0,1)$ ***

S.No.	ν	b	r	k	A-Efficiency	D-Efficiency	Remarks
48	39	65	5	3	0.9327	0.9652	$\alpha(0,1)$ ***
49	42	28	2	3	0.6342	0.8371	$\alpha(0,1)$;
50	42	42	3	3	0.8320	0.9187	$\alpha(0,1)$;
51	42	56	4	3	0.8969	0.9484	$\alpha(0,1)$ ***
52	42	70	5	3	0.9307	0.9642	$\alpha(0,1)$ ***
53	45	30	2	3	0.6242	0.8341	$\alpha(0,1)$ ***
54	45	45	3	3	0.8285	0.9172	$\alpha(0,1)$ ***
55	45	60	4	3	0.8935	0.9469	$\alpha(0,1)$;
56	45	75	5	3	0.9268	0.9627	$\alpha(0,1)$ ***
57	8	4	2	4	0.9074	0.9571	$\alpha(0,1,2)$
58	8	6	3	4	0.9608	0.9806	$\alpha(0,1,2)$, S6
59	8	8	4	4	0.9800	0.9898	$\alpha(0,2)$, SR36
60	8	10	5	4	0.9703	0.9856	$\alpha(0,2,3)$ \$
61	12	6	2	4	0.8655	0.9388	$\alpha(0,1,2)$
62	12	9	3	4	0.9380	0.9705	$\alpha(0,1,3)$ \$
63	12	12	4	4	0.9644	0.9829	$\alpha(0,1,2)$ \$
64	12	15	5	4	0.9747	0.9870	$\alpha(0,1,2)$
65	16	8	2	4	0.8929	0.9473	$\alpha(0,1)$, LS28, Square-Lattice
66	16	12	3	4	0.9422	0.9717	$\alpha(0,1,2)$ \$
67	16	16	4	4	0.9623	0.9816	$\alpha(0,1,2)$
68	16	20	5	4	0.9760	0.9878	$\alpha(0,1,2)$
69	20	10	2	4	0.8575	0.9333	$\alpha(0,1)$;, Rect.-Lattice
70	20	15	3	4	0.9433	0.9715	$\alpha(0,1)$;, Rect.-Lattice
71	20	20	4	4	0.9735	0.9862	$\alpha(0,1)$;
72	20	25	5	4	0.9890	0.9941	$\alpha(0,1)$;, SR46
73	24	12	2	4	0.8307	0.9232	$\alpha(0,1)$;
74	24	18	3	4	0.9283	0.9649	$\alpha(0,1)$;
75	24	24	4	4	0.9619	0.9809	$\alpha(0,1)$;
76	24	30	5	4	0.9782	0.9890	$\alpha(0,1)$;
77	28	14	2	4	0.8182	0.9172	$\alpha(0,1)$ ***
78	28	21	3	4	0.9205	0.9611	$\alpha(0,1)$ ***
79	28	28	4	4	0.9555	0.9775	$\alpha(0,1)$ ***
80	28	35	5	4	0.9730	0.9862	$\alpha(0,1)$;
81	32	16	2	4	0.8016	0.9113	$\alpha(0,1)$;
82	32	24	3	4	0.9123	0.9575	$\alpha(0,1)$ ***
83	32	32	4	4	0.9496	0.9747	$\alpha(0,1)$;
84	32	40	5	4	0.9668	0.9833	$\alpha(0,1)$ ***
85	36	18	2	4	0.7899	0.9069	$\alpha(0,1)$ ***
86	36	27	3	4	0.9112	0.9563	$\alpha(0,1)$ ***
87	36	36	4	4	0.9460	0.9729	$\alpha(0,1)$ ***
88	36	45	5	4	0.9633	0.9815	$\alpha(0,1)$ ***
89	40	20	2	4	0.7831	0.9039	$\alpha(0,1)$ ***
90	40	30	3	4	0.9010	0.9525	$\alpha(0,1)$ ***
91	40	40	4	4	0.9420	0.9710	$\alpha(0,1)$ ***
92	40	50	5	4	0.9602	0.9800	$\alpha(0,1)$ ***
93	44	22	2	4	0.7783	0.9016	$\alpha(0,1)$ ***
94	44	33	3	4	0.9022	0.9523	$\alpha(0,1)$ ***

S.No.	ν	b	r	k	A-Efficiency	D-Efficiency	Remarks
95	44	44	4	4	0.9390	0.9696	$\alpha(0,1)^{***}$
96	44	55	5	4	0.9575	0.9786	$\alpha(0,1);$
97	48	24	2	4	0.7758	0.8999	$\alpha(0,1)^{***}$
98	48	36	3	4	0.8971	0.9503	$\alpha(0,1)^{***}$
99	48	48	4	4	0.9365	0.9683	$\alpha(0,1)^{***}$
100	48	60	5	4	0.9562	0.9779	$\alpha(0,1)^{***}$
101	52	26	2	4	0.7748	0.8987	$\alpha(0,1)^{***}$
102	52	39	3	4	0.8931	0.9487	$\alpha(0,1)^{***}$
103	52	52	4	4	0.9335	0.9671	$\alpha(0,1)^{**};$
104	52	65	5	4	0.9539	0.9768	$\alpha(0,1)^{**};$
105	56	28	2	4	0.7612	0.8952	$\alpha(0,1);$
106	56	42	3	4	0.8898	0.9473	$\alpha(0,1)^{***}$
107	56	56	4	4	0.9317	0.9662	$\alpha(0,1)^{***}$
108	56	70	5	4	0.9517	0.9758	$\alpha(0,1)^{***}$
109	60	30	2	4	0.7629	0.8947	$\alpha(0,1)^{***}$
110	60	45	3	4	0.8868	0.9461	$\alpha(0,1)^{***}$
111	60	60	4	4	0.9305	0.9655	$\alpha(0,1)^{***}$
112	60	75	5	4	0.9501	0.9750	$\alpha(0,1)^{***}$
113	10	4	2	5	0.9067	0.9600	$\alpha(0,1,2)$
114	10	6	3	5	0.9550	0.9792	$\alpha(0,1,2,3)\$$
115	10	8	4	5	0.9720	0.9867	$\alpha(0,2,4)\$$
116	10	10	5	5	0.9770	0.9889	$\alpha(0,1,2,3,4)\$$
117	15	6	2	5	0.8909	0.9515	$\alpha(0,1,2)\$$
118	15	9	3	5	0.9515	0.9766	$\alpha(0,1,3)$
119	15	12	4	5	0.9726	0.9863	$\alpha(0,1,2)\$$
120	15	15	5	5	0.9834	0.9915	$\alpha(0,1,2)$
121	20	8	2	5	0.8848	0.9479	$\alpha(0,1,2)$
122	20	12	3	5	0.9492	0.9754	$\alpha(0,1,2)$
123	20	16	4	5	0.9671	0.9840	$\alpha(0,1,2)\$$
124	20	20	5	5	0.9838	0.9918	$\alpha(0,1,2)$
125	25	10	2	5	0.9000	0.9524	$\alpha(0,1);$, LS 51, Square-Lattice
126	25	15	3	5	0.9600	0.9798	$\alpha(0,1);$, LS52, square-Lattice
127	25	20	4	5	0.9818	0.9906	$\alpha(0,1);$, LS53, LS61, Square-Lattice
128	25	25	5	5	0.9931	0.9964	$\alpha(0,1)$, Square-Lattice
129	30	12	2	5	0.8797	0.9448	$\alpha(0,1)$, Rect.-Lattice
130	30	18	3	5	0.9478	0.9745	$\alpha(0,1)$
131	30	24	4	5	0.9690	0.9846	$\alpha(0,1,2)$
132	30	30	5	5	0.9746	0.9874	$\alpha(0,1,2)$
133	35	14	2	5	0.8639	0.9390	$\alpha(0,1)$
134	35	21	3	5	0.9406	0.9712	$\alpha(0,1)$
135	35	28	4	5	0.9658	0.9832	$\alpha(0,1)$
136	35	35	5	5	0.9771	0.9887	$\alpha(0,1,2)$
137	40	16	2	5	0.8536	0.9350	$\alpha(0,1)$
138	40	24	3	5	0.9337	0.9683	$\alpha(0,1)$
139	40	32	4	5	0.9610	0.9810	$\alpha(0,1)$
140	40	40	5	5	0.9718	0.9860	$\alpha(0,1,2)$
141	45	18	2	5	0.8439	0.9315	$\alpha(0,1)$

S.No.	ν	b	r	k	A-Efficiency	D-Efficiency	Remarks
142	45	27	3	5	0.9304	0.9666	$\alpha(0,1)$
143	45	36	4	5	0.9592	0.9798	$\alpha(0,1)$
144	45	45	5	5	0.9685	0.9843	$\alpha(0,1,2)$
145	50	20	2	5	0.8378	0.9290	$\alpha(0,1)$
146	50	30	3	5	0.9271	0.9651	$\alpha(0,1)$
147	50	40	4	5	0.9552	0.9781	$\alpha(0,1)$
148	50	50	5	5	0.9700	0.9851	$\alpha(0,1)$
149	55	22	2	5	0.8341	0.9272	$\alpha(0,1)$
150	55	33	3	5	0.9239	0.9637	$\alpha(0,1)$
151	55	44	4	5	0.9538	0.9773	$\alpha(0,1)$
152	55	55	5	5	0.9677	0.9840	$\alpha(0,1)$
153	60	24	2	5	0.8279	0.9251	$\alpha(0,1)$
154	60	36	3	5	0.9210	0.9625	$\alpha(0,1)$
155	60	48	4	5	0.9509	0.9760	$\alpha(0,1)$
156	60	60	5	5	0.9660	0.9832	$\alpha(0,1)$
157	65	26	2	5	0.8227	0.9234	$\alpha(0,1)$
158	65	39	3	5	0.9210	0.9621	$\alpha(0,1)$
159	65	52	4	5	0.9493	0.9752	$\alpha(0,1)$
160	65	65	5	5	0.9644	0.9824	$\alpha(0,1)$
161	70	28	2	5	0.8190	0.9220	$\alpha(0,1)$
162	70	42	3	5	0.9179	0.9609	$\alpha(0,1)$
163	70	56	4	5	0.9484	0.9747	$\alpha(0,1)$
164	70	70	5	5	0.9630	0.9817	$\alpha(0,1)$
165	75	30	2	5	0.8158	0.9208	$\alpha(0,1)$
166	75	45	3	5	0.9153	0.9599	$\alpha(0,1)$
167	75	60	4	5	0.9463	0.9738	$\alpha(0,1)$
168	75	75	5	5	0.9628	0.9815	$\alpha(0,1)$
169	12	4	2	6	0.9308	0.9698	$\alpha(0,1,2)$
170	12	6	3	6	0.9614	0.9823	$\alpha(0,1,2,3)$
171	12	8	4	6	0.9758	0.9885	$\alpha(0,2,4)$
172	12	10	5	6	0.9824	0.9915	$\alpha(0,1,2,3,4)$ \$
173	18	6	2	6	0.9175	0.9628	$\alpha(0,1,2)$
174	18	9	3	6	0.9633	0.9822	$\alpha(0,1,2)$
175	18	12	4	6	0.9721	0.9866	$\alpha(0,1,2,3)$ \$
176	18	15	5	6	0.9827	0.9915	$\alpha(0,1,2,3)$
177	24	8	2	6	0.8975	0.9550	$\alpha(0,1,2)$
178	24	12	3	6	0.9529	0.9777	$\alpha(0,1,2)$
179	24	16	4	6	0.9699	0.9854	$\alpha(0,1,2,3)$
180	24	20	5	6	0.9812	0.9907	$\alpha(0,1,2,3)$
181	30	10	2	6	0.8981	0.9544	$\alpha(0,1,2)$
182	30	15	3	6	0.9536	0.9778	$\alpha(0,1,3)$
183	30	20	4	6	0.9734	0.9870	$\alpha(0,1,2,3)$
184	30	25	5	6	0.9836	0.9919	$\alpha(0,1,2,3)$ \$
185	36	12	2	6	0.9074	0.9571	$\alpha(0,1)$;, LS74, Square-Lattice
186	36	18	3	6	0.9550	0.9782	$\alpha(0,1,2)$;
187	36	24	4	6	0.9753	0.9877	$\alpha(0,1,2)$;
188	36	30	5	6	0.9826	0.9913	$\alpha(0,1,2)$

S.No.	ν	b	r	k	A-Efficiency	D-Efficiency	Remarks
189	42	14	2	6	0.8946	0.9524	$\alpha(0,1)$, Rect.-Lattice
190	42	21	3	6	0.9539	0.9776	$\alpha(0,1)$, Rect.-Lattice
191	42	28	4	6	0.9721	0.9862	$\alpha(0,1,2)$;
192	42	35	5	6	0.9802	0.9901	$\alpha(0,1,2)$
193	48	16	2	6	0.8844	0.9488	$\alpha(0,1)$
194	48	24	3	6	0.9482	0.9752	$\alpha(0,1)$
195	48	32	4	6	0.9682	0.9844	$\alpha(0,1,2)$
196	48	40	5	6	0.9771	0.9888	$\alpha(0,1,2)$
197	54	18	2	6	0.8769	0.9460	$\alpha(0,1)$
198	54	27	3	6	0.9431	0.9731	$\alpha(0,1)$
199	54	36	4	6	0.9671	0.9839	$\alpha(0,1)$
200	54	45	5	6	0.9760	0.9881	$\alpha(0,1,2)$
201	60	20	2	6	0.8707	0.9438	$\alpha(0,1)$
202	60	30	3	6	0.9414	0.9722	$\alpha(0,1)$
203	60	40	4	6	0.9648	0.9828	$\alpha(0,1)$
204	60	50	5	6	0.9765	0.9884	$\alpha(0,1)$
205	66	22	2	6	0.8667	0.9421	$\alpha(0,1)$
206	66	33	3	6	0.9387	0.9710	$\alpha(0,1)$
207	66	44	4	6	0.9621	0.9816	$\alpha(0,1)$
208	66	55	5	6	0.9736	0.9871	$\alpha(0,1)$
209	72	24	2	6	0.8616	0.9405	$\alpha(0,1)$
210	72	36	3	6	0.9371	0.9702	$\alpha(0,1)$
211	72	48	4	6	0.9576	0.9796	$\alpha(0,1,2)$
212	72	60	5	6	0.9712	0.9859	$\alpha(0,1,2)$
213	78	26	2	6	0.8577	0.9391	$\alpha(0,1)$
214	78	39	3	6	0.9349	0.9693	$\alpha(0,1)$
215	78	52	4	6	0.9585	0.9800	$\alpha(0,1)$
216	78	65	5	6	0.9698	0.9853	$\alpha(0,1,2)$
217	84	28	2	6	0.8550	0.9380	$\alpha(0,1)$
218	84	42	3	6	0.9321	0.9682	$\alpha(0,1)$
219	84	56	4	6	0.9575	0.9795	$\alpha(0,1)$
220	84	70	5	6	0.9705	0.9855	$\alpha(0,1)$
221	90	30	2	6	0.8529	0.9372	$\alpha(0,1)$ ***
222	90	45	3	6	0.9312	0.9678	$\alpha(0,1)$ ***
223	90	60	4	6	0.9564	0.9790	$\alpha(0,1)$ **
224	90	75	5	6	0.9694	0.9850	$\alpha(0,1)$
225	14	4	2	7	0.9337	0.9722	$\alpha(0,1,2)$
226	14	6	3	7	0.9684	0.9855	$\alpha(0,1,2,3)$
227	14	8	4	7	0.9803	0.9906	$\alpha(0,2,4)$ \$
228	14	10	5	7	0.9863	0.9933	$\alpha(0,1,2,3,4)$
229	21	6	2	7	0.8993	0.9591	$\alpha(0,1,2)$
230	21	9	3	7	0.9589	0.9809	$\alpha(0,1,2,3)$
231	21	12	4	7	0.9758	0.9883	$\alpha(0,1,2,3)$
232	21	15	5	7	0.9845	0.9924	$\alpha(0,1,2,3,4)$
233	28	8	2	7	0.9135	0.9622	$\alpha(0,1,2)$ \$
234	28	12	3	7	0.9603	0.9812	$\alpha(0,1,2)$
235	28	16	4	7	0.9731	0.9871	$\alpha(0,1,2,3)$ \$

S.No.	ν	b	r	k	A-Efficiency	D-Efficiency	Remarks
236	28	20	5	7	0.9823	0.9913	$\alpha(0,1,2,3)$
237	35	10	2	7	0.9064	0.9592	$\alpha(0,1,2)$
238	35	15	3	7	0.9564	0.9795	$\alpha(0,1,2)$
239	35	20	4	7	0.9740	0.9874	$\alpha(0,1,2,3)$
240	35	25	5	7	0.9830	0.9916	$\alpha(0,1,2,3)$
241	42	12	2	7	0.9082	0.9593	$\alpha(0,1,2)$
242	42	18	3	7	0.9582	0.9801	$\alpha(0,1,2)$
243	42	24	4	7	0.9742	0.9874	$\alpha(0,1,2,3)$
244	42	30	5	7	0.9816	0.9909	$\alpha(0,1,2)$
245	49	14	2	7	0.9143	0.9610	$\alpha(0,1)$, LS84, Square-Lattice
246	49	21	3	7	0.9624	0.9817	$\alpha(0,1)$, LS85, Square-Lattice
247	49	28	4	7	0.9796	0.9897	$\alpha(0,1)$, LS86, Square-Lattice
248	49	35	5	7	0.9884	0.9941	$\alpha(0,1)$, LS87, Square-Lattice
249	56	16	2	7	0.9057	0.9580	$\alpha(0,1)$, Rect.-Lattice
250	56	24	3	7	0.9573	0.9796	$\alpha(0,1)$
251	56	32	4	7	0.9743	0.9874	$\alpha(0,1,2)$
252	56	40	5	7	0.9819	0.9910	$\alpha(0,1,2)$
253	63	18	2	7	0.8987	0.9556	$\alpha(0,1)$
254	63	27	3	7	0.9539	0.9781	$\alpha(0,1)$
255	63	36	4	7	0.9715	0.9861	$\alpha(0,1,2)$
256	63	45	5	7	0.9801	0.9902	$\alpha(0,1,2)$
257	70	20	2	7	0.8928	0.9536	$\alpha(0,1)$
258	70	30	3	7	0.9508	0.9768	$\alpha(0,1)$
259	70	40	4	7	0.9703	0.9856	$\alpha(0,1)$
260	70	50	5	7	0.9793	0.9897	$\alpha(0,1,2)$
261	77	22	2	7	0.8880	0.9519	$\alpha(0,1)$
262	77	33	3	7	0.9485	0.9758	$\alpha(0,1)$
263	77	44	4	7	0.9688	0.9848	$\alpha(0,1)$
264	77	55	5	7	0.9788	0.9896	$\alpha(0,1)$
265	84	24	2	7	0.8852	0.9507	$\alpha(0,1)$
266	84	36	3	7	0.9468	0.9750	$\alpha(0,1)$
267	84	48	4	7	0.9670	0.9841	$\alpha(0,1)$
268	84	60	5	7	0.9773	0.9889	$\alpha(0,1)$
269	91	26	2	7	0.8817	0.9496	$\alpha(0,1)$
270	91	39	3	7	0.9453	0.9744	$\alpha(0,1)$ ***
271	91	52	4	7	0.9657	0.9835	$\alpha(0,1)$ ***
272	91	65	5	7	0.9763	0.9884	$\alpha(0,1)$
273	98	28	2	7	0.8788	0.9486	$\alpha(0,1)$
274	98	42	3	7	0.9438	0.9737	$\alpha(0,1)$ **
275	98	56	4	7	0.9649	0.9831	$\alpha(0,1)$ ***
276	98	70	5	7	0.9752	0.9879	$\alpha(0,1)$
277	105	30	2	7	0.8765	0.9478	$\alpha(0,1)$
278	105	45	3	7	0.9419	0.9730	$\alpha(0,1)$
279	105	60	4	7	0.9636	0.9825	$\alpha(0,1)$
280	105	75	5	7	0.9744	0.9875	$\alpha(0,1)$
281	16	4	2	8	0.9454	0.9768	$\alpha(0,1,2)$
282	16	6	3	8	0.9683	0.9859	$\alpha(0,1,2,3)$

S.No.	ν	b	r	k	A-Efficiency	D-Efficiency	Remarks
283	16	8	4	8	0.9794	0.9904	$\alpha(0,2,4)$
284	16	10	5	8	0.9866	0.9936	$\alpha(0,1,2,3,4)$
285	24	6	2	8	0.9286	0.9695	$\alpha(0,1,2)$
286	24	9	3	8	0.9664	0.9843	$\alpha(0,1,2,3)$
287	24	12	4	8	0.9772	0.9892	$\alpha(0,1,2,3)$
288	24	15	5	8	0.9847	0.9926	$\alpha(0,1,2,3,4)$
289	32	8	2	8	0.9144	0.9641	$\alpha(0,1,2)$
290	32	12	3	8	0.9590	0.9812	$\alpha(0,1,2,3)$
291	32	16	4	8	0.9753	0.9882	$\alpha(0,1,2,3)$
292	32	20	5	8	0.9843	0.9923	$\alpha(0,1,2,3)$
293	40	10	2	8	0.9170	0.9642	$\alpha(0,1,2)$
294	40	15	3	8	0.9612	0.9818	$\alpha(0,1,2)$
295	40	20	4	8	0.9766	0.9887	$\alpha(0,1,2)$
296	40	25	5	8	0.9845	0.9923	$\alpha(0,1,2,3)$
297	48	12	2	8	0.9144	0.9630	$\alpha(0,1,2)$
298	48	18	3	8	0.9603	0.9813	$\alpha(0,1,2)$
299	48	24	4	8	0.9737	0.9874	$\alpha(0,1,2,3)$
300	48	30	5	8	0.9831	0.9917	$\alpha(0,1,2)$
301	56	14	2	8	0.9162	0.9633	$\alpha(0,1,2)$
302	56	21	3	8	0.9612	0.9816	$\alpha(0,1,2)$
303	56	28	4	8	0.9754	0.9880	$\alpha(0,1,2)$
304	56	35	5	8	0.9831	0.9917	$\alpha(0,1,2)$
305	64	16	2	8	0.9205	0.9644	$\alpha(0,1)$; LS102, Square-Lattice
306	64	24	3	8	0.9618	0.9818	$\alpha(0,1,2)$;
307	64	32	4	8	0.9778	0.9891	$\alpha(0,1,2)$ ***
308	64	40	5	8	0.9824	0.9914	$\alpha(0,1,2)$
309	72	18	2	8	0.9144	0.9623	$\alpha(0,1)$, Rect.-Lattice
310	72	27	3	8	0.9610	0.9814	$\alpha(0,1)$
311	72	36	4	8	0.9740	0.9874	$\alpha(0,1,2)$
312	72	45	5	8	0.9827	0.9915	$\alpha(0,1,2)$
313	80	20	2	8	0.9093	0.9606	$\alpha(0,1)$
314	80	30	3	8	0.9582	0.9802	$\alpha(0,1)$
315	80	40	4	8	0.9740	0.9874	$\alpha(0,1,2)$
316	80	50	5	8	0.9808	0.9906	$\alpha(0,1,2)$
317	88	22	2	8	0.9052	0.9592	$\alpha(0,1)$
318	88	33	3	8	0.9563	0.9794	$\alpha(0,1)$
319	88	44	4	8	0.9724	0.9867	$\alpha(0,1,2)$
320	88	55	5	8	0.9810	0.9907	$\alpha(0,1,2)$
321	96	24	2	8	0.9020	0.9580	$\alpha(0,1)$;
322	96	36	3	8	0.9539	0.9785	$\alpha(0,1)$ ***
323	96	48	4	8	0.9718	0.9864	$\alpha(0,1)$ ***
324	96	60	5	8	0.9807	0.9906	$\alpha(0,1)$
325	104	26	2	8	0.8990	0.9570	$\alpha(0,1)$
326	104	39	3	8	0.9527	0.9780	$\alpha(0,1)$
327	104	52	4	8	0.9702	0.9858	$\alpha(0,1)$
328	104	65	5	8	0.9797	0.9901	$\alpha(0,1)$
329	112	28	2	8	0.8966	0.9562	$\alpha(0,1)$

S.No.	ν	b	r	k	A-Efficiency	D-Efficiency	Remarks
330	112	42	3	8	0.9513	0.9774	$\alpha(0,1)$
331	112	56	4	8	0.9684	0.9849	$\alpha(0,1,2)$
332	112	70	5	8	0.9783	0.9895	$\alpha(0,1,2)$
333	120	30	2	8	0.8947	0.9555	$\alpha(0,1)$
334	120	45	3	8	0.9497	0.9768	$\alpha(0,1)$
335	120	60	4	8	0.9689	0.9851	$\alpha(0,1)$
336	120	75	5	8	0.9783	0.9894	$\alpha(0,1)$
337	18	4	2	9	0.9482	0.9786	$\alpha(0,1,2)$
338	18	6	3	9	0.9711	0.9872	$\alpha(0,1,2,3)$
339	18	8	4	9	0.9811	0.9912	$\alpha(0,2,4)$
340	18	10	5	9	0.9878	0.9942	$\alpha(0,1,2,3,4)$ \$
341	27	6	2	9	0.9294	0.9709	$\alpha(0,1,2)$
342	27	9	3	9	0.9626	0.9832	$\alpha(0,1,2,3)$
343	27	12	4	9	0.9795	0.9903	$\alpha(0,1,2,3)$
344	27	15	5	9	0.9859	0.9932	$\alpha(0,1,2,3)$
345	36	8	2	9	0.9207	0.9673	$\alpha(0,1,2)$
346	36	12	3	9	0.9634	0.9833	$\alpha(0,1,2,3)$
347	36	16	4	9	0.9747	0.9881	$\alpha(0,1,2,4)$
348	36	20	5	9	0.9843	0.9924	$\alpha(0,1,2,3)$
349	45	10	2	9	0.9272	0.9687	$\alpha(0,1,2)$
350	45	15	3	9	0.9660	0.9840	$\alpha(0,1,2)$
351	45	20	4	9	0.9795	0.9900	$\alpha(0,1,2,3)$ \$
352	45	25	5	9	0.9863	0.9932	$\alpha(0,1,2,3)$
353	54	12	2	9	0.9221	0.9667	$\alpha(0,1,2)$ \$
354	54	18	3	9	0.9632	0.9829	$\alpha(0,1,2)$
355	54	24	4	9	0.9760	0.9886	$\alpha(0,1,2,3)$
356	54	30	5	9	0.9840	0.9922	$\alpha(0,1,2,3)$
357	63	14	2	9	0.9213	0.9662	$\alpha(0,1,2)$
358	63	21	3	9	0.9628	0.9827	$\alpha(0,1,2)$
359	63	28	4	9	0.9703	0.9862	$\alpha(0,1,2,3)$
360	63	35	5	9	0.9845	0.9924	$\alpha(0,1,2)$
361	72	16	2	9	0.9229	0.9665	$\alpha(0,1,2)$
362	72	24	3	9	0.9641	0.9831	$\alpha(0,1,2)$
363	72	32	4	9	0.9750	0.9881	$\alpha(0,1,2,3)$
364	72	40	5	9	0.9804	0.9906	$\alpha(0,1,2,3)$
365	81	18	2	9	0.9259	0.9673	$\alpha(0,1)$;; LS119, Square-Lattice
366	81	27	3	9	0.9662	0.9839	$\alpha(0,1)$;; LS120, Square-Lattice
367	81	36	4	9	0.9790	0.9897	$\alpha(0,1,2)$ ***
368	81	45	5	9	0.9756	0.9886	$\alpha(0,1,2,3)$
369	90	20	2	9	0.9215	0.9658	$\alpha(0,1)$
370	90	30	3	9	0.9618	0.9821	$\alpha(0,1,2)$
371	90	40	4	9	0.9707	0.9862	$\alpha(0,1,2,3)$
372	90	50	5	9	0.9780	0.9895	$\alpha(0,1,2,3,4)$
373	99	22	2	9	0.9177	0.9645	$\alpha(0,1)$;
374	99	33	3	9	0.9617	0.9820	$\alpha(0,1)$;
375	99	44	4	9	0.9761	0.9885	$\alpha(0,1,2)$ ***
376	99	55	5	9	0.9801	0.9904	$\alpha(0,1,2)$

S.No.	ν	b	r	k	A-Efficiency	D-Efficiency	Remarks
377	108	24	2	9	0.9146	0.9635	$\alpha(0,1)$
378	108	36	3	9	0.9578	0.9805	$\alpha(0,1,2)$
379	108	48	4	9	0.9721	0.9868	$\alpha(0,1,2)$
380	108	60	5	9	0.9793	0.9900	$\alpha(0,1,2)$
381	117	26	2	9	0.9119	0.9626	$\alpha(0,1)$
382	117	39	3	9	0.9510	0.9779	$\alpha(0,1,2)$
383	117	52	4	9	0.9697	0.9857	$\alpha(0,1,2)$
384	117	65	5	9	0.9817	0.9911	$\alpha(0,1,2)$
385	126	28	2	9	0.9097	0.9618	$\alpha(0,1)$
386	126	42	3	9	0.9565	0.9800	$\alpha(0,1)$
387	126	56	4	9	0.9699	0.9859	$\alpha(0,1,2)$
388	126	70	5	9	0.9776	0.9893	$\alpha(0,1,2,3)$
389	135	30	2	9	0.9076	0.9611	$\alpha(0,1)$
390	135	45	3	9	0.9554	0.9796	$\alpha(0,1)$
391	135	60	4	9	0.9693	0.9856	$\alpha(0,1,2)$
392	135	75	5	9	0.9766	0.9888	$\alpha(0,1,2,3)$
393	20	4	2	10	0.9475	0.9792	$\alpha(0,1,2)$
394	20	6	3	10	0.9744	0.9886	$\alpha(0,1,2,3)$
395	20	8	4	10	0.9823	0.9919	$\alpha(0,1,2,3,4)$
396	20	10	5	10	0.9892	0.9948	$\alpha(0,1,2,3,4)$
397	30	6	2	10	0.9344	0.9734	$\alpha(0,1,2)$
398	30	9	3	10	0.9683	0.9857	$\alpha(0,1,2,3)$
399	30	12	4	10	0.9815	0.9913	$\alpha(0,1,2,3,4)$
400	30	15	5	10	0.9873	0.9939	$\alpha(0,1,2,3,5)$
401	40	8	2	10	0.9286	0.9707	$\alpha(0,1,2)$
402	40	12	3	10	0.9692	0.9858	$\alpha(0,1,2,3)$
403	40	16	4	10	0.9762	0.9889	$\alpha(0,1,2,4)$
404	40	20	5	10	0.9860	0.9932	$\alpha(0,1,2,3,4)$
405	50	10	2	10	0.9361	0.9724	$\alpha(0,1,2)$
406	50	15	3	10	0.9661	0.9844	$\alpha(0,1,2)$
407	50	20	4	10	0.9787	0.9899	$\alpha(0,1,2,3)$
408	50	25	5	10	0.9852	0.9928	$\alpha(0,1,2,3)$
409	60	12	2	10	0.9298	0.9701	$\alpha(0,1,2)$
410	60	18	3	10	0.9668	0.9846	$\alpha(0,1,2)$
411	60	24	4	10	0.9796	0.9902	$\alpha(0,1,2,3)$
412	60	30	5	10	0.9843	0.9924	$\alpha(0,1,2,3,4)$
413	70	14	2	10	0.9272	0.9691	$\alpha(0,1,2)$
414	70	21	3	10	0.9655	0.9840	$\alpha(0,1,2)$
415	70	28	4	10	0.9787	0.9898	$\alpha(0,1,2,3)$
416	70	35	5	10	0.9851	0.9927	$\alpha(0,1,2)$
417	80	16	2	10	0.9271	0.9689	$\alpha(0,1,2)$
418	80	24	3	10	0.9655	0.9840	$\alpha(0,1,2)$
419	80	32	4	10	0.9788	0.9898	$\alpha(0,1,2)$
420	80	40	5	10	0.9848	0.9926	$\alpha(0,1,2,3)$
421	90	18	2	10	0.9285	0.9692	$\alpha(0,1,2)$
422	90	27	3	10	0.9664	0.9843	$\alpha(0,1,2)$
423	90	36	4	10	0.9782	0.9895	$\alpha(0,1,2)$

S.No.	ν	b	r	k	A-Efficiency	D-Efficiency	Remarks
424	90	45	5	10	0.9834	0.9920	$\alpha(0,1,2)$
425	100	20	2	10	0.9308	0.9698	$\alpha(0,1)$;LS137, Square-Lattice
426	100	30	3	10	0.9667	0.9843	$\alpha(0,1,2)$;
427	100	40	4	10	0.9790	0.9898	$\alpha(0,1,2)$ **
428	100	50	5	10	0.9811	0.9910	$\alpha(0,1,2,3)$
429	110	22	2	10	0.9274	0.9686	$\alpha(0,1)$
430	110	33	3	10	0.9661	0.9841	$\alpha(0,1)$, Rect.-Lattice
431	110	44	4	10	0.9780	0.9894	$\alpha(0,1,2)$
432	110	55	5	10	0.9786	0.9899	$\alpha(0,1,2,3)$
433	120	24	2	10	0.9245	0.9677	$\alpha(0,1)$
434	120	36	3	10	0.9645	0.9834	$\alpha(0,1)$
435	120	48	4	10	0.9783	0.9895	$\alpha(0,1)$
436	120	60	5	10	0.9837	0.9921	$\alpha(0,1,2)$
437	130	26	2	10	0.9220	0.9668	$\alpha(0,1)$
438	130	39	3	10	0.9632	0.9829	$\alpha(0,1)$
439	130	52	4	10	0.9744	0.9879	$\alpha(0,1,2)$
440	130	65	5	10	0.9807	0.9907	$\alpha(0,1,2,3)$
441	140	28	2	10	0.9195	0.9661	$\alpha(0,1)$
442	140	42	3	10	0.9619	0.9824	$\alpha(0,1)$
443	140	56	4	10	0.9721	0.9870	$\alpha(0,1,2)$
444	140	70	5	10	0.9787	0.9899	$\alpha(0,1,2)$
445	150	30	2	10	0.9109	0.9635	$\alpha(0,1,2)$
446	150	45	3	10	0.9612	0.9821	$\alpha(0,1)$
447	150	60	4	10	0.9714	0.9867	$\alpha(0,1,2)$
448	150	75	5	10	0.9782	0.9897	$\alpha(0,1,2)$

\$ denotes that for corresponding parameters no resolvable PBIB (2) design exists.

** indicates that the design has been generated using the basic array of Patterson et al. (1978) or dual of these basic arrays.

***indicates that the design generated is better than the design obtainable from the basic arrays of Patterson et al. (1978) or corresponding Resolvable PBIB (2) designs of Clatworthy (1973).

; indicates that the design generated has efficiency equal to that of the design obtainable from Basic array or dualization of basic array of Patterson et al. (1978).

Table 2: α -arrays for generating designs with $v \leq 150, s \leq 15, k \leq 10, r \leq 5$.

k	s	Array for $r = 2$	Array for $r = 3$	Array for $r = 4$	Array for $r = 5$
3	2	0 0	0 0 0	0 0 0 0	0 0 0 0 0
		0 1	0 1 1	0 1 1 0	0 1 1 0 1
		0 1	0 1 0	0 1 0 1	0 1 0 1 1
3	3	0 0	0 0 0	0 0 0 0	0 0 0 0 0
		0 2	0 2 1	0 2 1 1	0 2 1 1 0
		0 1	0 1 2	0 1 2 0	0 1 2 0 1
3	4	0 0	0 0 0	0 0 0 0	0 0 0 0 0
		0 2	0 2 3	0 2 3 1	0 2 3 1 0
		0 3	0 3 1	0 3 1 2	0 3 1 2 3
3	5	0 0	0 0 0	0 0 0 0	0 0 0 0 0
		0 4	0 4 3	0 4 3 2	0 4 3 2 1
		0 3	0 3 1	0 3 1 4	0 3 1 4 2
3	6	0 0	0 0 0	0 0 0 0	0 0 0 0 0
		0 3	0 3 2	0 3 2 5	0 3 2 5 4
		0 5	0 5 3	0 5 3 4	0 5 3 4 2
3	7	0 0	0 0 0	0 0 0 0	0 0 0 0 0
		0 5	0 5 2	0 5 2 6	0 5 2 6 4
		0 4	0 4 3	0 4 3 2	0 4 3 2 1
3	8	0 0	0 0 0	0 0 0 0	0 0 0 0 0
		0 2	0 2 1	0 2 1 4	0 2 1 4 5
		0 7	0 7 3	0 7 3 5	0 7 3 5 1
3	9	0 0	0 0 0	0 0 0 0	0 0 0 0 0
		0 4	0 4 1	0 6 1 7	0 3 7 2 8
		0 6	0 6 8	0 3 8 2	0 8 5 6 1
3	10	0 0	0 0 0	0 0 0 0	0 0 0 0 0
		0 9	0 9 7	0 9 7 6	0 9 7 6 1
		0 7	0 5 4	0 5 4 8	0 5 4 8 2
3	11	0 0	0 0 0	0 0 0 0	0 0 0 0 0
		0 5	0 6 9	0 2 8 1	0 4 9 6 10
		0 2	0 4 8	0 3 4 6	0 3 4 7 2
3	12	0 0	0 0 0	0 0 0 0	0 0 0 0 0
		0 9	0 5 6	0 10 5 1	0 10 2 1 7
		0 1	0 9 8	0 7 8 6	0 5 11 7 3
3	13	0 0	0 0 0	0 0 0 0	0 0 0 0 0
		0 6	0 7 12	0 8 2 12	0 6 7 3 8
		0 8	0 9 3	0 3 4 11	0 9 2 1 12
3	14	0 0	0 0 0	0 0 0 0	0 0 0 0 0
		0 10	0 8 3	0 12 13 10	0 1 5 6 11
		0 13	0 1 13	0 9 6 1	0 13 10 7 8
3	15	0 0	0 0 0	0 0 0 0	0 0 0 0 0
		0 8	0 14 4	0 14 12 5	0 1 10 7 12
		0 6	0 13 7	0 13 3 7	0 13 2 11 6
4	2	0 0	0 0 0	0 0 0 0	0 0 0 0 0
		0 0	0 0 1	0 0 1 1	0 0 1 1 0
		0 1	0 1 0	0 1 0 1	0 1 0 1 0
		0 1	0 1 1	0 1 1 0	0 1 1 0 1
4	3	0 0	0 0 0	0 0 0 0	0 0 0 0 0

		0 2 0 1 0 1	0 1 2 0 2 1 0 2 1	0 2 1 0 0 1 2 1 0 0 1 2	0 1 0 2 1 0 2 1 2 0 0 2 2 1 1
4	4	0 0 0 1 0 3 0 2	0 0 0 0 3 2 0 1 3 0 2 1	0 0 0 0 0 1 2 3 0 2 3 1 0 1 3 2	0 0 0 0 0 0 3 1 2 2 0 3 2 0 1 0 2 3 1 3
4	5	0 0 0 4 0 3 0 1	0 0 0 0 2 3 0 3 2 0 4 1	0 0 0 0 0 1 4 2 0 4 1 3 0 3 2 1	0 0 0 0 0 0 1 2 4 3 0 2 4 3 1 0 3 1 2 4
4	6	0 0 0 1 0 2 0 3	0 0 0 0 3 4 0 1 5 0 4 3	0 0 0 0 0 3 5 2 0 2 1 3 0 1 4 5	0 0 0 0 0 0 4 1 5 2 0 2 3 4 5 0 5 4 3 1
4	7	0 0 0 5 0 2 0 1	0 0 0 0 3 2 0 6 1 0 5 3	0 0 0 0 0 1 6 2 0 6 3 4 0 4 5 3	0 0 0 0 0 0 4 2 3 6 0 2 1 5 3 0 6 3 1 2
4	8	0 0 0 5 0 1 0 3	0 0 0 0 3 5 0 2 6 0 5 4	0 0 0 0 0 3 2 6 0 6 7 4 0 4 1 3	0 0 0 0 0 0 7 6 3 4 0 5 1 4 3 0 1 7 6 2
4	9	0 0 0 5 0 1 0 3	0 0 0 0 4 7 0 2 1 0 3 5	0 0 0 0 0 1 5 2 0 3 8 6 0 7 6 5	0 0 0 0 0 0 2 1 5 8 0 3 7 8 4 0 8 5 3 1
4	10	0 0 0 6 0 1 0 3	0 0 0 0 1 4 0 3 2 0 7 5	0 0 0 0 0 7 8 2 0 6 2 3 0 1 4 9	0 0 0 0 0 0 8 1 2 4 0 9 3 7 8 0 4 2 5 1
4	11	0 0 0 1 0 9 0 5	0 0 0 0 5 1 0 7 10 0 2 4	0 0 0 0 0 7 8 3 0 10 1 9 0 8 6 2	0 0 0 0 0 0 7 2 6 10 0 8 1 9 4 0 3 10 1 8
4	12	0 0 0 7 0 1 0 9	0 0 0 0 10 8 0 1 5 0 6 7	0 0 0 0 0 11 6 7 0 9 1 10 0 3 8 6	0 0 0 0 0 0 1 6 10 5 0 6 10 11 8 0 9 4 3 7
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10	2	0 0 0 0 0 0 0 1 0 1 0 1 0 1 0 1 0 0 0 1	0 0 0 0 1 1 0 1 0 0 1 0 0 1 0 0 0 1 0 0 1 0 1 1 0 0 1 0 1 1	0 0 0 0 0 0 1 0 0 0 1 1 0 1 1 0 0 1 0 1 0 0 1 1 0 1 0 1 0 1 0 1 0 1 1 0 0 1 1 0	0 0 0 0 0 0 1 1 0 0 0 1 0 1 1 0 1 0 1 0 0 0 0 1 1 0 0 1 1 1 0 1 1 1 0 0 0 1 1 0 0 1 1 0 1 0 1 0 0 1
10	3	0 0 0 1 0 1 0 1 0 0 0 1 0 2 0 2 0 2 0 2 0 2	0 0 0 0 2 1 0 2 2 0 1 0 0 2 1 0 1 2 0 1 2 0 1 2 0 0 1 0 2 1	0 0 0 0 0 0 2 1 0 1 1 2 0 0 2 1 0 1 2 0 0 2 0 2 0 1 2 2 0 2 0 1 0 2 1 1 0 2 1 2	0 0 0 0 0 0 2 1 1 0 0 2 0 2 1 0 2 0 2 1 0 1 1 2 2 0 1 2 0 1 0 0 2 1 2 0 1 2 0 2 0 1 1 2 0 0 0 2 1 1

10	4	0 0 0 1 0 2 0 3 0 2 0 1 0 2 0 3 0 1 0 3	0 0 0 0 2 2 0 3 1 0 3 0 0 1 3 0 1 2 0 0 2 0 2 1 0 3 3 0 2 1	0 0 0 0 0 1 3 2 0 3 1 2 0 1 2 3 0 3 2 1 0 2 1 3 0 3 2 1 0 2 1 3 0 1 3 2 0 2 3 1	0 0 0 0 0 0 2 0 1 3 0 0 2 1 3 0 2 3 0 1 0 2 1 3 3 0 1 3 1 2 0 2 1 3 2 0 3 3 2 1 0 3 2 2 1 0 1 2 3 0
10	5	0 0 0 1 0 2 0 3 0 4 0 0 0 3 0 2 0 4 0 1	0 0 0 0 3 4 0 2 4 0 4 2 0 2 3 0 3 1 0 4 3 0 2 1 0 1 2 0 1 3	0 0 0 0 0 1 3 4 0 2 1 3 0 3 1 4 0 4 3 2 0 1 2 3 0 2 4 1 0 3 4 2 0 4 1 3 0 4 2 1	0 0 0 0 0 0 1 3 2 4 0 2 1 4 3 0 3 4 1 2 0 4 3 1 2 0 1 2 4 3 0 3 1 2 4 0 1 3 4 2 0 4 2 3 1 0 2 4 3 1
10	6	0 0 0 3 0 2 0 4 0 4 0 2 0 5 0 1 0 1 0 5	0 0 0 0 4 1 0 4 5 0 3 2 0 5 2 0 1 5 0 3 4 0 5 3 0 1 3 0 2 1	0 0 0 0 0 3 4 2 0 1 5 4 0 4 2 5 0 3 4 5 0 5 1 3 0 4 3 1 0 5 2 3 0 2 5 1 0 1 3 2	0 0 0 0 0 0 5 4 1 3 0 5 2 3 4 0 2 4 3 1 0 4 1 2 5 0 4 5 3 2 0 3 1 2 5 0 5 3 1 2 0 2 1 5 3 0 1 2 4 3
10	7	0 0 0 1 0 5 0 6 0 3 0 4 0 2 0 2 0 5 0 1	0 0 0 0 3 4 0 4 6 0 2 5 0 6 2 0 1 6 0 3 1 0 5 2 0 5 4 0 1 3	0 0 0 0 0 4 2 1 0 2 1 3 0 5 6 4 0 6 5 2 0 3 6 5 0 4 2 5 0 6 3 4 0 1 3 6 0 2 4 1	0 0 0 0 0 0 6 2 4 1 0 2 1 5 6 0 1 5 2 4 0 3 5 6 1 0 5 6 4 3 0 5 3 6 4 0 6 1 3 2 0 3 4 5 2 0 4 3 2 5
10	8	0 0 0 7 0 3 0 2 0 3 0 4 0 1 0 1 0 5 0 6	0 0 0 0 1 6 0 5 7 0 4 1 0 1 5 0 7 3 0 3 2 0 2 3 0 6 4 0 7 2	0 0 0 0 0 2 4 5 0 5 6 4 0 1 3 7 0 3 7 1 0 3 1 6 0 6 7 2 0 4 1 5 0 7 2 1 0 6 5 3	0 0 0 0 0 0 3 2 7 6 0 5 7 6 3 0 5 3 2 4 0 7 4 5 1 0 2 5 1 7 0 1 5 3 7 0 1 6 3 4 0 4 6 2 5 0 6 7 1 2

10	9	0 0 0 8 0 6 0 5 0 3 0 7 0 4 0 1 0 2 0 6	0 0 0 0 7 1 0 2 6 0 3 5 0 4 3 0 8 2 0 1 7 0 6 4 0 5 6 0 3 8	0 0 0 0 0 5 3 6 0 5 4 2 0 8 7 4 0 7 2 6 0 3 8 1 0 8 1 3 0 4 6 7 0 2 5 4 0 6 3 8	0 0 0 0 0 0 2 1 8 5 0 5 1 3 7 0 5 6 7 4 0 1 5 2 6 0 6 3 8 2 0 8 2 4 5 0 7 6 1 8 0 4 2 5 7 0 8 4 3 6
10	10	0 0 0 9 0 5 0 7 0 1 0 6 0 2 0 8 0 4 0 3	0 0 0 0 8 1 0 1 2 0 4 3 0 9 4 0 7 5 0 5 6 0 3 7 0 6 8 0 2 9	0 0 0 0 0 1 9 5 0 3 6 9 0 5 7 2 0 4 5 6 0 6 3 1 0 7 2 4 0 8 4 7 0 9 8 2 0 2 6 3	0 0 0 0 0 0 1 3 6 7 0 2 5 9 1 0 3 7 2 6 0 4 9 7 5 0 5 2 3 8 0 6 1 4 9 0 7 8 5 3 0 8 4 1 2 0 9 6 8 4
10	11	0 0 0 10 0 7 0 4 0 5 0 9 0 8 0 2 0 1 0 6	0 0 0 0 1 3 0 7 5 0 4 1 0 9 2 0 10 4 0 8 7 0 2 8 0 5 6 0 6 9	0 0 0 0 0 5 1 4 0 2 3 7 0 9 10 1 0 10 8 6 0 8 2 10 0 6 8 3 0 1 4 5 0 7 6 2 0 3 7 1	0 0 0 0 0 0 1 3 6 7 0 2 5 9 10 0 3 7 2 6 0 4 10 7 5 0 5 2 3 8 0 6 1 4 9 0 7 8 5 3 0 8 4 10 2 0 9 6 8 1
10	12	0 0 0 11 0 9 0 1 0 7 0 3 0 5 0 10 0 6 0 2	0 0 0 0 3 9 0 10 5 0 7 10 0 9 1 0 8 7 0 6 2 0 2 4 0 1 6 0 11 8	0 0 0 0 0 3 8 5 0 10 2 3 0 5 7 1 0 6 4 7 0 8 11 6 0 4 10 8 0 11 6 10 0 9 5 4 0 2 3 11	0 0 0 0 0 0 6 1 11 5 0 11 3 5 2 0 10 11 2 7 0 10 9 6 4 0 9 3 10 1 0 3 5 1 8 0 4 2 3 11 0 7 10 4 3 0 9 5 4 6
10	13	0 0 0 6 0 11 0 12 0 1 0 9 0 3 0 4 0 7	0 0 0 0 12 10 0 4 5 0 5 2 0 2 6 0 7 3 0 6 9 0 1 8 0 11 4	0 0 0 0 0 6 11 5 0 11 5 2 0 12 2 7 0 1 6 4 0 9 10 1 0 3 1 8 0 4 3 11 0 7 8 3	0 0 0 0 0 0 6 1 11 5 0 11 3 5 2 0 12 11 2 7 0 1 9 6 4 0 9 3 10 1 0 3 5 1 8 0 4 2 3 11 0 7 12 8 3

		0 8	0 8 7	0 8 4 6	0 8 5 4 6
10	14	0 0	0 0 0	0 0 0 0	0 0 0 0 0
		0 1	0 9 12	0 1 3 5	0 1 3 5 2
		0 2	0 2 11	0 2 5 1	0 2 5 1 9
		0 3	0 11 7	0 3 7 6	0 3 7 6 4
		0 4	0 12 6	0 4 9 7	0 4 9 7 6
		0 5	0 5 10	0 5 12 13	0 5 12 13 5
		0 6	0 4 8	0 6 13 8	0 6 13 8 10
		0 7	0 3 2	0 7 8 10	0 7 8 10 13
		0 8	0 13 1	0 8 10 3	0 8 10 3 1
		0 9	0 7 13	0 9 6 2	0 9 6 2 8
10	15	0 0	0 0 0	0 0 0 0	0 0 0 0 0
		0 3	0 11 6	0 3 14 5	0 1 3 14 5
		0 5	0 14 2	0 5 8 1	0 2 5 8 1
		0 6	0 12 4	0 6 2 9	0 3 7 2 9
		0 9	0 10 12	0 9 11 7	0 4 9 11 7
		0 12	0 7 1	0 12 1 13	0 5 12 1 13
		0 1	0 13 9	0 1 3 8	0 14 1 3 8
		0 8	0 3 11	0 8 13 10	0 7 8 13 10
		0 10	0 8 5	0 10 5 7	0 8 10 5 7
		0 6	0 1 14	0 6 4 2	0 9 6 4 2

Table 3: Block layouts of α -designs

BLOCK SIZE 3

1. $v = 6, b = 4, r = 2, k = 3, AE = 0.8333, DE = 0.9253$ Replication 1 B1(1, 3, 5); B2(2, 4, 6). Replication 2 B1(1, 4, 6); B2(2, 3, 5).	$\alpha(0,1,2)$ \$
2. $v = 6, b = 6, r = 3, k = 3, AE = 0.9294, DE = 0.9651$ Replication 1 and Replication 2 as design in 1. Replication 3 B1(1, 4, 5); B2(2, 3, 6).	$\alpha(0,1,2)$ \$
3. $v = 6, b = 8, r = 4, k = 3, AE = 0.9615, DE = 0.9801$ Replication 1, 2 and 3 as Design in 2. Replication 4 B1(1, 3, 6); B2(2, 4, 5).	$\alpha(0,2)$, SR19
4. $v = 6, b = 10, r = 5, k = 3, AE = 0.9466, DE = 0.9737$ Replication 1, 2, 3 and 4 as Design in 3. Replication 5 as Replication 2 of Design in 1.	$\alpha(0,2,3)$
5. $v = 9, b = 6, r = 2, k = 3, AE = 0.8889, DE = 0.9428$ Replication 1 B1(1, 4, 7); B2(2, 5, 8); B3(3, 6, 9). Replication 2 B1(1, 6, 8); B2(2, 4, 9); B3(3, 5, 7).	$\alpha(0,1)$, LS7, Square-Lattice
6. $v = 9, b = 9, r = 3, k = 3, AE = 0.9697, DE = 0.9837$ Replication 1 and Replication 2 as design in 5 Replication 3 B1(1, 5, 9); B2(2, 6, 7); B3(3, 4, 8).	$\alpha(0,1)$, SR23, Square-Lattice
7. $v = 9, b = 12, r = 4, k = 3, AE = 0.9412, DE = 0.9710$ Replication 1, 2 and 3 as Design in 6. Replication 4 B1(1, 5, 7); B2(2, 6, 8); B3(3, 4, 9).	$\alpha(0,1,2)$
8. $v = 9, b = 15, r = 5, k = 3, AE = 0.9552, DE = 0.9768$ Replication 1, 2, 3 and 4 as Design in 7. Replication 5 B1(1, 4, 8); B2(2, 5, 9); B3(3, 6, 7).	$\alpha(0,1,2)$
9. $v = 12, b = 8, r = 2, k = 3, AE = 0.8176, DE = 0.9123$ Replication 1 B1(1, 5, 9); B2(2, 6, 10); B3(3, 7, 11); B4(4, 8, 12).	$\alpha(0,1)$, Rect-Lattice

Replication 2

B1(1, 7, 12); B2(2, 8, 9); B3(3, 5, 10); B4(4, 6, 11).

10. $v = 12, b = 12, r = 3, k = 3, AE = 0.9241, DE = 0.9628$ $\alpha(0,1)$
Replication 1 and Replication 2 as Design in 9.

Replication 3

B1(1, 8, 10); B2(2, 5, 11); B3(3, 6, 12); B4(4, 7, 9).

11. $v = 12, b = 16, r = 4, k = 3, AE = 0.9513, DE = 0.9753$ $\alpha(0,1,2)$
Replication 1, 2 and 3 as Design in 10.

Replication 4

B1(1, 6, 11); B2(2, 7, 12); B3(3, 8, 9); B4(4, 5, 10).

12. $v = 12, b = 20, r = 5, k = 3, AE = 0.9592, DE = 0.9788$ $\alpha(0,1,2)$ \$
Replication 1, 2, 3 and 4 as Design in 11.

Replication 5

B1(1, 5, 12); B2(2, 6, 9); B3(3, 7, 10); B4(4, 8, 11).

13. $v = 15, b = 10, r = 2, k = 3, AE = 0.7645, DE = 0.8914$ $\alpha(0,1);$
Replication 1

B1(1, 6, 11); B2(2, 7, 12); B3(3, 8, 13); B4(4, 9, 14); B5(5, 10, 15).

Replication 2

B1(1, 10, 14); B2(2, 6, 15); B3(3, 7, 11); B4(4, 8, 12); B5(5, 9, 13).

14. $v = 15, b = 15, r = 3, k = 3, AE = 0.9067, DE = 0.9533$ $\alpha(0,1)$ \$;
Replication 1 and Replication 2 as Design in 13.

Replication 3

B1(1, 9, 12); B2(2, 10, 13); B3(3, 6, 14); B4(4, 7, 15); B5(5, 8, 11).

15. $v = 15, b = 20, r = 4, k = 3, AE = 0.9554, DE = 0.9767$ $\alpha(0,1)$ \$;
Replication 1, 2 and 3 as Design in 14.

Replication 4

B1(1, 8, 15); B2(2, 9, 11); B3(3, 10, 12); B4(4, 6, 13); B5(5, 7, 14).

16. $v = 15, b = 25, r = 5, k = 3, AE = 0.9800, DE = 0.9890$ $\alpha(0,1);, SR28$
Replication 1, 2, 3 and 4 as Design in 15.

Replication 5

B1(1, 7, 13); B2(2, 8, 14); B3(3, 9, 15); B4(4, 10, 11); B5(5, 6, 12).

17. $v = 18, b = 12, r = 2, k = 3, AE = 0.7410, DE = 0.8799$ $\alpha(0,1);$

Replication 1

B1(1, 7, 13); B2(2, 8, 14); B3(3, 9, 15); B4(4, 10, 16); B5(5, 11, 17); B6(6, 12, 18).

Replication 2

B1(1, 10, 18); B2(2, 11, 13); B3(3, 12, 14); B4(4, 7, 15); B5(5, 8, 16); B6(6, 9, 17).

18. $v = 18, b = 18, r = 3, k = 3, AE = 0.8915, DE = 0.9459$ $\alpha(0,1)$;
Replication 1 and Replication 2 as Design in 17.
- Replication 3
B1(1, 9, 16); B2(2, 10, 17); B3(3, 11, 18); B4(4, 12, 13); B5(5, 7, 14); B6(6, 8, 15).
19. $v = 18, b = 24, r = 4, k = 3, AE = 0.9386, DE = 0.9689$ $\alpha(0,1)$;
Replication 1, 2 and 3 as Design in 18.
- Replication 4
B 1(1, 12, 17); B 2(2, 7, 18); B 3(3, 8, 13); B 4(4, 9, 14); B 5(5, 10, 15); B 6(6, 11, 16).
20. $v = 18, b = 30, r = 5, k = 3, AE = 0.9644, DE = 0.9816$ $\alpha(0,1)$;
Replication 1, 2, 3 and 4 as Design in 19.
- Replication 5
B1(1, 11, 15); B2(2, 12, 16); B3(3, 7, 17); B4(4, 8, 18); B5(5, 9, 13); B6(6, 10, 14).
21. $v = 21, b = 14, r = 2, k = 3, AE = 0.7353, DE = 0.8741$ $\alpha(0,1)$;
Replication 1
B1(1, 8, 15); B2(2, 9, 16); B3(3, 10, 17); B4(4, 11, 18); B5(5, 12, 19); B6(6, 13, 20);
B7(7, 14, 21).
- Replication 2
B1(1, 13, 19); B2(2, 14, 20); B3(3, 8, 21); B4(4, 9, 15); B5(5, 10, 16); B6(6, 11, 17);
B7(7, 12, 18).
22. $v = 21, b = 21, r = 3, k = 3, AE = 0.8856, DE = 0.9421$ $\alpha(0,1)$;
Replication 1 and Replication 2 as Design in 21.
- Replication 3
B1(1, 10, 18); B2(2, 11, 19); B3(3, 12, 20); B4(4, 13, 21); B5(5, 14, 15); B6(6, 8, 16);
B7(7, 9, 17).
23. $v = 21, b = 28, r = 4, k = 3, AE = 0.9351, DE = 0.9660$ $\alpha(0,1)**$;
Replication 1, 2 and 3 as Design in 22.
- Replication 4
B1(1, 14, 17); B2(2, 8, 18); B3(3, 9, 19); B4(4, 10, 20); B5(5, 11, 21); B6(6, 12, 15);
B7(7, 13, 16).
24. $v = 21, b = 35, r = 5, k = 3, AE = 0.9559, DE = 0.9773$ $\alpha(0,1)\$$;
Replication 1, 2, 3 and 4 as Design in 23.
- Replication 5
B1(1, 12, 16); B2(2, 13, 17); B3(3, 14, 18); B4(4, 8, 19); B5(5, 9, 20); B6(6, 10, 21);
B7(7, 11, 15).
25. $v = 24, b = 16, r = 2, k = 3, AE = 0.7110, DE = 0.8651$ $\alpha(0,1)$;
Replication 1
B1(1, 9, 17); B2(2, 10, 18); B3(3, 11, 19); B4(4, 12, 20); B5(5, 13, 21); B6(6, 14, 22);
B7(7, 15, 23); B8(8, 16, 24).
- Replication 2
B1(1, 11, 24); B2(2, 12, 17); B3(3, 13, 18); B4(4, 14, 19); B5(5, 15, 20); B6(6, 16, 21);
B7(7, 9, 22); B8(8, 10, 23).

26. $v = 24, b = 24, r = 3, k = 3, AE = 0.8712, DE = 0.9361$ $\alpha(0,1)$;
Replication 1 and Replication 2 as Design in 25.
- Replication 3
B1(1, 10, 20); B2(2, 11, 21); B3(3, 12, 22); B4(4, 13, 23); B5(5, 14, 24); B6(6, 15, 17);
B7(7, 16, 18); B8(8, 9, 19).
27. $v = 24, b = 32, r = 4, k = 3, AE = 0.9264, DE = 0.9619$ $\alpha(0,1)^{***}$
Replication 1, 2 and 3 as Design in 26.
- Replication 4
B1(1, 13, 22); B2(2, 14, 23); B3(3, 15, 24); B4(4, 16, 17); B5(5, 9, 18); B6(6, 10, 19);
B7(7, 11, 20); B8(8, 12, 21).
28. $v = 24, b = 40, r = 5, k = 3, AE = 0.9488, DE = 0.9738$ $\alpha(0,1)^{***}$
Replication 1, 2, 3 and 4 as Design in 27.
- Replication 5
B1(1, 14, 18); B2(2, 15, 19); B3(3, 16, 20); B4(4, 9, 21); B5(5, 10, 22); B6(6, 11, 23);
B7(7, 12, 24); B8(8, 13, 17).
29. $v = 27, b = 18, r = 2, k = 3, AE = 0.6916, DE = 0.8580$ $\alpha(0,1)$;
Replication 1
B1(1, 10, 19); B2(2, 11, 20); B3(3, 12, 21); B4(4, 13, 22); B5(5, 14, 23); B6(6, 15, 24);
B7(7, 16, 25); B8(8, 17, 26); B9(9, 18, 27).
- Replication 2
B1(1, 14, 25); B2(2, 15, 26); B3(3, 16, 27); B4(4, 17, 19); B5(5, 18, 20); B6(6, 10, 21);
B7(7, 11, 22); B8(8, 12, 23); B9(9, 13, 24).
30. $v = 27, b = 27, r = 3, k = 3, AE = 0.8607, DE = 0.9315$ $\alpha(0,1)^{***}$
Replication 1, and 2 as Design in 29.
- Replication 3
B1(1, 11, 27); B2(2, 12, 19); B3(3, 13, 20); B4(4, 14, 21); B5(5, 15, 22); B6(6, 16, 23);
B7(7, 17, 24); B8(8, 18, 25); B9(9, 10, 26).
31. $v = 27, b = 36, r = 4, k = 3, AE = 0.9243, DE = 0.9603$ $\alpha(0,1)$;
Replication 1 as Design in 30.
- Replication 2
B 1(1, 16, 22); B 2(2, 17, 23); B 3(3, 18, 24); B 4(4, 10, 25); B 5(5, 11, 26); B 6(6, 12, 27);
B 7(7, 13, 19); B 8(8, 14, 20); B 9(9, 15, 21).
- Replication 3 as Design in 30.
- Replication 4
B 1(1, 17, 21); B 2(2, 18, 22); B 3(3, 10, 23); B 4(4, 11, 24); B 5(5, 12, 25); B 6(6, 13, 26);
B 7(7, 14, 27); B 8(8, 15, 19); B 9(9, 16, 20).
32. $v = 27, b = 45, r = 5, k = 3, AE = 0.9436, DE = 0.9711$ $\alpha(0,1)^{***}$
Replication 1
B1(1, 10, 19); B2(2, 11, 20); B3(3, 12, 21); B4(4, 13, 22); B5(5, 14, 23); B6(6, 15, 24);
B7(7, 16, 25); B8(8, 17, 26); B9(9, 18, 27).

Replication 2

B1(1, 13, 27); B2(2, 14, 19); B3(3, 15, 20); B4(4, 16, 21); B5(5, 17, 22); B6(6, 18, 23);
B7(7, 10, 24); B8(8, 11, 25); B9(9, 12, 26).

Replication 3

B1(1, 17, 24); B2(2, 18, 25); B3(3, 10, 26); B4(4, 11, 27); B5(5, 12, 19); B6(6, 13, 20);
B7(7, 14, 21); B8(8, 15, 22); B9(9, 16, 23).

Replication 4

B1(1, 12, 25); B2(2, 13, 26); B3(3, 14, 27); B4(4, 15, 19); B5(5, 16, 20); B6(6, 17, 21);
B7(7, 18, 22); B8(8, 10, 23); B9(9, 11, 24).

Replication 5

B1(1, 18, 20); B2(2, 10, 21); B3(3, 11, 22); B4(4, 12, 23); B5(5, 13, 24); B6(6, 14, 25);
B7(7, 15, 26); B8(8, 16, 27); B9(9, 17, 19).

33. $v = 30, b = 20, r = 2, k = 3, AE = 0.6734, DE = 0.8519$ $\alpha(0,1)^{***}$

Replication 1

B1(1, 11, 21); B2(2, 12, 22); B3(3, 13, 23); B4(4, 14, 24); B5(5, 15, 25); B6(6, 16, 26);
B7(7, 17, 27); B8(8, 18, 28); B9(9, 19, 29); B10(10, 20, 30).

Replication 2

B1(1, 20, 28); B2(2, 11, 29); B3(3, 12, 30); B4(4, 13, 21); B5(5, 14, 22); B6(6, 15, 23);
B7(7, 16, 24); B8(8, 17, 25); B9(9, 18, 26); B10(10, 19, 27).

34. $v = 30, b = 30, r = 3, k = 3, AE = 0.8506, DE = 0.9275$ $\alpha(0,1);$

Replication 1 as Design in 33.

Replication 2

B1(1, 20, 26); B2(2, 11, 27); B3(3, 12, 28); B4(4, 13, 29); B5(5, 14, 30); B6(6, 15, 21);
B7(7, 16, 22); B8(8, 17, 23); B9(9, 18, 24); B10(10, 19, 25).

Replication 3

B1(1, 18, 25); B2(2, 19, 26); B3(3, 20, 27); B4(4, 11, 28); B5(5, 12, 29); B6(6, 13, 30);
B7(7, 14, 21); B8(8, 15, 22); B9(9, 16, 23); B10(10, 17, 24).

35. $v = 30, b = 40, r = 4, k = 3, AE = 0.9170, DE = 0.9571$ $\alpha(0,1)^{**};$

Replication 1, 2 and 3 as Design in 34.

Replication 4

B 1(1, 17, 29); B 2(2, 18, 30); B 3(3, 19, 21); B 4(4, 20, 22); B 5(5, 11, 23); B 6(6, 12, 24);
B 7(7, 13, 25); B 8(8, 14, 26); B 9(9, 15, 27); B10(10, 16, 28).

36. $v = 30, b = 50, r = 5, k = 3, AE = 0.9401, DE = 0.9692$ $\alpha(0,1)^{***}$

Replication 1, 2, 3 and 4 as Design in 35.

Replication 5

B1(1, 12, 23); B2(2, 13, 24); B3(3, 14, 25); B4(4, 15, 26); B5(5, 16, 27); B6(6, 17, 28);
B7(7, 18, 29); B8(8, 19, 30); B9(9, 20, 21); B10(10, 11, 22).

37. $v = 33, b = 22, r = 2, k = 3, AE = 0.6542, DE = 0.8462$ $\alpha(0,1);$

Replication 1

B1(1, 12, 23); B2(2, 13, 24); B3(3, 14, 25); B4(4, 15, 26); B5(5, 16, 27); B6(6, 17, 28);
B7(7, 18, 29); B8(8, 19, 30); B9(9, 20, 31); B10(10, 21, 32); B11(11, 22, 33).

Replication 2

B1(1, 17, 25); B2(2, 18, 26); B3(3, 19, 27); B4(4, 20, 28); B5(5, 21, 29); B6(6, 22, 30);
B7(7, 12, 31); B8(8, 13, 32); B9(9, 14, 33); B10(10, 15, 23); B11(11, 16, 24).

38. $v = 33, b = 33, r = 3, k = 3, AE = 0.8471, DE = 0.9253$ $\alpha(0,1)$;

Replication 1

B1(1, 12, 23); B2(2, 13, 24); B3(3, 14, 25); B4(4, 15, 26); B5(5, 16, 27); B6(6, 17, 28);
B7(7, 18, 29); B8(8, 19, 30); B9(9, 20, 31); B10(10, 21, 32); B11(11, 22, 33).

Replication 2

B1(1, 18, 27); B2(2, 19, 28); B3(3, 20, 29); B4(4, 21, 30); B5(5, 22, 31); B6(6, 12, 32);
B7(7, 13, 33); B8(8, 14, 23); B9(9, 15, 24); B10(10, 16, 25); B11(11, 17, 26).

Replication 3

B1(1, 21, 31); B2(2, 22, 32); B3(3, 12, 33); B4(4, 13, 23); B5(5, 14, 24); B6(6, 15, 25);
B7(7, 16, 26); B8(8, 17, 27); B9(9, 18, 28); B10(10, 19, 29); B11(11, 20, 30).

39. $v = 33, b = 44, r = 4, k = 3, AE = 0.9108, DE = 0.9544$ $\alpha(0,1)$;

Replication 1

B1(1, 12, 23); B2(2, 13, 24); B3(3, 14, 25); B4(4, 15, 26); B5(5, 16, 27); B6(6, 17, 28);
B7(7, 18, 29); B8(8, 19, 30); B9(9, 20, 31); B10(10, 21, 32); B11(11, 22, 33).

Replication 2

B1(1, 14, 26); B2(2, 15, 27); B3(3, 16, 28); B4(4, 17, 29); B5(5, 18, 30); B6(6, 19, 31);
B7(7, 20, 32); B8(8, 21, 33); B9(9, 22, 23); B10(10, 12, 24); B11(11, 13, 25).

Replication 3

B1(1, 20, 27); B2(2, 21, 28); B3(3, 22, 29); B4(4, 12, 30); B5(5, 13, 31); B6(6, 14, 32);
B7(7, 15, 33); B8(8, 16, 23); B9(9, 17, 24); B10(10, 18, 25); B11(11, 19, 26).

Replication 4

B1(1, 13, 29); B2(2, 14, 30); B3(3, 15, 31); B4(4, 16, 32); B5(5, 17, 33); B6(6, 18, 23);
B7(7, 19, 24); B8(8, 20, 25); B9(9, 21, 26); B10(10, 22, 27); B11(11, 12, 28).

40. $v = 33, b = 55, r = 5, k = 3, AE = 0.9364, DE = 0.9674$ $\alpha(0,1)^{***}$

Replication 1

B1(1, 12, 23); B2(2, 13, 24); B3(3, 14, 25); B4(4, 15, 26); B5(5, 16, 27); B6(6, 17, 28);
B7(7, 18, 29); B8(8, 19, 30); B9(9, 20, 31); B10(10, 21, 32); B11(11, 22, 33).

Replication 2

B1(1, 16, 26); B2(2, 17, 27); B3(3, 18, 28); B4(4, 19, 29); B5(5, 20, 30); B6(6, 21, 31);
B7(7, 22, 32); B8(8, 12, 33); B9(9, 13, 23); B10(10, 14, 24); B11(11, 15, 25).

Replication 3

B1(1, 21, 27); B2(2, 22, 28); B3(3, 12, 29); B4(4, 13, 30); B5(5, 14, 31); B6(6, 15, 32);
B7(7, 16, 33); B8(8, 17, 23); B9(9, 18, 24); B10(10, 19, 25); B11(11, 20, 26).

Replication 4

B1(1, 18, 30); B2(2, 19, 31); B3(3, 20, 32); B4(4, 21, 33); B5(5, 22, 23); B6(6, 12, 24);
B7(7, 13, 25); B8(8, 14, 26); B9(9, 15, 27); B10(10, 16, 28); B11(11, 17, 29).

Replication 5

B1(1, 22, 25); B2(2, 12, 26); B3(3, 13, 27); B4(4, 14, 28); B5(5, 15, 29); B6(6, 16, 30);
B7(7, 17, 31); B8(8, 18, 32); B9(9, 19, 33); B10(10, 20, 23); B11(11, 21, 24).

41. $v = 36, b = 24, r = 2, k = 3, AE = 0.6509, DE = 0.8434$ $\alpha(0,1)^{***}$

Replication 1
 B1(1, 13, 25); B2(2, 14, 26); B3(3, 15, 27); B4(4, 16, 28); B5(5, 17, 29); B6(6, 18, 30);
 B7(7, 19, 31); B8(8, 20, 32); B9(9, 21, 33); B10(10, 22, 34); B11(11, 23, 35); B12(12, 24, 36).

Replication 2
 B1(1, 22, 26); B2(2, 23, 27); B3(3, 24, 28); B4(4, 13, 29); B5(5, 14, 30); B6(6, 15, 31);
 B7(7, 16, 32); B8(8, 17, 33); B9(9, 18, 34); B10(10, 19, 35); B11(11, 20, 36); B12(12, 21, 25).

42. $v = 36, b = 36, r = 3, k = 3, AE = 0.8403, DE = 0.9225$ $\alpha(0,1)^{***}$

Replication 1
 B 1(1, 13, 25); B 2(2, 14, 26); B 3(3, 15, 27); B 4(4, 16, 28); B 5(5, 17, 29); B 6(6, 18, 30);
 B 7(7, 19, 31); B 8(8, 20, 32); B 9(9, 21, 33); B10(10, 22, 34); B11(11, 23, 35); B12(12, 24, 36).

Replication 2
 B 1(1, 18, 34); B 2(2, 19, 35); B 3(3, 20, 36); B 4(4, 21, 25); B 5(5, 22, 26); B 6(6, 23, 27);
 B 7(7, 24, 28); B 8(8, 13, 29); B 9(9, 14, 30); B10(10, 15, 31); B11(11, 16, 32); B12(12, 17, 33).

Replication 3
 B 1(1, 19, 33); B 2(2, 20, 34); B 3(3, 21, 35); B 4(4, 22, 36); B 5(5, 23, 25); B 6(6, 24, 26);
 B 7(7, 13, 27); B 8(8, 14, 28); B 9(9, 15, 29); B10(10, 16, 30); B11(11, 17, 31); B12(12, 18, 32).

43. $v = 36, b = 48, r = 4, k = 3, AE = 0.9052, DE = 0.9520$ $\alpha(0,1);$

Replication 1
 B1(1, 13, 25); B2(2, 14, 26); B3(3, 15, 27); B4(4, 16, 28); B5(5, 17, 29); B6(6, 18, 30);
 B7(7, 19, 31); B8(8, 20, 32); B9(9, 21, 33); B10(10, 22, 34); B11(11, 23, 35); B12(12, 24, 36).

Replication 2
 B1(1, 23, 32); B2(2, 24, 33); B3(3, 13, 34); B4(4, 14, 35); B5(5, 15, 36); B6(6, 16, 25);
 B7(7, 17, 26); B8(8, 18, 27); B9(9, 19, 28); B10(10, 20, 29); B11(11, 21, 30); B12(12, 22, 31).

Replication 3
 B1(1, 18, 33); B2(2, 19, 34); B3(3, 20, 35); B4(4, 21, 36); B5(5, 22, 25); B6(6, 23, 26);
 B7(7, 24, 27); B8(8, 13, 28); B9(9, 14, 29); B10(10, 15, 30); B11(11, 16, 31); B12(12, 17, 32).

Replication 4
 B1(1, 14, 31); B2(2, 15, 32); B3(3, 16, 33); B4(4, 17, 34); B5(5, 18, 35); B6(6, 19, 36);
 B7(7, 20, 25); B8(8, 21, 26); B9(9, 22, 27); B10(10, 23, 28); B11(11, 24, 29); B12(12, 13, 30).

44. $v = 36, b = 60, r = 5, k = 3, AE = 0.9334, DE = 0.9658$ $\alpha(0,1)^{***}$

Replication 1
 B1(1, 13, 25); B2(2, 14, 26); B3(3, 15, 27); B4(4, 16, 28); B5(5, 17, 29); B6(6, 18, 30);
 B7(7, 19, 31); B8(8, 20, 32); B9(9, 21, 33); B10(10, 22, 34); B11(11, 23, 35); B12(12, 24, 36).

Replication 2
 B1(1, 23, 30); B2(2, 24, 31); B3(3, 13, 32); B4(4, 14, 33); B5(5, 15, 34); B6(6, 16, 35);
 B7(7, 17, 36); B8(8, 18, 25); B9(9, 19, 26); B10(10, 20, 27); B11(11, 21, 28); B12(12, 22, 29).

Replication 3
 B1(1, 15, 36); B2(2, 16, 25); B3(3, 17, 26); B4(4, 18, 27); B5(5, 19, 28); B6(6, 20, 29);
 B7(7, 21, 30); B8(8, 22, 31); B9(9, 23, 32); B10(10, 24, 33); B11(11, 13, 34); B12(12, 14, 35).

Replication 4
 B1(1, 14, 32); B2(2, 15, 33); B3(3, 16, 34); B4(4, 17, 35); B5(5, 18, 36); B6(6, 19, 25);
 B7(7, 20, 26); B8(8, 21, 27); B9(9, 22, 28); B10(10, 23, 29); B11(11, 24, 30); B12(12, 13, 31).

Replication 5

B1(1, 20, 28); B2(2, 21, 29); B3(3, 22, 30); B4(4, 23, 31); B5(5, 24, 32); B6(6, 13, 33);
B7(7, 14, 34); B8(8, 15, 35); B9(9, 16, 36); B10(10, 17, 25); B11(11, 18, 26); B12(12, 19, 27).

45. $v = 39, b = 26, r = 2, k = 3, AE = 0.6458, DE = 0.8406$ $\alpha(0,1)$;

Replication 1

B1(1, 14, 27); B2(2, 15, 28); B3(3, 16, 29); B4(4, 17, 30); B5(5, 18, 31); B6(6, 19, 32);
B7(7, 20, 33); B8(8, 21, 34); B9(9, 22, 35); B10(10, 23, 36); B11(11, 24, 37); B12(12, 25, 38);
B13(13, 26, 39).

Replication 2

B1(1, 20, 35); B2(2, 21, 36); B3(3, 22, 37); B4(4, 23, 38); B5(5, 24, 39); B6(6, 25, 27);
B7(7, 26, 28); B8(8, 14, 29); B9(9, 15, 30); B10(10, 16, 31); B11(11, 17, 32); B12(12, 18, 33);
B13(13, 19, 34).

46. $v = 39, b = 39, r = 3, k = 3, AE = 0.8343, DE = 0.9202$ $\alpha(0,1)^{***}$

Replication 1

B1(1, 14, 27); B2(2, 15, 28); B3(3, 16, 29); B4(4, 17, 30); B5(5, 18, 31); B6(6, 19, 32);
B7(7, 20, 33); B8(8, 21, 34); B9(9, 22, 35); B10(10, 23, 36); B11(11, 24, 37); B12(12, 25, 38);
B13(13, 26, 39).

Replication 2

B1(1, 21, 36); B2(2, 22, 37); B3(3, 23, 38); B4(4, 24, 39); B5(5, 25, 27); B6(6, 26, 28);
B7(7, 14, 29); B8(8, 15, 30); B9(9, 16, 31); B10(10, 17, 32); B11(11, 18, 33); B12(12, 19, 34);
B13(13, 20, 35).

Replication 3

B1(1, 26, 30); B2(2, 14, 31); B3(3, 15, 32); B4(4, 16, 33); B5(5, 17, 34); B6(6, 18, 35);
B7(7, 19, 36); B8(8, 20, 37); B9(9, 21, 38); B10(10, 22, 39); B11(11, 23, 27); B12(12, 24, 28);
B13(13, 25, 29).

47. $v = 39, b = 52, r = 4, k = 3, AE = 0.9011, DE = 0.9502$ $\alpha(0,1)^{***}$

Replication 1

B 1(1, 14, 27); B 2(2, 15, 28); B 3(3, 16, 29); B 4(4, 17, 30); B 5(5, 18, 31); B 6(6, 19, 32);
B 7(7, 20, 33); B 8(8, 21, 34); B 9(9, 22, 35); B10(10, 23, 36); B11(11, 24, 37); B12(12, 25, 38);
B13(13, 26, 39).

Replication 2

B 1(1, 22, 30); B 2(2, 23, 31); B 3(3, 24, 32); B 4(4, 25, 33); B 5(5, 26, 34); B 6(6, 14, 35);
B 7(7, 15, 36); B 8(8, 16, 37); B 9(9, 17, 38); B10(10, 18, 39); B11(11, 19, 27); B12(12, 20, 28);
B13(13, 21, 29).

Replication 3

B 1(1, 16, 31); B 2(2, 17, 32); B 3(3, 18, 33); B 4(4, 19, 34); B 5(5, 20, 35); B 6(6, 21, 36);
B 7(7, 22, 37); B 8(8, 23, 38); B 9(9, 24, 39); B10(10, 25, 27); B11(11, 26, 28); B12(12, 14, 29);
B13(13, 15, 30).

Replication 4

B 1(1, 26, 38); B 2(2, 14, 39); B 3(3, 15, 27); B 4(4, 16, 28); B 5(5, 17, 29); B 6(6, 18, 30);
B 7(7, 19, 31); B 8(8, 20, 32); B 9(9, 21, 33); B10(10, 22, 34); B11(11, 23, 35); B12(12, 24, 36);
B13(13, 25, 37).

48. $v = 39, b = 65, r = 5, k = 3, AE = 0.9327, DE = 0.9652$ $\alpha(0,1)^{***}$

Replication 1

B1(1, 14, 27); B2(2, 15, 28); B3(3, 16, 29); B4(4, 17, 30); B5(5, 18, 31); B6(6, 19, 32);
B7(7, 20, 33); B8(8, 21, 34); B9(9, 22, 35); B10(10, 23, 36); B11(11, 24, 37); B12(12, 25, 38);
B13(13, 26, 39).

Replication 2

B1(1, 20, 36); B2(2, 21, 37); B3(3, 22, 38); B4(4, 23, 39); B5(5, 24, 27); B6(6, 25, 28);
B7(7, 26, 29); B8(8, 14, 30); B9(9, 15, 31); B10(10, 16, 32); B11(11, 17, 33); B12(12, 18, 34);
B13(13, 19, 35).

Replication 3

B1(1, 21, 29); B2(2, 22, 30); B3(3, 23, 31); B4(4, 24, 32); B5(5, 25, 33); B6(6, 26, 34);
B7(7, 14, 35); B8(8, 15, 36); B9(9, 16, 37); B10(10, 17, 38); B11(11, 18, 39); B12(12, 19, 27);
B13(13, 20, 28).

Replication 4

B1(1, 17, 28); B2(2, 18, 29); B3(3, 19, 30); B4(4, 20, 31); B5(5, 21, 32); B6(6, 22, 33);
B7(7, 23, 34); B8(8, 24, 35); B9(9, 25, 36); B10(10, 26, 37); B11(11, 14, 38); B12(12, 15, 39);
B13(13, 16, 27).

Replication 5

B1(1, 22, 39); B2(2, 23, 27); B3(3, 24, 28); B4(4, 25, 29); B5(5, 26, 30); B6(6, 14, 31);
B7(7, 15, 32); B8(8, 16, 33); B9(9, 17, 34); B10(10, 18, 35); B11(11, 19, 36); B12(12, 20, 37);
B13(13, 21, 38).

49. $v = 42, b = 28, r = 2, k = 3, AE = 0.6342, DE = 0.8371$ $\alpha(0,1)$;

Replication 1

B1(1, 15, 29); B2(2, 16, 30); B3(3, 17, 31); B4(4, 18, 32); B5(5, 19, 33); B6(6, 20, 34);
B7(7, 21, 35); B8(8, 22, 36); B9(9, 23, 37); B10(10, 24, 38); B11(11, 25, 39); B12(12, 26, 40);
B13(13, 27, 41); B14(14, 28, 42).

Replication 2

B1(1, 25, 42); B2(2, 26, 29); B3(3, 27, 30); B4(4, 28, 31); B5(5, 15, 32); B6(6, 16, 33);
B7(7, 17, 34); B8(8, 18, 35); B9(9, 19, 36); B10(10, 20, 37); B11(11, 21, 38); B12(12, 22, 39);
B13(13, 23, 40); B14(14, 24, 41).

50. $v = 42, b = 42, r = 3, k = 3, AE = 0.8320, DE = 0.9187$ $\alpha(0,1)$;

Replication 1

B 1(1, 15, 29); B 2(2, 16, 30); B 3(3, 17, 31); B 4(4, 18, 32); B 5(5, 19, 33); B 6(6, 20, 34);
B 7(7, 21, 35); B 8(8, 22, 36); B 9(9, 23, 37); B10(10, 24, 38); B11(11, 25, 39); B12(12, 26, 40);
B13(13, 27, 41); B14(14, 28, 42).

Replication 2

B 1(1, 23, 30); B 2(2, 24, 31); B 3(3, 25, 32); B 4(4, 26, 33); B 5(5, 27, 34); B 6(6, 28, 35);
B 7(7, 15, 36); B 8(8, 16, 37); B 9(9, 17, 38); B10(10, 18, 39); B11(11, 19, 40); B12(12, 20, 41);
B13(13, 21, 42); B14(14, 22, 29).

Replication 3

B 1(1, 18, 42); B 2(2, 19, 29); B 3(3, 20, 30); B 4(4, 21, 31); B 5(5, 22, 32); B 6(6, 23, 33);
B 7(7, 24, 34); B 8(8, 25, 35); B 9(9, 26, 36); B10(10, 27, 37); B11(11, 28, 38); B12(12, 15, 39);
B13(13, 16, 40); B14(14, 17, 41).

51. $v = 42, b = 56, r = 4, k = 3, AE = 0.8969, DE = 0.9484$ $\alpha(0,1)^{***}$

Replication 1

B1(1, 15, 29); B2(2, 16, 30); B3(3, 17, 31); B4(4, 18, 32); B5(5, 19, 33); B6(6, 20, 34);
B7(7, 21, 35); B8(8, 22, 36); B9(9, 23, 37); B10(10, 24, 38); B11(11, 25, 39); B12(12, 26, 40);
B13(13, 27, 41); B14(14, 28, 42).

Replication 2

B1(1, 27, 38); B2(2, 28, 39); B3(3, 15, 40); B4(4, 16, 41); B5(5, 17, 42); B6(6, 18, 29);
B7(7, 19, 30); B8(8, 20, 31); B9(9, 21, 32); B10(10, 22, 33); B11(11, 23, 34); B12(12, 24, 35);
B13(13, 25, 36); B14(14, 26, 37).

Replication 3

B1(1, 28, 35); B2(2, 15, 36); B3(3, 16, 37); B4(4, 17, 38); B5(5, 18, 39); B6(6, 19, 40);
B7(7, 20, 41); B8(8, 21, 42); B9(9, 22, 29); B10(10, 23, 30); B11(11, 24, 31); B12(12, 25, 32);
B13(13, 26, 33); B14(14, 27, 34).

Replication 4

B1(1, 25, 30); B2(2, 26, 31); B3(3, 27, 32); B4(4, 28, 33); B5(5, 15, 34); B6(6, 16, 35);
B7(7, 17, 36); B8(8, 18, 37); B9(9, 19, 38); B10(10, 20, 39); B11(11, 21, 40); B12(12, 22, 41);
B13(13, 23, 42); B14(14, 24, 29).

52. $v = 42, b = 70, r = 5, k = 3, AE = 0.9307, DE = 0.9642$ $\alpha(0,1)^{***}$

Replication 1

B1(1, 15, 29); B2(2, 16, 30); B3(3, 17, 31); B4(4, 18, 32); B5(5, 19, 33); B6(6, 20, 34);
B7(7, 21, 35); B8(8, 22, 36); B9(9, 23, 37); B10(10, 24, 38); B11(11, 25, 39); B12(12, 26, 40);
B13(13, 27, 41); B14(14, 28, 42).

Replication 2

B1(1, 16, 42); B2(2, 17, 29); B3(3, 18, 30); B4(4, 19, 31); B5(5, 20, 32); B6(6, 21, 33);
B7(7, 22, 34); B8(8, 23, 35); B9(9, 24, 36); B10(10, 25, 37); B11(11, 26, 38); B12(12, 27, 39);
B13(13, 28, 40); B14(14, 15, 41).

Replication 3

B1(1, 20, 39); B2(2, 21, 40); B3(3, 22, 41); B4(4, 23, 42); B5(5, 24, 29); B6(6, 25, 30);
B7(7, 26, 31); B8(8, 27, 32); B9(9, 28, 33); B10(10, 15, 34); B11(11, 16, 35); B12(12, 17, 36);
B13(13, 18, 37); B14(14, 19, 38).

Replication 4

B1(1, 21, 36); B2(2, 22, 37); B3(3, 23, 38); B4(4, 24, 39); B5(5, 25, 40); B6(6, 26, 41);
B7(7, 27, 42); B8(8, 28, 29); B9(9, 15, 30); B10(10, 16, 31); B11(11, 17, 32); B12(12, 18, 33);
B13(13, 19, 34); B14(14, 20, 35).

Replication 5

B1(1, 26, 37); B2(2, 27, 38); B3(3, 28, 39); B4(4, 15, 40); B5(5, 16, 41); B6(6, 17, 42);
B7(7, 18, 29); B8(8, 19, 30); B9(9, 20, 31); B10(10, 21, 32); B11(11, 22, 33); B12(12, 23, 34);
B13(13, 24, 35); B14(14, 25, 36).

53. $v = 45, b = 30, r = 2, k = 3, AE = 0.6242, DE = 0.8341$ $\alpha(0,1)^{***}$

Replication 1

B1(1, 16, 31); B2(2, 17, 32); B3(3, 18, 33); B4(4, 19, 34); B5(5, 20, 35); B6(6, 21, 36);
B7(7, 22, 37); B8(8, 23, 38); B9(9, 24, 39); B10(10, 25, 40); B11(11, 26, 41); B12(12, 27, 42);
B13(13, 28, 43); B14(14, 29, 44); B15(15, 30, 45).

Replication 2

B1(1, 24, 37); B2(2, 25, 38); B3(3, 26, 39); B4(4, 27, 40); B5(5, 28, 41); B6(6, 29, 42);
B7(7, 30, 43); B8(8, 16, 44); B9(9, 17, 45); B10(10, 18, 31); B11(11, 19, 32); B12(12, 20, 33);
B13(13, 21, 34); B14(14, 22, 35); B15(15, 23, 36).

54. $v = 45, b = 45, r = 3, k = 3, AE = 0.8285, DE = 0.9172$

$\alpha(0,1)^{***}$

Replication 1

B1(1, 16, 31); B2(2, 17, 32); B3(3, 18, 33); B4(4, 19, 34); B5(5, 20, 35); B6(6, 21, 36);
B7(7, 22, 37); B8(8, 23, 38); B9(9, 24, 39); B10(10, 25, 40); B11(11, 26, 41); B12(12, 27, 42);
B13(13, 28, 43); B14(14, 29, 44); B15(15, 30, 45).

Replication 2

B1(1, 30, 44); B2(2, 16, 45); B3(3, 17, 31); B4(4, 18, 32); B5(5, 19, 33); B6(6, 20, 34);
B7(7, 21, 35); B8(8, 22, 36); B9(9, 23, 37); B10(10, 24, 38); B11(11, 25, 39); B12(12, 26, 40);
B13(13, 27, 41); B14(14, 28, 42); B15(15, 29, 43).

Replication 3

B1(1, 20, 38); B2(2, 21, 39); B3(3, 22, 40); B4(4, 23, 41); B5(5, 24, 42); B6(6, 25, 43);
B7(7, 26, 44); B8(8, 27, 45); B9(9, 28, 31); B10(10, 29, 32); B11(11, 30, 33); B12(12, 16, 34);
B13(13, 17, 35); B14(14, 18, 36); B15(15, 19, 37).

55. $v = 45, b = 60, r = 4, k = 3, AE = 0.8935, DE = 0.9469$

$\alpha(0,1)$;

Replication 1 and 2 as Design in 54.

Replication 3

B 1(1, 28, 34); B 2(2, 29, 35); B 3(3, 30, 36); B 4(4, 16, 37);
B 5(5, 17, 38); B 6(6, 18, 39); B 7(7, 19, 40); B 8(8, 20, 41);
B 9(9, 21, 42); B10(10, 22, 43); B11(11, 23, 44); B12(12, 24, 45);
B13(13, 25, 31); B14(14, 26, 32); B15(15, 27, 33).

Replication 4

B 1(1, 21, 38); B 2(2, 22, 39); B 3(3, 23, 40); B 4(4, 24, 41);
B 5(5, 25, 42); B 6(6, 26, 43); B 7(7, 27, 44); B 8(8, 28, 45);
B 9(9, 29, 31); B10(10, 30, 32); B11(11, 16, 33); B12(12, 17, 34);
B13(13, 18, 35); B14(14, 19, 36); B15(15, 20, 37).

56. $v = 45, b = 75, r = 5, k = 3, AE = 0.9268, DE = 0.9627$

$\alpha(0,1)^{***}$

Replication 1

B1(1, 16, 31); B2(2, 17, 32); B3(3, 18, 33); B4(4, 19, 34); B5(5, 20, 35); B6(6, 21, 36);
B7(7, 22, 37); B8(8, 23, 38); B9(9, 24, 39); B10(10, 25, 40); B11(11, 26, 41); B12(12, 27, 42);
B13(13, 28, 43); B14(14, 29, 44); B15(15, 30, 45);

Replication 2

B1(1, 17, 44); B2(2, 18, 45); B3(3, 19, 31); B4(4, 20, 32); B5(5, 21, 33); B6(6, 22, 34);
B7(7, 23, 35); B8(8, 24, 36); B9(9, 25, 37); B10(10, 26, 38); B11(11, 27, 39); B12(12, 28, 40);
B13(13, 29, 41); B14(14, 30, 42); B15(15, 16, 43);

Replication 3

B1(1, 26, 33); B2(2, 27, 34); B3(3, 28, 35); B4(4, 29, 36); B5(5, 30, 37); B6(6, 16, 38);
B7(7, 17, 39); B8(8, 18, 40); B9(9, 19, 41); B10(10, 20, 42); B11(11, 21, 43); B12(12, 22, 44);
B13(13, 23, 45); B14(14, 24, 31); B15(15, 25, 32);

Replication 4

B1(1, 23, 42); B2(2, 24, 43); B3(3, 25, 44); B4(4, 26, 45); B5(5, 27, 31); B6(6, 28, 32);
B7(7, 29, 33); B8(8, 30, 34); B9(9, 16, 35); B10(10, 17, 36); B11(11, 18, 37); B12(12, 19, 38);
B13(13, 20, 39); B14(14, 21, 40); B15(15, 22, 41);

Replication 5

B1(1, 28, 37); B2(2, 29, 38); B3(3, 30, 39); B4(4, 16, 40); B5(5, 17, 41); B6(6, 18, 42);
B7(7, 19, 43); B8(8, 20, 44); B9(9, 21, 45); B10(10, 22, 31); B11(11, 23, 32); B12(12, 24, 33);
B13(13, 25, 34); B14(14, 26, 35); B15(15, 27, 36);

BLOCK SIZE 4

57. $v = 8, b = 4, r = 2, k = 4, AE = 0.9074, DE = 0.9571$ $\alpha(0,1,2)$

Replication 1

B1(1, 3, 5, 7); B2(2, 4, 6, 8).

Replication 2

B1(1, 3, 6, 8); B2(2, 4, 5, 7).

58. $v = 8, b = 6, r = 3, k = 4, AE = 0.9608, DE = 0.9806$ $\alpha(0,1,2), S6$

Replication 1 and 2 as design in 57.

Replication 3

B1(1, 4, 5, 8); B2(2, 3, 6, 7).

59. $v = 8, b = 8, r = 4, k = 4, AE = 0.9800, DE = 0.9898$ $\alpha(0,2), SR36$

Replication 1,2 and 3 as design in 58.

Replication 4

B1(1, 4, 6, 7); B2(2, 3, 5, 8).

60. $v = 8, b = 10, r = 5, k = 4, AE = 0.9703, DE = 0.9856$ $\alpha(0,2,3)\$$

Replication 1,2,3 and 4 as design in 59.

Replication 5

B1(1, 3, 5, 8); B2(2, 4, 6, 7).

61. $v = 12, b = 6, r = 2, k = 4, AE = 0.8655, DE = 0.9388$ $\alpha(0,1,2)$

Replication 1

B1(1, 4, 7, 10); B2(2, 5, 8, 11); B3(3, 6, 9, 12).

Replication 2

B1(1, 6, 8, 11); B2(2, 4, 9, 12); B3(3, 5, 7, 10).

62. $v = 12, b = 9, r = 3, k = 4, AE = 0.9380, DE = 0.9705$ $\alpha(0,1,3)\$$

Replication 1

B1(1, 4, 7, 10); B2(2, 5, 8, 11); B3(3, 6, 9, 12).

Replication 2

B1(1, 5, 9, 12); B2(2, 6, 7, 10); B3(3, 4, 8, 11).

Replication 3

B1(1, 6, 8, 11); B2(2, 4, 9, 12); B3(3, 5, 7, 10).

63. $v = 12, b = 12, r = 4, k = 4, AE = 0.9644, DE = 0.9829$ $\alpha(0,1,2)\$$

Replication 1

B1(1, 4, 7, 10); B2(2, 5, 8, 11); B3(3, 6, 9, 12).

Replication 2

B1(1, 6, 8, 10); B2(2, 4, 9, 11); B3(3, 5, 7, 12).

Replication 3

B1(1, 5, 9, 11); B2(2, 6, 7, 12); B3(3, 4, 8, 10).

Replication 4

B1(1, 4, 8, 12); B2(2, 5, 9, 10); B3(3, 6, 7, 11).

64. $v = 12, b = 15, r = 5, k = 4, AE = 0.9747, DE = 0.9870$ $\alpha(0,1,2)$

Replication 1

B1(1, 4, 7, 10); B2(2, 5, 8, 11); B3(3, 6, 9, 12).

Replication 2

B1(1, 5, 9, 12); B2(2, 6, 7, 10); B3(3, 4, 8, 11).

Replication 3

B1(1, 4, 8, 12); B2(2, 5, 9, 10); B3(3, 6, 7, 11).

Replication 4

B1(1, 6, 9, 11); B2(2, 4, 7, 12); B3(3, 5, 8, 10).

Replication 5

B1(1, 5, 7, 11); B2(2, 6, 8, 12); B3(3, 4, 9, 10).

65. $v = 16, b = 8, r = 2, k = 4, AE = 0.8929, DE = 0.9473$ $\alpha(0,1), \text{LS28, Square-Lattice}$

Replication 1

B1(1, 5, 9, 13); B2(2, 6, 10, 14); B3(3, 7, 11, 15); B4(4, 8, 12, 16).

Replication 2

B1(1, 6, 12, 15); B2(2, 7, 9, 16); B3(3, 8, 10, 13); B4(4, 5, 11, 14).

66. $v = 16, b = 12, r = 3, k = 4, AE = 0.9422, DE = 0.9717$ $\alpha(0,1,2)\$$

Replication 1

B1(1, 5, 9, 13); B2(2, 6, 10, 14); B3(3, 7, 11, 15); B4(4, 8, 12, 16).

Replication 2

B1(1, 8, 10, 15); B2(2, 5, 11, 16); B3(3, 6, 12, 13); B4(4, 7, 9, 14).

Replication 3

B1(1, 7, 12, 14); B2(2, 8, 9, 15); B3(3, 5, 10, 16); B4(4, 6, 11, 13).

67. $v = 16, b = 16, r = 4, k = 4, AE = 0.9623, DE = 0.9816$ $\alpha(0,1,2)$

Replication 1

B1(1, 5, 9, 13); B2(2, 6, 10, 14); B3(3, 7, 11, 15); B4(4, 8, 12, 16).

Replication 2

B1(1, 6, 11, 14); B2(2, 7, 12, 15); B3(3, 8, 9, 16); B4(4, 5, 10, 13).

Replication 3

B1(1, 7, 12, 16); B2(2, 8, 9, 13); B3(3, 5, 10, 14); B4(4, 6, 11, 15).

Replication 4

B1(1, 8, 10, 15);B2(2, 5, 11, 16);B3(3, 6, 12, 13);B4(4, 7, 9, 14).

68. $v = 16, b = 20, r = 5, k = 4, AE = 0.9760, DE = 0.9878$ $\alpha(0,1,2)$

Replication 1

B1(1, 5, 9, 13); B2(2, 6, 10, 14);B3(3, 7, 11, 15);B4(4, 8, 12, 16).

Replication 2

B1(1, 8, 12, 15);B2(2, 5, 9, 16); B3(3, 6, 10, 13);B4(4, 7, 11, 14).

Replication 3

B1(1, 6, 11, 16);B2(2, 7, 12, 13);B3(3, 8, 9, 14); B4(4, 5, 10, 15).

Replication 4

B1(1, 7, 9, 14); B2(2, 8, 10, 15);B3(3, 5, 11, 16);B4(4, 6, 12, 13).

Replication 5

B1(1, 7, 10, 16);B2(2, 8, 11, 13);B3(3, 5, 12, 14);B4(4, 6, 9, 15).

69. $v = 20, b = 10, r = 2, k = 4, AE = 0.8575, DE = 0.9333$ $\alpha(0,1)$, Rect-Lattice

Replication 1

B1(1, 6, 11, 16);B2(2, 7, 12, 17);B3(3, 8, 13, 18);B4(4, 9, 14, 19);B5(5, 10, 15, 20).

Replication 2

B1(1, 10, 14, 17);B2(2, 6, 15, 18);B3(3, 7, 11, 19);B4(4, 8, 12, 20);B5(5, 9, 13, 16).

70. $v = 20, b = 15, r = 3, k = 4, AE = 0.9433, DE = 0.9715$ $\alpha(0,1)$, Rect.-Lattice

Replication 1

B1(1, 6, 11, 16);B2(2, 7, 12, 17);B3(3, 8, 13, 18);B4(4, 9, 14, 19);B5(5, 10, 15, 20).

Replication 2

B1(1, 8, 14, 20);B2(2, 9, 15, 16);B3(3, 10, 11, 17);B4(4, 6, 12, 18);B5(5, 7, 13, 19).

Replication 3

B1(1, 9, 13, 17);B2(2, 10, 14, 18);B3(3, 6, 15, 19);B4(4, 7, 11, 20);B5(5, 8, 12, 16).

71. $v = 20, b = 20, r = 4, k = 4, AE = 0.9735, DE = 0.9862$ $\alpha(0,1)$;

Replication 1

B1(1, 6, 11, 16);B2(2, 7, 12, 17);B3(3, 8, 13, 18);B4(4, 9, 14, 19);B5(5, 10, 15, 20).

Replication 2

B1(1, 7, 15, 19);B2(2, 8, 11, 20);B3(3, 9, 12, 16);B4(4, 10, 13, 17);B5(5, 6, 14, 18).

Replication 3

B1(1, 10, 12, 18);B2(2, 6, 13, 19);B3(3, 7, 14, 20);B4(4, 8, 15, 16);B5(5, 9, 11, 17).

Replication 4

B1(1, 8, 14, 17);B2(2, 9, 15, 18);B3(3, 10, 11, 19);B4(4, 6, 12, 20);B5(5, 7, 13, 16).

72. $v = 20, b = 25, r = 5, k = 4, AE = 0.9890, DE = 0.9941$ $\alpha(0,1)$, SR46

Replication 1

B1(1, 6, 11, 16);B2(2, 7, 12, 17);B3(3, 8, 13, 18);B4(4, 9, 14, 19);B5(5, 10, 15, 20).

Replication 2

B1(1, 7, 13, 19);B2(2, 8, 14, 20);B3(3, 9, 15, 16);B4(4, 10, 11, 17);B5(5, 6, 12, 18).

Replication 3

B1(1, 8, 15, 17);B2(2, 9, 11, 18);B3(3, 10, 12, 19);B4(4, 6, 13, 20);B5(5, 7, 14, 16).

Replication 4

B1(1, 10, 14, 18);B2(2, 6, 15, 19);B3(3, 7, 11, 20);B4(4, 8, 12, 16);B5(5, 9, 13, 17).

Replication 5

B1(1, 9, 12, 20);B2(2, 10, 13, 16); B3(3, 6, 14, 17);B4(4, 7, 15, 18);B5(5, 8, 11, 19).

73. $v = 24, b = 12, r = 2, k = 4, AE = 0.8307, DE = 0.9232$ $\alpha(0,1);$

Replication 1

B 1(1, 7, 13, 19); B 2(2, 8, 14, 20); B 3(3, 9, 15, 21); B 4(4, 10, 16, 22);
B 5(5, 11, 17, 23); B 6(6, 12, 18, 24).

Replication 2

B 1(1, 8, 15, 22); B 2(2, 9, 16, 23); B 3(3, 10, 17, 24); B 4(4, 11, 18, 19);
B 5(5, 12, 13, 20); B 6(6, 7, 14, 21).

74. $v = 24, b = 18, r = 3, k = 4, AE = 0.9283, DE = 0.9649$ $\alpha(0,1);$

Replication 1

B 1(1, 7, 13, 19); B 2(2, 8, 14, 20); B 3(3, 9, 15, 21); B 4(4, 10, 16, 22);
B 5(5, 11, 17, 23); B 6(6, 12, 18, 24).

Replication 2

B 1(1, 10, 14, 23); B 2(2, 11, 15, 24); B 3(3, 12, 16, 19); B 4(4, 7, 17, 20);
B 5(5, 8, 18, 21); B 6(6, 9, 13, 22).

Replication 3

B 1(1, 11, 18, 22); B 2(2, 12, 13, 23); B 3(3, 7, 14, 24);
B 4(4, 8, 15, 19); B 5(5, 9, 16, 20); B 6(6, 10, 17, 21).

75. $v = 24, b = 24, r = 4, k = 4, AE = 0.9619, DE = 0.9809$ $\alpha(0,1);$

Replication 1

B 1(1, 7, 13, 19); B 2(2, 8, 14, 20); B 3(3, 9, 15, 21); B 4(4, 10, 16, 22);
B 5(5, 11, 17, 23); B 6(6, 12, 18, 24).

Replication 2

B 1(1, 10, 15, 20); B 2(2, 11, 16, 21); B 3(3, 12, 17, 22); B 4(4, 7, 18, 23);
B 5(5, 8, 13, 24); B 6(6, 9, 14, 19).

Replication 3

B 1(1, 12, 14, 23); B 2(2, 7, 15, 24); B 3(3, 8, 16, 19); B 4(4, 9, 17, 20);
B 5(5, 10, 18, 21); B 6(6, 11, 13, 22).

Replication 4

B 1(1, 9, 16, 24); B 2(2, 10, 17, 19); B 3(3, 11, 18, 20); B 4(4, 12, 13, 21);
B 5(5, 7, 14, 22); B 6(6, 8, 15, 23).

76. $v = 24, b = 30, r = 5, k = 4, AE = 0.9782, DE = 0.9890$ $\alpha(0,1);$

Replication 1

B 1(1, 7, 13, 19); B 2(2, 8, 14, 20); B 3(3, 9, 15, 21); B 4(4, 10, 16, 22);
B 5(5, 11, 17, 23); B 6(6, 12, 18, 24).

Replication 2

B 1(1, 11, 15, 24); B 2(2, 12, 16, 19); B 3(3, 7, 17, 20); B 4(4, 8, 18, 21);
 B 5(5, 9, 13, 22); B 6(6, 10, 14, 23).

Replication 3

B 1(1, 8, 16, 23); B 2(2, 9, 17, 24); B 3(3, 10, 18, 19); B 4(4, 11, 13, 20);
 B 5(5, 12, 14, 21); B 6(6, 7, 15, 22).

Replication 4

B 1(1, 12, 17, 22); B 2(2, 7, 18, 23); B 3(3, 8, 13, 24); B 4(4, 9, 14, 19);
 B 5(5, 10, 15, 20); B 6(6, 11, 16, 21).

Replication 5

B 1(1, 9, 18, 20); B 2(2, 10, 13, 21); B 3(3, 11, 14, 22); B 4(4, 12, 15, 23);
 B 5(5, 7, 16, 24); B 6(6, 8, 17, 19).

77. $v = 28, b = 14, r = 2, k = 4, AE = 0.8182, DE = 0.9172$

$\alpha(0,1)^{***}$

Replication 1

B1(1, 8, 15, 22); B2(2, 9, 16, 23); B3(3, 10, 17, 24); B4(4, 11, 18, 25);
 B5(5, 12, 19, 26); B6(6, 13, 20, 27); B7(7, 14, 21, 28).

Replication 2

B1(1, 13, 17, 23); B2(2, 14, 18, 24); B3(3, 8, 19, 25); B4(4, 9, 20, 26);
 B5(5, 10, 21, 27); B6(6, 11, 15, 28); B7(7, 12, 16, 22).

78. $v = 28, b = 21, r = 3, k = 4, AE = 0.9205, DE = 0.9611$

$\alpha(0,1)^{***}$

Replication 1

B1(1, 8, 15, 22); B2(2, 9, 16, 23); B3(3, 10, 17, 24); B4(4, 11, 18, 25);
 B5(5, 12, 19, 26); B6(6, 13, 20, 27); B7(7, 14, 21, 28).

Replication 2

B1(1, 11, 21, 27); B2(2, 12, 15, 28); B3(3, 13, 16, 22); B4(4, 14, 17, 23);
 B5(5, 8, 18, 24); B6(6, 9, 19, 25); B7(7, 10, 20, 26).

Replication 3

B1(1, 10, 16, 25); B2(2, 11, 17, 26); B3(3, 12, 18, 27); B4(4, 13, 19, 28);
 B5(5, 14, 20, 22); B6(6, 8, 21, 23); B7(7, 9, 15, 24).

79. $v = 28, b = 28, r = 4, k = 4, AE = 0.9555, DE = 0.9775$

$\alpha(0,1)^{***}$

Replication 1

B 1(1, 8, 15, 22); B 2(2, 9, 16, 23); B 3(3, 10, 17, 24); B 4(4, 11, 18, 25);
 B 5(5, 12, 19, 26); B 6(6, 13, 20, 27); B 7(7, 14, 21, 28).

Replication 2

B 1(1, 9, 21, 26); B 2(2, 10, 15, 27); B 3(3, 11, 16, 28); B 4(4, 12, 17, 22);
 B 5(5, 13, 18, 23); B 6(6, 14, 19, 24); B 7(7, 8, 20, 25).

Replication 3

B 1(1, 14, 18, 27); B 2(2, 8, 19, 28); B 3(3, 9, 20, 22); B 4(4, 10, 21, 23);
 B 5(5, 11, 15, 24); B 6(6, 12, 16, 25); B 7(7, 13, 17, 26).

Replication 4

B 1(1, 10, 19, 25); B 2(2, 11, 20, 26); B 3(3, 12, 21, 27); B 4(4, 13, 15, 28);
 B 5(5, 14, 16, 22); B 6(6, 8, 17, 23); B 7(7, 9, 18, 24).

80. $v = 28, b = 35, r = 5, k = 4, AE = 0.9730, DE = 0.9862$				$\alpha(0,1);$
Replication 1				
B 1(1, 8, 15, 22);	B 2(2, 9, 16, 23);	B 3(3, 10, 17, 24);	B 4(4, 11, 18, 25);	
B 5(5, 12, 19, 26);	B 6(6, 13, 20, 27);	B 7(7, 14, 21, 28).		
Replication 2				
B 1(1, 12, 17, 28);	B 2(2, 13, 18, 22);	B 3(3, 14, 19, 23);	B 4(4, 8, 20, 24);	
B 5(5, 9, 21, 25);	B 6(6, 10, 15, 26);	B 7(7, 11, 16, 27).		
Replication 3				
B 1(1, 10, 16, 25);	B 2(2, 11, 17, 26);	B 3(3, 12, 18, 27);	B 4(4, 13, 19, 28);	
B 5(5, 14, 20, 22);	B 6(6, 8, 21, 23);	B 7(7, 9, 15, 24).		
Replication 4				
B 1(1, 11, 20, 23);	B 2(2, 12, 21, 24);	B 3(3, 13, 15, 25);	B 4(4, 14, 16, 26);	
B 5(5, 8, 17, 27);	B 6(6, 9, 18, 28);	B 7(7, 10, 19, 22).		
Replication 5				
B 1(1, 14, 18, 24);	B 2(2, 8, 19, 25);	B 3(3, 9, 20, 26);	B 4(4, 10, 21, 27);	
B 5(5, 11, 15, 28);	B 6(6, 12, 16, 22);	B 7(7, 13, 17, 23).		
81. $v = 32, b = 16, r = 2, k = 4, AE = 0.8016, DE = 0.9113$				$\alpha(0,1);$
Replication 1				
B1(1, 9, 17, 25);	B2(2, 10, 18, 26);	B3(3, 11, 19, 27);	B4(4, 12, 20, 28);	
B5(5, 13, 21, 29);	B6(6, 14, 22, 30);	B7(7, 15, 23, 31);	B8(8, 16, 24, 32).	
Replication 2				
B1(1, 14, 18, 28);	B2(2, 15, 19, 29);	B3(3, 16, 20, 30);	B4(4, 9, 21, 31);	
B5(5, 10, 22, 32);	B6(6, 11, 23, 25);	B7(7, 12, 24, 26);	B8(8, 13, 17, 27).	
82. $v = 32, b = 24, r = 3, k = 4, AE = 0.9123, DE = 0.9575$				$\alpha(0,1)***$
Replication 1				
B1(1, 9, 17, 25);	B2(2, 10, 18, 26);	B3(3, 11, 19, 27);	B4(4, 12, 20, 28);	
B5(5, 13, 21, 29);	B6(6, 14, 22, 30);	B7(7, 15, 23, 31);	B8(8, 16, 24, 32).	
Replication 2				
B1(1, 12, 19, 30);	B2(2, 13, 20, 31);	B3(3, 14, 21, 32);	B4(4, 15, 22, 25);	
B5(5, 16, 23, 26);	B6(6, 9, 24, 27);	B7(7, 10, 17, 28);	B8(8, 11, 18, 29).	
Replication 3				
B1(1, 14, 23, 29);	B2(2, 15, 24, 30);	B3(3, 16, 17, 31);	B4(4, 9, 18, 32);	
B5(5, 10, 19, 25);	B6(6, 11, 20, 26);	B7(7, 12, 21, 27);	B8(8, 13, 22, 28).	
83. $v = 32, b = 32, r = 4, k = 4, AE = 0.9496, DE = 0.9747$				$\alpha(0,1);$
Replication 1				
B 1(1, 9, 17, 25);	B 2(2, 10, 18, 26);	B 3(3, 11, 19, 27);	B 4(4, 12, 20, 28);	
B 5(5, 13, 21, 29);	B 6(6, 14, 22, 30);	B 7(7, 15, 23, 31);	B 8(8, 16, 24, 32).	
Replication 2				
B 1(1, 12, 23, 29);	B 2(2, 13, 24, 30);	B 3(3, 14, 17, 31);	B 4(4, 15, 18, 32);	
B 5(5, 16, 19, 25);	B 6(6, 9, 20, 26);	B 7(7, 10, 21, 27);	B 8(8, 11, 22, 28).	
Replication 3				
B 1(1, 11, 24, 26);	B 2(2, 12, 17, 27);	B 3(3, 13, 18, 28);	B 4(4, 14, 19, 29);	
B 5(5, 15, 20, 30);	B 6(6, 16, 21, 31);	B 7(7, 9, 22, 32);	B 8(8, 10, 23, 25).	

Replication 4
 B 1(1, 15, 21, 28); B 2(2, 16, 22, 29); B 3(3, 9, 23, 30); B 4(4, 10, 24, 31);
 B 5(5, 11, 17, 32); B 6(6, 12, 18, 25); B 7(7, 13, 19, 26); B 8(8, 14, 20, 27).

84. $v = 32, b = 40, r = 5, k = 4, AE = 0.9668, DE = 0.9833$ $\alpha(0,1)^{***}$

Replication 1
 B1(1, 9, 17, 25); B2(2, 10, 18, 26); B3(3, 11, 19, 27); B4(4, 12, 20, 28);
 B5(5, 13, 21, 29); B6(6, 14, 22, 30); B7(7, 15, 23, 31); B8(8, 16, 24, 32).

Replication 2
 B1(1, 16, 22, 26); B2(2, 9, 23, 27); B3(3, 10, 24, 28); B4(4, 11, 17, 29);
 B5(5, 12, 18, 30); B6(6, 13, 19, 31); B7(7, 14, 20, 32); B8(8, 15, 21, 25).

Replication 3
 B1(1, 15, 18, 32); B2(2, 16, 19, 25); B3(3, 9, 20, 26); B4(4, 10, 21, 27);
 B5(5, 11, 22, 28); B6(6, 12, 23, 29); B7(7, 13, 24, 30); B8(8, 14, 17, 31).

Replication 4
 B1(1, 12, 21, 31); B2(2, 13, 22, 32); B3(3, 14, 23, 25); B4(4, 15, 24, 26);
 B5(5, 16, 17, 27); B6(6, 9, 18, 28); B7(7, 10, 19, 29); B8(8, 11, 20, 30).

Replication 5
 B1(1, 13, 20, 27); B2(2, 14, 21, 28); B3(3, 15, 22, 29); B4(4, 16, 23, 30);
 B5(5, 9, 24, 31); B6(6, 10, 17, 32); B7(7, 11, 18, 25); B8(8, 12, 19, 26).

85. $v = 36, b = 18, r = 2, k = 4, AE = 0.7899, DE = 0.9069$ $\alpha(0,1)^{***}$

Replication 1
 B1(1, 10, 19, 28); B2(2, 11, 20, 29); B3(3, 12, 21, 30); B4(4, 13, 22, 31);
 B5(5, 14, 23, 32); B6(6, 15, 24, 33); B7(7, 16, 25, 34); B8(8, 17, 26, 35);
 B9(9, 18, 27, 36).

Replication 2
 B1(1, 15, 20, 31); B2(2, 16, 21, 32); B3(3, 17, 22, 33); B4(4, 18, 23, 34);
 B5(5, 10, 24, 35); B6(6, 11, 25, 36); B7(7, 12, 26, 28); B8(8, 13, 27, 29);
 B9(9, 14, 19, 30).

86. $v = 36, b = 27, r = 3, k = 4, AE = 0.9112, DE = 0.9563$ $\alpha(0,1)^{***}$

Replication 1
 B1(1, 10, 19, 28); B2(2, 11, 20, 29); B3(3, 12, 21, 30); B4(4, 13, 22, 31);
 B5(5, 14, 23, 32); B6(6, 15, 24, 33); B7(7, 16, 25, 34); B8(8, 17, 26, 35);
 B9(9, 18, 27, 36).

Replication 2
 B1(1, 14, 21, 31); B2(2, 15, 22, 32); B3(3, 16, 23, 33); B4(4, 17, 24, 34);
 B5(5, 18, 25, 35); B6(6, 10, 26, 36); B7(7, 11, 27, 28); B8(8, 12, 19, 29);
 B9(9, 13, 20, 30).

Replication 3
 B1(1, 17, 20, 33); B2(2, 18, 21, 34); B3(3, 10, 22, 35); B4(4, 11, 23, 36);
 B5(5, 12, 24, 28); B6(6, 13, 25, 29); B7(7, 14, 26, 30); B8(8, 15, 27, 31);
 B9(9, 16, 19, 32).

87. $v = 36, b = 36, r = 4, k = 4, AE = 0.9460, DE = 0.9729$				$\alpha(0,1)^{***}$
Replication 1				
B1(1, 10, 19, 28);	B2(2, 11, 20, 29);	B3(3, 12, 21, 30);	B4(4, 13, 22, 31);	
B5(5, 14, 23, 32);	B6(6, 15, 24, 33);	B7(7, 16, 25, 34);	B8(8, 17, 26, 35);	
B9(9, 18, 27, 36).				
Replication 2				
B1(1, 11, 22, 35);	B2(2, 12, 23, 36);	B3(3, 13, 24, 28);	B4(4, 14, 25, 29);	
B5(5, 15, 26, 30);	B6(6, 16, 27, 31);	B7(7, 17, 19, 32);	B8(8, 18, 20, 33);	
B9(9, 10, 21, 34).				
Replication 3				
B1(1, 15, 27, 34);	B2(2, 16, 19, 35);	B3(3, 17, 20, 36);	B4(4, 18, 21, 28);	
B5(5, 10, 22, 29);	B6(6, 11, 23, 30);	B7(7, 12, 24, 31);	B8(8, 13, 25, 32);	
B9(9, 14, 26, 33).				
Replication 4				
B1(1, 12, 25, 33);	B2(2, 13, 26, 34);	B3(3, 14, 27, 35);	B4(4, 15, 19, 36);	
B5(5, 16, 20, 28);	B6(6, 17, 21, 29);	B7(7, 18, 22, 30);	B8(8, 10, 23, 31);	
B9(9, 11, 24, 32).				
88. $v = 36, b = 45, r = 5, k = 4, AE = 0.9633, DE = 0.9815$				$\alpha(0,1)^{***}$
Replication 1				
B 1(1, 10, 19, 28);	B 2(2, 11, 20, 29);	B 3(3, 12, 21, 30);	B 4(4, 13, 22, 31);	
B 5(5, 14, 23, 32);	B 6(6, 15, 24, 33);	B 7(7, 16, 25, 34);	B 8(8, 17, 26, 35);	
B 9(9, 18, 27, 36).				
Replication 2				
B 1(1, 12, 22, 36);	B 2(2, 13, 23, 28);	B 3(3, 14, 24, 29);	B 4(4, 15, 25, 30);	
B 5(5, 16, 26, 31);	B 6(6, 17, 27, 32);	B 7(7, 18, 19, 33);	B 8(8, 10, 20, 34);	
B 9(9, 11, 21, 35).				
Replication 3				
B 1(1, 11, 26, 33);	B 2(2, 12, 27, 34);	B 3(3, 13, 19, 35);	B 4(4, 14, 20, 36);	
B 5(5, 15, 21, 28);	B 6(6, 16, 22, 29);	B 7(7, 17, 23, 30);	B 8(8, 18, 24, 31);	
B 9(9, 10, 25, 32).				
Replication 4				
B 1(1, 15, 27, 31);	B 2(2, 16, 19, 32);	B 3(3, 17, 20, 33);	B 4(4, 18, 21, 34);	
B 5(5, 10, 22, 35);	B 6(6, 11, 23, 36);	B 7(7, 12, 24, 28);	B 8(8, 13, 25, 29);	
B 9(9, 14, 26, 30).				
Replication 5				
B 1(1, 18, 23, 29);	B 2(2, 10, 24, 30);	B 3(3, 11, 25, 31);	B 4(4, 12, 26, 32);	
B 5(5, 13, 27, 33);	B 6(6, 14, 19, 34);	B 7(7, 15, 20, 35);	B 8(8, 16, 21, 36);	
B 9(9, 17, 22, 28).				
89. $v = 40, b = 20, r = 2, k = 4, AE = 0.7831, DE = 0.9039$				$\alpha(0,1)^{***}$
Replication 1				
B1(1, 11, 21, 31);	B2(2, 12, 22, 32);	B3(3, 13, 23, 33);	B4(4, 14, 24, 34);	
B5(5, 15, 25, 35);	B6(6, 16, 26, 36);	B7(7, 17, 27, 37);	B8(8, 18, 28, 38);	
B9(9, 19, 29, 39);	B10(10, 20, 30, 40).			

Replication 2

B1(1, 17, 22, 34);	B2(2, 18, 23, 35);	B3(3, 19, 24, 36);	B4(4, 20, 25, 37);
B5(5, 11, 26, 38);	B6(6, 12, 27, 39);	B7(7, 13, 28, 40);	B8(8, 14, 29, 31);
B9(9, 15, 30, 32);	B10(10, 16, 21, 33).		

90. $v = 40, b = 30, r = 3, k = 4, AE = 0.9010, DE = 0.9525$

$\alpha(0,1)^{***}$

Replication 1

B1(1, 11, 21, 31);	B2(2, 12, 22, 32);	B3(3, 13, 23, 33);	B4(4, 14, 24, 34);
B5(5, 15, 25, 35);	B6(6, 16, 26, 36);	B7(7, 17, 27, 37);	B8(8, 18, 28, 38);
B9(9, 19, 29, 39);	B10(10, 20, 30, 40).		

Replication 2

B1(1, 12, 24, 38);	B2(2, 13, 25, 39);	B3(3, 14, 26, 40);	B4(4, 15, 27, 31);
B5(5, 16, 28, 32);	B6(6, 17, 29, 33);	B7(7, 18, 30, 34);	B8(8, 19, 21, 35);
B9(9, 20, 22, 36);	B10(10, 11, 23, 37).		

Replication 3

B1(1, 15, 23, 36);	B2(2, 16, 24, 37);	B3(3, 17, 25, 38);	B4(4, 18, 26, 39);
B5(5, 19, 27, 40);	B6(6, 20, 28, 31);	B7(7, 11, 29, 32);	B8(8, 12, 30, 33);
B9(9, 13, 21, 34);	B10(10, 14, 22, 35).		

91. $v = 40, b = 40, r = 4, k = 4, AE = 0.9420, DE = 0.9710$

$\alpha(0,1)^{***}$

Replication 1

B 1(1, 11, 21, 31);	B 2(2, 12, 22, 32);	B 3(3, 13, 23, 33);	B 4(4, 14, 24, 34);
B 5(5, 15, 25, 35);	B 6(6, 16, 26, 36);	B 7(7, 17, 27, 37);	B 8(8, 18, 28, 38);
B 9(9, 19, 29, 39);	B10(10, 20, 30, 40).		

Replication 2

B 1(1, 18, 27, 32);	B 2(2, 19, 28, 33);	B 3(3, 20, 29, 34);	B 4(4, 11, 30, 35);
B 5(5, 12, 21, 36);	B 6(6, 13, 22, 37);	B 7(7, 14, 23, 38);	B 8(8, 15, 24, 39);
B 9(9, 16, 25, 40);	B10(10, 17, 26, 31).		

Replication 3

B 1(1, 19, 23, 35);	B 2(2, 20, 24, 36);	B 3(3, 11, 25, 37);	B 4(4, 12, 26, 38);
B 5(5, 13, 27, 39);	B 6(6, 14, 28, 40);	B 7(7, 15, 29, 31);	B 8(8, 16, 30, 32);
B 9(9, 17, 21, 33);	B10(10, 18, 22, 34).		

Replication 4

B 1(1, 13, 24, 40);	B 2(2, 14, 25, 31);	B 3(3, 15, 26, 32);	B 4(4, 16, 27, 33);
B 5(5, 17, 28, 34);	B 6(6, 18, 29, 35);	B 7(7, 19, 30, 36);	B 8(8, 20, 21, 37);
B 9(9, 11, 22, 38);	B10(10, 12, 23, 39).		

92. $v = 40, b = 50, r = 5, k = 4, AE = 0.9602, DE = 0.9800$

$\alpha(0,1)^{***}$

Replication 1

B1(1, 11, 21, 31);	B2(2, 12, 22, 32);	B3(3, 13, 23, 33);	B4(4, 14, 24, 34);
B5(5, 15, 25, 35);	B6(6, 16, 26, 36);	B7(7, 17, 27, 37);	B8(8, 18, 28, 38);
B9(9, 19, 29, 39);	B10(10, 20, 30, 40).		

Replication 2

B1(1, 19, 30, 35);	B2(2, 20, 21, 36);	B3(3, 11, 22, 37);	B4(4, 12, 23, 38);
B5(5, 13, 24, 39);	B6(6, 14, 25, 40);	B7(7, 15, 26, 31);	B8(8, 16, 27, 32);
B9(9, 17, 28, 33);	B10(10, 18, 29, 34).		

Replication 3

B1(1, 12, 24, 33);	B2(2, 13, 25, 34);	B3(3, 14, 26, 35);	B4(4, 15, 27, 36);
B5(5, 16, 28, 37);	B6(6, 17, 29, 38);	B7(7, 18, 30, 39);	B8(8, 19, 21, 40);
B9(9, 20, 22, 31);	B10(10, 11, 23, 32).		

Replication 4

B1(1, 13, 28, 36);	B2(2, 14, 29, 37);	B3(3, 15, 30, 38);	B4(4, 16, 21, 39);
B5(5, 17, 22, 40);	B6(6, 18, 23, 31);	B7(7, 19, 24, 32);	B8(8, 20, 25, 33);
B9(9, 11, 26, 34);	B10(10, 12, 27, 35).		

Replication 5

B1(1, 15, 29, 32);	B2(2, 16, 30, 33);	B3(3, 17, 21, 34);	B4(4, 18, 22, 35);
B5(5, 19, 23, 36);	B6(6, 20, 24, 37);	B7(7, 11, 25, 38);	B8(8, 12, 26, 39);
B9(9, 13, 27, 40);	B10(10, 14, 28, 31).		

93. $v = 44, b = 22, r = 2, k = 4, AE = 0.7783, DE = 0.9016$

$\alpha(0,1)^{***}$

Replication 1

B1(1, 12, 23, 34);	B2(2, 13, 24, 35);	B3(3, 14, 25, 36);	B4(4, 15, 26, 37);
B5(5, 16, 27, 38);	B6(6, 17, 28, 39);	B7(7, 18, 29, 40);	B8(8, 19, 30, 41);
B9(9, 20, 31, 42);	B10(10, 21, 32, 43);	B11(11, 22, 33, 44).	

Replication 2

B1(1, 13, 32, 39);	B2(2, 14, 33, 40);	B3(3, 15, 23, 41);	B4(4, 16, 24, 42);
B5(5, 17, 25, 43);	B6(6, 18, 26, 44);	B7(7, 19, 27, 34);	B8(8, 20, 28, 35);
B9(9, 21, 29, 36);	B10(10, 22, 30, 37);	B11(11, 12, 31, 38).	

94. $v = 44, b = 33, r = 3, k = 4, AE = 0.9022, DE = 0.9523$

$\alpha(0,1)^{***}$

Replication 1

B1(1, 12, 23, 34);	B2(2, 13, 24, 35);	B3(3, 14, 25, 36);	B4(4, 15, 26, 37);
B5(5, 16, 27, 38);	B6(6, 17, 28, 39);	B7(7, 18, 29, 40);	B8(8, 19, 30, 41);
B9(9, 20, 31, 42);	B10(10, 21, 32, 43);	B11(11, 22, 33, 44).	

Replication 2

B1(1, 17, 30, 36);	B2(2, 18, 31, 37);	B3(3, 19, 32, 38);	B4(4, 20, 33, 39);
B5(5, 21, 23, 40);	B6(6, 22, 24, 41);	B7(7, 12, 25, 42);	B8(8, 13, 26, 43);
B9(9, 14, 27, 44);	B10(10, 15, 28, 34);	B11(11, 16, 29, 35).	

Replication 3

B1(1, 13, 33, 38);	B2(2, 14, 23, 39);	B3(3, 15, 24, 40);	B4(4, 16, 25, 41);
B5(5, 17, 26, 42);	B6(6, 18, 27, 43);	B7(7, 19, 28, 44);	B8(8, 20, 29, 34);
B9(9, 21, 30, 35);	B10(10, 22, 31, 36);	B11(11, 12, 32, 37).	

95. $v = 44, b = 44, r = 4, k = 4, AE = 0.9390, DE = 0.9696$

$\alpha(0,1)^{***}$

Replication 1

B 1(1, 12, 23, 34);	B 2(2, 13, 24, 35);	B 3(3, 14, 25, 36);	B 4(4, 15, 26, 37);
B 5(5, 16, 27, 38);	B 6(6, 17, 28, 39);	B 7(7, 18, 29, 40);	B 8(8, 19, 30, 41);
B 9(9, 20, 31, 42);	B10(10, 21, 32, 43);	B11(11, 22, 33, 44).	

Replication 2

B 1(1, 19, 33, 42);	B 2(2, 20, 23, 43);	B 3(3, 21, 24, 44);	B 4(4, 22, 25, 34);
B 5(5, 12, 26, 35);	B 6(6, 13, 27, 36);	B 7(7, 14, 28, 37);	B 8(8, 15, 29, 38);
B 9(9, 16, 30, 39);	B10(10, 17, 31, 40);	B11(11, 18, 32, 41).	

Replication 3

B 1(1, 20, 24, 40);	B 2(2, 21, 25, 41);	B 3(3, 22, 26, 42);	B 4(4, 12, 27, 43);
B 5(5, 13, 28, 44);	B 6(6, 14, 29, 34);	B 7(7, 15, 30, 35);	B 8(8, 16, 31, 36);
B 9(9, 17, 32, 37);	B10(10, 18, 33, 38);	B11(11, 19, 23, 39).	

Replication 4

B 1(1, 15, 32, 36);	B 2(2, 16, 33, 37);	B 3(3, 17, 23, 38);	B 4(4, 18, 24, 39);
B 5(5, 19, 25, 40);	B 6(6, 20, 26, 41);	B 7(7, 21, 27, 42);	B 8(8, 22, 28, 43);
B 9(9, 12, 29, 44);	B10(10, 13, 30, 34);	B11(11, 14, 31, 35).	

96. $v = 44, b = 55, r = 5, k = 4, AE = 0.9575, DE = 0.9786$

$\alpha(0,1);$

Replication 1

B1(1, 12, 23, 34);	B2(2, 13, 24, 35);	B3(3, 14, 25, 36);	B4(4, 15, 26, 37);
B5(5, 16, 27, 38);	B6(6, 17, 28, 39);	B7(7, 18, 29, 40);	B8(8, 19, 30, 41);
B9(9, 20, 31, 42);	B10(10, 21, 32, 43);	B11(11, 22, 33, 44).	

Replication 2

B1(1, 19, 31, 37);	B2(2, 20, 32, 38);	B3(3, 21, 33, 39);	B4(4, 22, 23, 40);
B5(5, 12, 24, 41);	B6(6, 13, 25, 42);	B7(7, 14, 26, 43);	B8(8, 15, 27, 44);
B9(9, 16, 28, 34);	B10(10, 17, 29, 35);	B11(11, 18, 30, 36).	

Replication 3

B1(1, 14, 24, 44);	B2(2, 15, 25, 34);	B3(3, 16, 26, 35);	B4(4, 17, 27, 36);
B5(5, 18, 28, 37);	B6(6, 19, 29, 38);	B7(7, 20, 30, 39);	B8(8, 21, 31, 40);
B9(9, 22, 32, 41);	B10(10, 12, 33, 42);	B11(11, 13, 23, 43).	

Replication 4

B1(1, 18, 32, 35);	B2(2, 19, 33, 36);	B3(3, 20, 23, 37);	B4(4, 21, 24, 38);
B5(5, 22, 25, 39);	B6(6, 12, 26, 40);	B7(7, 13, 27, 41);	B8(8, 14, 28, 42);
B9(9, 15, 29, 43);	B10(10, 16, 30, 44);	B11(11, 17, 31, 34).	

Replication 5

B1(1, 22, 27, 42);	B2(2, 12, 28, 43);	B3(3, 13, 29, 44);	B4(4, 14, 30, 34);
B5(5, 15, 31, 35);	B6(6, 16, 32, 36);	B7(7, 17, 33, 37);	B8(8, 18, 23, 38);
B9(9, 19, 24, 39);	B10(10, 20, 25, 40);	B11(11, 21, 26, 41).	

97. $v = 48, b = 24, r = 2, k = 4, AE = 0.7758, DE = 0.8999$				$\alpha(0,1)^{***}$
Replication 1				
B1(1, 13, 25, 37);	B2(2, 14, 26, 38);	B3(3, 15, 27, 39);	B4(4, 16, 28, 40);	
B5(5, 17, 29, 41);	B6(6, 18, 30, 42);	B7(7, 19, 31, 43);	B8(8, 20, 32, 44);	
B9(9, 21, 33, 45);	B10(10, 22, 34, 46);	B11(11, 23, 35, 47);	B12(12, 24, 36, 48).	
Replication 2				
B1(1, 20, 26, 46);	B2(2, 21, 27, 47);	B3(3, 22, 28, 48);	B4(4, 23, 29, 37);	
B5(5, 24, 30, 38);	B6(6, 13, 31, 39);	B7(7, 14, 32, 40);	B8(8, 15, 33, 41);	
B9(9, 16, 34, 42);	B10(10, 17, 35, 43);	B11(11, 18, 36, 44);	B12(12, 19, 25, 45).	
98. $v = 48, b = 36, r = 3, k = 4, AE = 0.8971, DE = 0.9503$				$\alpha(0,1)^{***}$
Replication 1				
B1(1, 13, 25, 37);	B2(2, 14, 26, 38);	B3(3, 15, 27, 39);	B4(4, 16, 28, 40);	
B5(5, 17, 29, 41);	B6(6, 18, 30, 42);	B7(7, 19, 31, 43);	B8(8, 20, 32, 44);	
B9(9, 21, 33, 45);	B10(10, 22, 34, 46);	B11(11, 23, 35, 47);	B12(12, 24, 36, 48).	
Replication 2				
B1(1, 23, 26, 43);	B2(2, 24, 27, 44);	B3(3, 13, 28, 45);	B4(4, 14, 29, 46);	
B5(5, 15, 30, 47);	B6(6, 16, 31, 48);	B7(7, 17, 32, 37);	B8(8, 18, 33, 38);	
B9(9, 19, 34, 39);	B10(10, 20, 35, 40);	B11(11, 21, 36, 41);	B12(12, 22, 25, 42).	
Replication 3				
B1(1, 21, 30, 44);	B2(2, 22, 31, 45);	B3(3, 23, 32, 46);	B4(4, 24, 33, 47);	
B5(5, 13, 34, 48);	B6(6, 14, 35, 37);	B7(7, 15, 36, 38);	B8(8, 16, 25, 39);	
B9(9, 17, 26, 40);	B10(10, 18, 27, 41);	B11(11, 19, 28, 42);	B12(12, 20, 29, 43).	
99. $v = 48, b = 48, r = 4, k = 4, AE = 0.9365, DE = 0.9683$				$\alpha(0,1)^{***}$
Replication 1				
B 1(1, 13, 25, 37);	B 2(2, 14, 26, 38);	B 3(3, 15, 27, 39);	B 4(4, 16, 28, 40);	
B 5(5, 17, 29, 41);	B 6(6, 18, 30, 42);	B 7(7, 19, 31, 43);	B 8(8, 20, 32, 44);	
B 9(9, 21, 33, 45);	B10(10, 22, 34, 46);	B11(11, 23, 35, 47);	B12(12, 24, 36, 48).	
Replication 2				
B 1(1, 24, 34, 40);	B 2(2, 13, 35, 41);	B 3(3, 14, 36, 42);	B 4(4, 15, 25, 43);	
B 5(5, 16, 26, 44);	B 6(6, 17, 27, 45);	B 7(7, 18, 28, 46);	B 8(8, 19, 29, 47);	
B 9(9, 20, 30, 48);	B10(10, 21, 31, 37);	B11(11, 22, 32, 38);	B12(12, 23, 33, 39).	
Replication 3				
B 1(1, 19, 26, 45);	B 2(2, 20, 27, 46);	B 3(3, 21, 28, 47);	B 4(4, 22, 29, 48);	
B 5(5, 23, 30, 37);	B 6(6, 24, 31, 38);	B 7(7, 13, 32, 39);	B 8(8, 14, 33, 40);	
B 9(9, 15, 34, 41);	B10(10, 16, 35, 42);	B11(11, 17, 36, 43);	B12(12, 18, 25, 44).	
Replication 4				
B 1(1, 20, 35, 43);	B 2(2, 21, 36, 44);	B 3(3, 22, 25, 45);	B 4(4, 23, 26, 46);	
B 5(5, 24, 27, 47);	B 6(6, 13, 28, 48);	B 7(7, 14, 29, 37);	B 8(8, 15, 30, 38);	
B 9(9, 16, 31, 39);	B10(10, 17, 32, 40);	B11(11, 18, 33, 41);	B12(12, 19, 34, 42).	
100. $v = 48, b = 60, r = 5, k = 4, AE = 0.9562, DE = 0.9779$				$\alpha(0,1)^{***}$
Replication 1				
B 1(1, 13, 25, 37);	B 2(2, 14, 26, 38);	B 3(3, 15, 27, 39);	B 4(4, 16, 28, 40);	
B 5(5, 17, 29, 41);	B 6(6, 18, 30, 42);	B 7(7, 19, 31, 43);	B 8(8, 20, 32, 44);	
B 9(9, 21, 33, 45);	B10(10, 22, 34, 46);	B11(11, 23, 35, 47);	B12(12, 24, 36, 48).	

Replication 2

B 1(1, 14, 31, 46);	B 2(2, 15, 32, 47);	B 3(3, 16, 33, 48);	B 4(4, 17, 34, 37);
B 5(5, 18, 35, 38);	B 6(6, 19, 36, 39);	B 7(7, 20, 25, 40);	B 8(8, 21, 26, 41);
B 9(9, 22, 27, 42);	B10(10, 23, 28, 43);	B11(11, 24, 29, 44);	B12(12, 13, 30, 45).

Replication 3

B 1(1, 19, 35, 41);	B 2(2, 20, 36, 42);	B 3(3, 21, 25, 43);	B 4(4, 22, 26, 44);
B 5(5, 23, 27, 45);	B 6(6, 24, 28, 46);	B 7(7, 13, 29, 47);	B 8(8, 14, 30, 48);
B 9(9, 15, 31, 37);	B10(10, 16, 32, 38);	B11(11, 17, 33, 39);	B12(12, 18, 34, 40).

Replication 4

B 1(1, 23, 36, 40);	B 2(2, 24, 25, 41);	B 3(3, 13, 26, 42);	B 4(4, 14, 27, 43);
B 5(5, 15, 28, 44);	B 6(6, 16, 29, 45);	B 7(7, 17, 30, 46);	B 8(8, 18, 31, 47);
B 9(9, 19, 32, 48);	B10(10, 20, 33, 37);	B11(11, 21, 34, 38);	B12(12, 22, 35, 39).

Replication 5

B 1(1, 18, 33, 44);	B 2(2, 19, 34, 45);	B 3(3, 20, 35, 46);	B 4(4, 21, 36, 47);
B 5(5, 22, 25, 48);	B 6(6, 23, 26, 37);	B 7(7, 24, 27, 38);	B 8(8, 13, 28, 39);
B 9(9, 14, 29, 40);	B10(10, 15, 30, 41);	B11(11, 16, 31, 42);	B12(12, 17, 32, 43).

101. $v = 52, b = 26, r = 2, k = 4, AE = 0.7748, DE = 0.8987$ $\alpha(0,1)***$

Replication 1

B1(1, 14, 27, 40);	B2(2, 15, 28, 41);	B3(3, 16, 29, 42);	B4(4, 17, 30, 43);
B5(5, 18, 31, 44);	B6(6, 19, 32, 45);	B7(7, 20, 33, 46);	B8(8, 21, 34, 47);
B9(9, 22, 35, 48);	B10(10, 23, 36, 49);	B11(11, 24, 37, 50);	B12(12, 25, 38, 51);
B13(13, 26, 39, 52).			

Replication 2

B1(1, 19, 31, 47);	B2(2, 20, 32, 48);	B3(3, 21, 33, 49);	B4(4, 22, 34, 50);
B5(5, 23, 35, 51);	B6(6, 24, 36, 52);	B7(7, 25, 37, 40);	B8(8, 26, 38, 41);
B9(9, 14, 39, 42);	B10(10, 15, 27, 43);	B11(11, 16, 28, 44);	B12(12, 17, 29, 45);
B13(13, 18, 30, 46).			

102. $v = 52, b = 52, r = 3, k = 4, AE = 0.8931, DE = 0.9487$ $\alpha(0,1)***$

Replication 1

B1(1, 14, 27, 40);	B2(2, 15, 28, 41);	B3(3, 16, 29, 42);	B4(4, 17, 30, 43);
B5(5, 18, 31, 44);	B6(6, 19, 32, 45);	B7(7, 20, 33, 46);	B8(8, 21, 34, 47);
B9(9, 22, 35, 48);	B10(10, 23, 36, 49);	B11(11, 24, 37, 50);	B12(12, 25, 38, 51);
B13(13, 26, 39, 52).			

Replication 2

B1(1, 25, 36, 42);	B2(2, 26, 37, 43);	B3(3, 14, 38, 44);	B4(4, 15, 39, 45);
B5(5, 16, 27, 46);	B6(6, 17, 28, 47);	B7(7, 18, 29, 48);	B8(8, 19, 30, 49);
B9(9, 20, 31, 50);	B10(10, 21, 32, 51);	B11(11, 22, 33, 52);	B12(12, 23, 34, 40);
B13(13, 24, 35, 41).			

Replication 3

B1(1, 19, 33, 41);	B2(2, 20, 34, 42);	B3(3, 21, 35, 43);	B4(4, 22, 36, 44);
B5(5, 23, 37, 45);	B6(6, 24, 38, 46);	B7(7, 25, 39, 47);	B8(8, 26, 27, 48);
B9(9, 14, 28, 49);	B10(10, 15, 29, 50);	B11(11, 16, 30, 51);	B12(12, 17, 31, 52);
B13(13, 18, 32, 40).			

103.	$v = 52, b = 52, r = 4, k = 4, AE = 0.9335, DE = 0.9671$	$\alpha(0,1)**;$	
Replication 1			
B 1(1, 14, 27, 40);	B 2(2, 15, 28, 41);	B 3(3, 16, 29, 42);	B 4(4, 17, 30, 43);
B 5(5, 18, 31, 44);	B 6(6, 19, 32, 45);	B 7(7, 20, 33, 46);	B 8(8, 21, 34, 47);
B 9(9, 22, 35, 48);	B10(10, 23, 36, 49);	B11(11, 24, 37, 50);	B12(12, 25, 38, 51);
B13(13, 26, 39, 52).			
Replication 2			
B 1(1, 26, 36, 43);	B 2(2, 14, 37, 44);	B 3(3, 15, 38, 45);	B 4(4, 16, 39, 46);
B 5(5, 17, 27, 47);	B 6(6, 18, 28, 48);	B 7(7, 19, 29, 49);	B 8(8, 20, 30, 50);
B 9(9, 21, 31, 51);	B10(10, 22, 32, 52);	B11(11, 23, 33, 40);	B12(12, 24, 34, 41);
B13(13, 25, 35, 42).			
Replication 3			
B 1(1, 24, 32, 42);	B 2(2, 25, 33, 43);	B 3(3, 26, 34, 44);	B 4(4, 14, 35, 45);
B 5(5, 15, 36, 46);	B 6(6, 16, 37, 47);	B 7(7, 17, 38, 48);	B 8(8, 18, 39, 49);
B 9(9, 19, 27, 50);	B10(10, 20, 28, 51);	B11(11, 21, 29, 52);	B12(12, 22, 30, 40);
B13(13, 23, 31, 41).			
Replication 4			
B 1(1, 18, 38, 52);	B 2(2, 19, 39, 40);	B 3(3, 20, 27, 41);	B 4(4, 21, 28, 42);
B 5(5, 22, 29, 43);	B 6(6, 23, 30, 44);	B 7(7, 24, 31, 45);	B 8(8, 25, 32, 46);
B 9(9, 26, 33, 47);	B10(10, 14, 34, 48);	B11(11, 15, 35, 49);	B12(12, 16, 36, 50);
B13(13, 17, 37, 51).			
104.	$v = 52, b = 65, r = 5, k = 4, AE = 0.9539, DE = 0.9768$	$\alpha(0,1)**;$	
Replication 1			
B 1(1, 14, 27, 40);	B 2(2, 15, 28, 41);	B 3(3, 16, 29, 42);	B 4(4, 17, 30, 43);
B 5(5, 18, 31, 44);	B 6(6, 19, 32, 45);	B 7(7, 20, 33, 46);	B 8(8, 21, 34, 47);
B 9(9, 22, 35, 48);	B10(10, 23, 36, 49);	B11(11, 24, 37, 50);	B12(12, 25, 38, 51);
B13(13, 26, 39, 52).			
Replication 2			
B 1(1, 26, 36, 43);	B 2(2, 14, 37, 44);	B 3(3, 15, 38, 45);	B 4(4, 16, 39, 46);
B 5(5, 17, 27, 47);	B 6(6, 18, 28, 48);	B 7(7, 19, 29, 49);	B 8(8, 20, 30, 50);
B 9(9, 21, 31, 51);	B10(10, 22, 32, 52);	B11(11, 23, 33, 40);	B12(12, 24, 34, 41);
B13(13, 25, 35, 42).			
Replication 3			
B 1(1, 24, 32, 42);	B 2(2, 25, 33, 43);	B 3(3, 26, 34, 44);	B 4(4, 14, 35, 45);
B 5(5, 15, 36, 46);	B 6(6, 16, 37, 47);	B 7(7, 17, 38, 48);	B 8(8, 18, 39, 49);
B 9(9, 19, 27, 50);	B10(10, 20, 28, 51);	B11(11, 21, 29, 52);	B12(12, 22, 30, 40);
B13(13, 23, 31, 41).			
Replication 4			
B 1(1, 18, 38, 52);	B 2(2, 19, 39, 40);	B 3(3, 20, 27, 41);	B 4(4, 21, 28, 42);
B 5(5, 22, 29, 43);	B 6(6, 23, 30, 44);	B 7(7, 24, 31, 45);	B 8(8, 25, 32, 46);
B 9(9, 26, 33, 47);	B10(10, 14, 34, 48);	B11(11, 15, 35, 49);	B12(12, 16, 36, 50);
B13(13, 17, 37, 51).			
Replication 5			
B 1(1, 15, 30, 47);	B 2(2, 16, 31, 48);	B 3(3, 17, 32, 49);	B 4(4, 18, 33, 50);
B 5(5, 19, 34, 51);	B 6(6, 20, 35, 52);	B 7(7, 21, 36, 40);	B 8(8, 22, 37, 41);
B 9(9, 23, 38, 42);	B10(10, 24, 39, 43);	B11(11, 25, 27, 44);	B12(12, 26, 28, 45);
B13(13, 14, 29, 46).			

105. $v = 56, b = 28, r = 2, k = 4, AE = 0.7612, DE = 0.8952$ $\alpha(0,1);$

Replication 1

B1(1, 15, 29, 43);	B2(2, 16, 30, 44);	B3(3, 17, 31, 45);	B4(4, 18, 32, 46);
B5(5, 19, 33, 47);	B6(6, 20, 34, 48);	B7(7, 21, 35, 49);	B8(8, 22, 36, 50);
B9(9, 23, 37, 51);	B10(10, 24, 38, 52);	B11(11, 25, 39, 53);	B12(12, 26, 40, 54);
B13(13, 27, 41, 55);	B14(14, 28, 42, 56).		

Replication 2

B1(1, 28, 35, 47);	B2(2, 15, 36, 48);	B3(3, 16, 37, 49);	B4(4, 17, 38, 50);
B5(5, 18, 39, 51);	B6(6, 19, 40, 52);	B7(7, 20, 41, 53);	B8(8, 21, 42, 54);
B9(9, 22, 29, 55);	B10(10, 23, 30, 56);	B11(11, 24, 31, 43);	B12(12, 25, 32, 44);
B13(13, 26, 33, 45);	B14(14, 27, 34, 46).		

106. $v = 56, b = 42, r = 3, k = 4, AE = 0.8898, DE = 0.9473$ $\alpha(0,1)***$

Replication 1

B1(1, 15, 29, 43);	B2(2, 16, 30, 44);	B3(3, 17, 31, 45);	B4(4, 18, 32, 46);
B5(5, 19, 33, 47);	B6(6, 20, 34, 48);	B7(7, 21, 35, 49);	B8(8, 22, 36, 50);
B9(9, 23, 37, 51);	B10(10, 24, 38, 52);	B11(11, 25, 39, 53);	B12(12, 26, 40, 54);
B13(13, 27, 41, 55);	B14(14, 28, 42, 56).		

Replication 2

B1(1, 21, 38, 51);	B2(2, 22, 39, 52);	B3(3, 23, 40, 53);	B4(4, 24, 41, 54);
B5(5, 25, 42, 55);	B6(6, 26, 29, 56);	B7(7, 27, 30, 43);	B8(8, 28, 31, 44);
B9(9, 15, 32, 45);	B10(10, 16, 33, 46);	B11(11, 17, 34, 47);	B12(12, 18, 35, 48);
B13(13, 19, 36, 49);	B14(14, 20, 37, 50).		

Replication 3

B1(1, 28, 41, 47);	B2(2, 15, 42, 48);	B3(3, 16, 29, 49);	B4(4, 17, 30, 50);
B5(5, 18, 31, 51);	B6(6, 19, 32, 52);	B7(7, 20, 33, 53);	B8(8, 21, 34, 54);
B9(9, 22, 35, 55);	B10(10, 23, 36, 56);	B11(11, 24, 37, 43);	B12(12, 25, 38, 44);
B13(13, 26, 39, 45);	B14(14, 27, 40, 46).		

107. $v = 56, b = 56, r = 4, k = 4, AE = 0.9317, DE = 0.9662$ $\alpha(0,1)***$

Replication 1

B1(1, 15, 29, 43);	B2(2, 16, 30, 44);	B3(3, 17, 31, 45);	B4(4, 18, 32, 46);
B5(5, 19, 33, 47);	B6(6, 20, 34, 48);	B7(7, 21, 35, 49);	B8(8, 22, 36, 50);
B9(9, 23, 37, 51);	B10(10, 24, 38, 52);	B11(11, 25, 39, 53);	B12(12, 26, 40, 54);
B13(13, 27, 41, 55);	B14(14, 28, 42, 56).		

Replication 2

B1(1, 26, 41, 49);	B2(2, 27, 42, 50);	B3(3, 28, 29, 51);	B4(4, 15, 30, 52);
B5(5, 16, 31, 53);	B6(6, 17, 32, 54);	B7(7, 18, 33, 55);	B8(8, 19, 34, 56);
B9(9, 20, 35, 43);	B10(10, 21, 36, 44);	B11(11, 22, 37, 45);	B12(12, 23, 38, 46);
B13(13, 24, 39, 47);	B14(14, 25, 40, 48).		

Replication 3

B1(1, 16, 34, 46);	B2(2, 17, 35, 47);	B3(3, 18, 36, 48);	B4(4, 19, 37, 49);
B5(5, 20, 38, 50);	B6(6, 21, 39, 51);	B7(7, 22, 40, 52);	B8(8, 23, 41, 53);
B9(9, 24, 42, 54);	B10(10, 25, 29, 55);	B11(11, 26, 30, 56);	B12(12, 27, 31, 43);
B13(13, 28, 32, 44);	B14(14, 15, 33, 45).		

Replication 4

B1(1, 22, 42, 47);	B2(2, 23, 29, 48);	B3(3, 24, 30, 49);	B4(4, 25, 31, 50);
B5(5, 26, 32, 51);	B6(6, 27, 33, 52);	B7(7, 28, 34, 53);	B8(8, 15, 35, 54);
B9(9, 16, 36, 55);	B10(10, 17, 37, 56);	B11(11, 18, 38, 43);	B12(12, 19, 39, 44);
B13(13, 20, 40, 45);	B14(14, 21, 41, 46).		

108.	$v = 56, b = 70, r = 5, k = 4, AE = 0.9517, DE = 0.9758$	$\alpha(0,1)^{***}$	
Replication 1			
B1(1, 15, 29, 43);	B2(2, 16, 30, 44);	B3(3, 17, 31, 45);	B4(4, 18, 32, 46);
B5(5, 19, 33, 47);	B6(6, 20, 34, 48);	B7(7, 21, 35, 49);	B8(8, 22, 36, 50);
B9(9, 23, 37, 51);	B10(10, 24, 38, 52);	B11(11, 25, 39, 53);	B12(12, 26, 40, 54);
B13(13, 27, 41, 55);	B14(14, 28, 42, 56).		
Replication 2			
B1(1, 22, 40, 56);	B2(2, 23, 41, 43);	B3(3, 24, 42, 44);	B4(4, 25, 29, 45);
B5(5, 26, 30, 46);	B6(6, 27, 31, 47);	B7(7, 28, 32, 48);	B8(8, 15, 33, 49);
B9(9, 16, 34, 50);	B10(10, 17, 35, 51);	B11(11, 18, 36, 52);	B12(12, 19, 37, 53);
B13(13, 20, 38, 54);	B14(14, 21, 39, 55).		
Replication 3			
B1(1, 21, 32, 50);	B2(2, 22, 33, 51);	B3(3, 23, 34, 52);	B4(4, 24, 35, 53);
B5(5, 25, 36, 54);	B6(6, 26, 37, 55);	B7(7, 27, 38, 56);	B8(8, 28, 39, 43);
B9(9, 15, 40, 44);	B10(10, 16, 41, 45);	B11(11, 17, 42, 46);	B12(12, 18, 29, 47);
B13(13, 19, 30, 48);	B14(14, 20, 31, 49).		
Replication 4			
B1(1, 25, 42, 51);	B2(2, 26, 29, 52);	B3(3, 27, 30, 53);	B4(4, 28, 31, 54);
B5(5, 15, 32, 55);	B6(6, 16, 33, 56);	B7(7, 17, 34, 43);	B8(8, 18, 35, 44);
B9(9, 19, 36, 45);	B10(10, 20, 37, 46);	B11(11, 21, 38, 47);	B12(12, 22, 39, 48);
B13(13, 23, 40, 49);	B14(14, 24, 41, 50).		
Replication 5			
B1(1, 19, 31, 52);	B2(2, 20, 32, 53);	B3(3, 21, 33, 54);	B4(4, 22, 34, 55);
B5(5, 23, 35, 56);	B6(6, 24, 36, 43);	B7(7, 25, 37, 44);	B8(8, 26, 38, 45);
B9(9, 27, 39, 46);	B10(10, 28, 40, 47);	B11(11, 15, 41, 48);	B12(12, 16, 42, 49);
B13(13, 17, 29, 50);	B14(14, 18, 30, 51).		
109.	$v = 60, b = 30, r = 2, k = 4, AE = 0.7629, DE = 0.8947$	$\alpha(0,1)^{***}$	
Replication 1			
B1(1, 16, 31, 46);	B2(2, 17, 32, 47);	B3(3, 18, 33, 48);	B4(4, 19, 34, 49);
B5(5, 20, 35, 50);	B6(6, 21, 36, 51);	B7(7, 22, 37, 52);	B8(8, 23, 38, 53);
B9(9, 24, 39, 54);	B10(10, 25, 40, 55);	B11(11, 26, 41, 56);	B12(12, 27, 42, 57);
B13(13, 28, 43, 58);	B14(14, 29, 44, 59);	B15(15, 30, 45, 60).	
Replication 2			
B1(1, 18, 45, 52);	B2(2, 19, 31, 53);	B3(3, 20, 32, 54);	B4(4, 21, 33, 55);
B5(5, 22, 34, 56);	B6(6, 23, 35, 57);	B7(7, 24, 36, 58);	B8(8, 25, 37, 59);
B9(9, 26, 38, 60);	B10(10, 27, 39, 46);	B11(11, 28, 40, 47);	B12(12, 29, 41, 48);
B13(13, 30, 42, 49);	B14(14, 16, 43, 50);	B15(15, 17, 44, 51).	
110.	$v = 60, b = 45, r = 3, k = 4, AE = 0.8868, DE = 0.9461$	$\alpha(0,1)^{***}$	
Replication 1			
B1(1, 16, 31, 46);	B2(2, 17, 32, 47);	B3(3, 18, 33, 48);	B4(4, 19, 34, 49);
B5(5, 20, 35, 50);	B6(6, 21, 36, 51);	B7(7, 22, 37, 52);	B8(8, 23, 38, 53);
B9(9, 24, 39, 54);	B10(10, 25, 40, 55);	B11(11, 26, 41, 56);	B12(12, 27, 42, 57);
B13(13, 28, 43, 58);	B14(14, 29, 44, 59);	B15(15, 30, 45, 60).	
Replication 2			
B1(1, 18, 34, 56);	B2(2, 19, 35, 57);	B3(3, 20, 36, 58);	B4(4, 21, 37, 59);
B5(5, 22, 38, 60);	B6(6, 23, 39, 46);	B7(7, 24, 40, 47);	B8(8, 25, 41, 48);
B9(9, 26, 42, 49);	B10(10, 27, 43, 50);	B11(11, 28, 44, 51);	B12(12, 29, 45, 52);
B13(13, 30, 31, 53);	B14(14, 16, 32, 54);	B15(15, 17, 33, 55).	

Replication 3

B1(1, 21, 42, 55);	B2(2, 22, 43, 56);	B3(3, 23, 44, 57);	B4(4, 24, 45, 58);
B5(5, 25, 31, 59);	B6(6, 26, 32, 60);	B7(7, 27, 33, 46);	B8(8, 28, 34, 47);
B9(9, 29, 35, 48);	B10(10, 30, 36, 49);	B11(11, 16, 37, 50);	B12(12, 17, 38, 51);
B13(13, 18, 39, 52);	B14(14, 19, 40, 53);	B15(15, 20, 41, 54).	

111. $v = 60, b = 60, r = 4, k = 4, AE = 0.9305, DE = 0.9655$

$\alpha(0,1)^{***}$

Replication 1

B1(1, 16, 31, 46);	B2(2, 17, 32, 47);	B3(3, 18, 33, 48);	B4(4, 19, 34, 49);
B5(5, 20, 35, 50);	B6(6, 21, 36, 51);	B7(7, 22, 37, 52);	B8(8, 23, 38, 53);
B9(9, 24, 39, 54);	B10(10, 25, 40, 55);	B11(11, 26, 41, 56);	B12(12, 27, 42, 57);
B13(13, 28, 43, 58);	B14(14, 29, 44, 59);	B15(15, 30, 45, 60).	

Replication 2

B1(1, 28, 41, 54);	B2(2, 29, 42, 55);	B3(3, 30, 43, 56);	B4(4, 16, 44, 57);
B5(5, 17, 45, 58);	B6(6, 18, 31, 59);	B7(7, 19, 32, 60);	B8(8, 20, 33, 46);
B9(9, 21, 34, 47);	B10(10, 22, 35, 48);	B11(11, 23, 36, 49);	B12(12, 24, 37, 50);
B13(13, 25, 38, 51);	B14(14, 26, 39, 52);	B15(15, 27, 40, 53).	

Replication 3

B1(1, 25, 42, 50);	B2(2, 26, 43, 51);	B3(3, 27, 44, 52);	B4(4, 28, 45, 53);
B5(5, 29, 31, 54);	B6(6, 30, 32, 55);	B7(7, 16, 33, 56);	B8(8, 17, 34, 57);
B9(9, 18, 35, 58);	B10(10, 19, 36, 59);	B11(11, 20, 37, 60);	B12(12, 21, 38, 46);
B13(13, 22, 39, 47);	B14(14, 23, 40, 48);	B15(15, 24, 41, 49).	

Replication 4

B1(1, 17, 36, 52);	B2(2, 18, 37, 53);	B3(3, 19, 38, 54);	B4(4, 20, 39, 55);
B5(5, 21, 40, 56);	B6(6, 22, 41, 57);	B7(7, 23, 42, 58);	B8(8, 24, 43, 59);
B9(9, 25, 44, 60);	B10(10, 26, 45, 46);	B11(11, 27, 31, 47);	B12(12, 28, 32, 48);
B13(13, 29, 33, 49);	B14(14, 30, 34, 50);	B15(15, 16, 35, 51).	

112. $v = 60, b = 75, r = 5, k = 4, AE = 0.9501, DE = 0.9750$

$\alpha(0,1)^{***}$

Replication 1

B1(1, 16, 31, 46);	B2(2, 17, 32, 47);	B3(3, 18, 33, 48);	B4(4, 19, 34, 49);
B5(5, 20, 35, 50);	B6(6, 21, 36, 51);	B7(7, 22, 37, 52);	B8(8, 23, 38, 53);
B9(9, 24, 39, 54);	B10(10, 25, 40, 55);	B11(11, 26, 41, 56);	B12(12, 27, 42, 57);
B13(13, 28, 43, 58);	B14(14, 29, 44, 59);	B15(15, 30, 45, 60).	

Replication 2

B1(1, 18, 44, 54);	B2(2, 19, 45, 55);	B3(3, 20, 31, 56);	B4(4, 21, 32, 57);
B5(5, 22, 33, 58);	B6(6, 23, 34, 59);	B7(7, 24, 35, 60);	B8(8, 25, 36, 46);
B9(9, 26, 37, 47);	B10(10, 27, 38, 48);	B11(11, 28, 39, 49);	B12(12, 29, 40, 50);
B13(13, 30, 41, 51);	B14(14, 16, 42, 52);	B15(15, 17, 43, 53).	

Replication 3

B1(1, 23, 33, 55);	B2(2, 24, 34, 56);	B3(3, 25, 35, 57);	B4(4, 26, 36, 58);
B5(5, 27, 37, 59);	B6(6, 28, 38, 60);	B7(7, 29, 39, 46);	B8(8, 30, 40, 47);
B9(9, 16, 41, 48);	B10(10, 17, 42, 49);	B11(11, 18, 43, 50);	B12(12, 19, 44, 51);
B13(13, 20, 45, 52);	B14(14, 21, 31, 53);	B15(15, 22, 32, 54).	

Replication 4

B1(1, 30, 37, 49);	B2(2, 16, 38, 50);	B3(3, 17, 39, 51);	B4(4, 18, 40, 52);
B5(5, 19, 41, 53);	B6(6, 20, 42, 54);	B7(7, 21, 43, 55);	B8(8, 22, 44, 56);
B9(9, 23, 45, 57);	B10(10, 24, 31, 58);	B11(11, 25, 32, 59);	B12(12, 26, 33, 60);
B13(13, 27, 34, 46);	B14(14, 28, 35, 47);	B15(15, 29, 36, 48).	

Replication 5

B1(1, 28, 36, 57); B2(2, 29, 37, 58); B3(3, 30, 38, 59); B4(4, 16, 39, 60);
B5(5, 17, 40, 46); B6(6, 18, 41, 47); B7(7, 19, 42, 48); B8(8, 20, 43, 49);
B9(9, 21, 44, 50); B10(10, 22, 45, 51); B11(11, 23, 31, 52); B12(12, 24, 32, 53);
B13(13, 25, 33, 54); B14(14, 26, 34, 55); B15(15, 27, 35, 56).

BLOCK SIZE 5

113. $v = 10, b = 4, r = 2, k = 5, AE = 0.9067, DE = 0.9600$ $\alpha(0,1,2)$

Replication 1

B1(1, 3, 5, 7, 9); B2(2, 4, 6, 8, 10).

Replication 2

B1(1, 4, 6, 7, 10); B2(2, 3, 5, 8, 9).

114. $v = 10, b = 6, r = 3, k = 5, AE = 0.9550, DE = 0.9792$ $\alpha(0,1,2,3)\$$

Replication 1

B1(1, 3, 5, 7, 9); B2(2, 4, 6, 8, 10).

Replication 2

B1(1, 3, 6, 8, 10); B2(2, 4, 5, 7, 9).

Replication 3

B1(1, 4, 5, 8, 9); B2(2, 3, 6, 7, 10).

115. $v = 10, b = 8, r = 4, k = 5, AE = 0.9720, DE = 0.9867$ $\alpha(0,2,4)\$$

Replication 1

B1(1, 3, 5, 7, 9); B2(2, 4, 6, 8, 10).

Replication 2

B1(1, 3, 6, 7, 10); B2(2, 4, 5, 8, 9).

Replication 3

B1(1, 4, 5, 8, 10); B2(2, 3, 6, 7, 9).

Replication 4

B1(1, 4, 6, 8, 9); B2(2, 3, 5, 7, 10).

116. $v = 10, b = 10, r = 5, k = 5, AE = 0.9770, DE = 0.9889$ $\alpha(0,1,2,3,4)\$$

Replication 1

B1(1, 3, 5, 7, 9); B2(2, 4, 6, 8, 10).

Replication 2

B1(1, 4, 6, 7, 9); B2(2, 3, 5, 8, 10).

Replication 3

B1(1, 4, 5, 8, 10); B2(2, 3, 6, 7, 9).

Replication 4

B1(1, 4, 5, 7, 10); B2(2, 3, 6, 8, 9).

Replication 5

B1(1, 3, 6, 8, 10); B2(2, 4, 5, 7, 9).

117. $v = 15, b = 6, r = 2, k = 5, AE = 0.8909, DE = 0.9515$ $\alpha(0,1,2)\$$

Replication 1

B1(1, 4, 7, 10, 13); B2(2, 5, 8, 11, 14); B3(3, 6, 9, 12, 15).

Replication 2

B1(1, 5, 8, 12, 15); B2(2, 6, 9, 10, 13); B3(3, 4, 7, 11, 14).

118. $v = 15, b = 9, r = 3, k = 5, AE = 0.9515, DE = 0.9766$ $\alpha(0,1,3)$

Replication 1

B1(1, 4, 7, 10, 13); B2(2, 5, 8, 11, 14); B3(3, 6, 9, 12, 15).

Replication 2

B1(1, 6, 8, 11, 15); B2(2, 4, 9, 12, 13); B3(3, 5, 7, 10, 14).

Replication 3

B1(1, 5, 9, 12, 14); B2(2, 6, 7, 10, 15); B3(3, 4, 8, 11, 13).

119. $v = 15, b = 12, r = 4, k = 5, AE = 0.9726, DE = 0.9863$ $\alpha(0,1,2)\$$

Replication 1

B1(1, 4, 7, 10, 13); B2(2, 5, 8, 11, 14); B3(3, 6, 9, 12, 15).

Replication 2

B1(1, 5, 8, 12, 13); B2(2, 6, 9, 10, 14); B3(3, 4, 7, 11, 15).

Replication 3

B1(1, 6, 7, 11, 14); B2(2, 4, 8, 12, 15); B3(3, 5, 9, 10, 13).

Replication 4

B1(1, 5, 9, 11, 15); B2(2, 6, 7, 12, 13); B3(3, 4, 8, 10, 14).

120. $v = 15, b = 15, r = 5, k = 5, AE = 0.9834, DE = 0.9915$ $\alpha(0,1,2)$

Replication 1

B1(1, 4, 7, 10, 13); B2(2, 5, 8, 11, 14); B3(3, 6, 9, 12, 15).

Replication 2

B1(1, 6, 7, 11, 15); B2(2, 4, 8, 12, 13); B3(3, 5, 9, 10, 14).

Replication 3

B1(1, 5, 9, 11, 13); B2(2, 6, 7, 12, 14); B3(3, 4, 8, 10, 15).

Replication 4

B1(1, 6, 8, 10, 14); B2(2, 4, 9, 11, 15); B3(3, 5, 7, 12, 13).

Replication 5

B1(1, 5, 8, 12, 15); B2(2, 6, 9, 10, 13); B3(3, 4, 7, 11, 14).

121. $v = 20, b = 8, r = 2, k = 5, AE = 0.8848, DE = 0.9479$ $\alpha(0,1,2)$

Replication 1

B1(1, 5, 9, 13, 17); B2(2, 6, 10, 14, 18); B3(3, 7, 11, 15, 19); B4(4, 8, 12, 16, 20).

Replication 2

B1(1, 6, 12, 15, 19); B2(2, 7, 9, 16, 20); B3(3, 8, 10, 13, 17); B4(4, 5, 11, 14, 18).

122. $v = 20, b = 12, r = 3, k = 5, AE = 0.9492, DE = 0.9754$ $\alpha(0,1,2)$

Replication 1
 B1(1, 5, 9, 13, 17); B2(2, 6, 10, 14, 18); B3(3, 7, 11, 15, 19); B4(4, 8, 12, 16, 20).

Replication 2
 B1(1, 8, 12, 14, 19); B2(2, 5, 9, 15, 20); B3(3, 6, 10, 16, 17); B4(4, 7, 11, 13, 18).

Replication 3
 B1(1, 6, 11, 16, 20); B2(2, 7, 12, 13, 17); B3(3, 8, 9, 14, 18); B4(4, 5, 10, 15, 19).

123. $v = 20, b = 16, r = 4, k = 5, AE = 0.9671, DE = 0.9840$ $\alpha(0,1,2)\$$

Replication 1
 B1(1, 5, 9, 13, 17); B2(2, 6, 10, 14, 18); B3(3, 7, 11, 15, 19); B4(4, 8, 12, 16, 20).

Replication 2
 B1(1, 7, 10, 16, 20); B2(2, 8, 11, 13, 17); B3(3, 5, 12, 14, 18); B4(4, 6, 9, 15, 19).

Replication 3
 B1(1, 6, 12, 15, 18); B2(2, 7, 9, 16, 19); B3(3, 8, 10, 13, 20); B4(4, 5, 11, 14, 17).

Replication 4
 B1(1, 8, 11, 14, 19); B2(2, 5, 12, 15, 20); B3(3, 6, 9, 16, 17); B4(4, 7, 10, 13, 18).

124. $v = 20, b = 20, r = 5, k = 5, AE = 0.9838, DE = 0.9918$ $\alpha(0,1,2)$

Replication 1
 B1(1, 5, 9, 13, 17); B2(2, 6, 10, 14, 18); B3(3, 7, 11, 15, 19); B4(4, 8, 12, 16, 20).

Replication 2
 B1(1, 8, 12, 14, 19); B2(2, 5, 9, 15, 20); B3(3, 6, 10, 16, 17); B4(4, 7, 11, 13, 18).

Replication 3
 B1(1, 6, 11, 15, 20); B2(2, 7, 12, 16, 17); B3(3, 8, 9, 13, 18); B4(4, 5, 10, 14, 19).

Replication 4
 B1(1, 7, 10, 13, 20); B2(2, 8, 11, 14, 17); B3(3, 5, 12, 15, 18); B4(4, 6, 9, 16, 19).

Replication 5
 B1(1, 5, 11, 16, 18); B2(2, 6, 12, 13, 19); B3(3, 7, 9, 14, 20); B4(4, 8, 10, 15, 17).

125. $v = 25, b = 10, r = 2, k = 5, AE = 0.9000, DE = 0.9524$ $\alpha(0,1);, LS51, Square-Lattice$

Replication 1
 B1(1, 6, 11, 16, 21); B2(2, 7, 12, 17, 22); B3(3, 8, 13, 18, 23); B4(4, 9, 14, 19, 24);
 B5(5, 10, 15, 20, 25).

Replication 2
 B1(1, 9, 12, 20, 23); B2(2, 10, 13, 16, 24); B3(3, 6, 14, 17, 25); B4(4, 7, 15, 18, 21);
 B5(5, 8, 11, 19, 22).

126. $v = 25, b = 15, r = 3, k = 5, AE = 0.9600, DE = 0.9798$ $\alpha(0,1);, LS52, Square-Lattice$

Replication 1
 B1(1, 6, 11, 16, 21); B2(2, 7, 12, 17, 22); B3(3, 8, 13, 18, 23); B4(4, 9, 14, 19, 24);
 B5(5, 10, 15, 20, 25).

Replication 2

B1(1, 9, 13, 20, 22); B2(2, 10, 14, 16, 23); B3(3, 6, 15, 17, 24); B4(4, 7, 11, 18, 25);
B5(5, 8, 12, 19, 21).

Replication 3

B1(1, 8, 14, 17, 25); B2(2, 9, 15, 18, 21); B3(3, 10, 11, 19, 22); B4(4, 6, 12, 20, 23);
B5(5, 7, 13, 16, 24).

127. $v = 25, b = 20, r = 4, k = 5, AE = 0.9818, DE = 0.9906$ $\alpha(0,1)$, LS53, LS61, Square-Lattice

Replication 1

B1(1, 6, 11, 16, 21); B2(2, 7, 12, 17, 22); B3(3, 8, 13, 18, 23); B4(4, 9, 14, 19, 24);
B5(5, 10, 15, 20, 25).

Replication 2

B1(1, 10, 12, 18, 24); B2(2, 6, 13, 19, 25); B3(3, 7, 14, 20, 21); B4(4, 8, 15, 16, 22);
B5(5, 9, 11, 17, 23).

Replication 3

B1(1, 7, 15, 19, 23); B2(2, 8, 11, 20, 24); B3(3, 9, 12, 16, 25); B4(4, 10, 13, 17, 21);
B5(5, 6, 14, 18, 22).

Replication 4

B1(1, 8, 14, 17, 25); B2(2, 9, 15, 18, 21); B3(3, 10, 11, 19, 22); B4(4, 6, 12, 20, 23);
B5(5, 7, 13, 16, 24).

128. $v = 25, b = 25, r = 5, k = 5, AE = 0.9931, DE = 0.9964$ $\alpha(0,1)$, Square-Lattice

Replication 1

B1(1, 6, 11, 16, 21); B2(2, 7, 12, 17, 22); B3(3, 8, 13, 18, 23); B4(4, 9, 14, 19, 24);
B5(5, 10, 15, 20, 25).

Replication 2

B1(1, 9, 12, 18, 25); B2(2, 10, 13, 19, 21); B3(3, 6, 14, 20, 22); B4(4, 7, 15, 16, 23);
B5(5, 8, 11, 17, 24).

Replication 3

B1(1, 10, 14, 17, 23); B2(2, 6, 15, 18, 24); B3(3, 7, 11, 19, 25); B4(4, 8, 12, 20, 21);
B5(5, 9, 13, 16, 22).

Replication 4

B1(1, 8, 15, 19, 22); B2(2, 9, 11, 20, 23); B3(3, 10, 12, 16, 24); B4(4, 6, 13, 17, 25);
B5(5, 7, 14, 18, 21).

Replication 5

B1(1, 7, 13, 20, 24); B2(2, 8, 14, 16, 25); B3(3, 9, 15, 17, 21); B4(4, 10, 11, 18, 22);
B5(5, 6, 12, 19, 23).

129. $v = 30, b = 12, r = 2, k = 5, AE = 0.8797, DE = 0.9448$ $\alpha(0,1)$, Rect.-Lattice

Replication 1

B1(1, 7, 13, 19, 25); B2(2, 8, 14, 20, 26); B3(3, 9, 15, 21, 27); B4(4, 10, 16, 22, 28);
B5(5, 11, 17, 23, 29); B6(6, 12, 18, 24, 30).

Replication 2

B1(1, 9, 16, 24, 26); B2(2, 10, 17, 19, 27); B3(3, 11, 18, 20, 28); B4(4, 12, 13, 21, 29);
B5(5, 7, 14, 22, 30); B6(6, 8, 15, 23, 25).

130. $v = 30, b = 18, r = 3, k = 5, AE = 0.9478, DE = 0.9745$ $\alpha(0,1)$

Replication 1
 B1(1, 7, 13, 19, 25); B2(2, 8, 14, 20, 26); B3(3, 9, 15, 21, 27); B4(4, 10, 16, 22, 28);
 B5(5, 11, 17, 23, 29); B6(6, 12, 18, 24, 30).

Replication 2
 B1(1, 12, 16, 23, 26); B2(2, 7, 17, 24, 27); B3(3, 8, 18, 19, 28); B4(4, 9, 13, 20, 29);
 B5(5, 10, 14, 21, 30); B6(6, 11, 15, 22, 25).

Replication 3
 B1(1, 10, 15, 24, 29); B2(2, 11, 16, 19, 30); B3(3, 12, 17, 20, 25); B4(4, 7, 18, 21, 26);
 B5(5, 8, 13, 22, 27); B6(6, 9, 14, 23, 28).

131. $v = 30, b = 24, r = 4, k = 5, AE = 0.9690, DE = 0.9846$ $\alpha(0,1,2)$

Replication 1
 B1(1, 7, 13, 19, 25); B2(2, 8, 14, 20, 26); B3(3, 9, 15, 21, 27); B4(4, 10, 16, 22, 28);
 B5(5, 11, 17, 23, 29); B6(6, 12, 18, 24, 30).

Replication 2
 B1(1, 9, 17, 22, 26); B2(2, 10, 18, 23, 27); B3(3, 11, 13, 24, 28); B4(4, 12, 14, 19, 29);
 B5(5, 7, 15, 20, 30); B6(6, 8, 16, 21, 25).

Replication 3
 B1(1, 12, 18, 20, 28); B2(2, 7, 13, 21, 29); B3(3, 8, 14, 22, 30); B4(4, 9, 15, 23, 25);
 B5(5, 10, 16, 24, 26); B6(6, 11, 17, 19, 27).

Replication 4
 B1(1, 8, 15, 24, 29); B2(2, 9, 16, 19, 30); B3(3, 10, 17, 20, 25); B4(4, 11, 18, 21, 26);
 B5(5, 12, 13, 22, 27); B6(6, 7, 14, 23, 28).

132. $v = 30, b = 30, r = 5, k = 5, AE = 0.9746, DE = 0.9874$ $\alpha(0,1,2)$

Replication 1
 B1(1, 7, 13, 19, 25); B2(2, 8, 14, 20, 26); B3(3, 9, 15, 21, 27); B4(4, 10, 16, 22, 28);
 B5(5, 11, 17, 23, 29); B6(6, 12, 18, 24, 30).

Replication 2
 B1(1, 12, 14, 21, 26); B2(2, 7, 15, 22, 27); B3(3, 8, 16, 23, 28); B4(4, 9, 17, 24, 29);
 B5(5, 10, 18, 19, 30); B6(6, 11, 13, 20, 25).

Replication 3
 B1(1, 10, 16, 24, 27); B2(2, 11, 17, 19, 28); B3(3, 12, 18, 20, 29); B4(4, 7, 13, 21, 30);
 B5(5, 8, 14, 22, 25); B6(6, 9, 15, 23, 26).

Replication 4
 B1(1, 9, 17, 22, 30); B2(2, 10, 18, 23, 25); B3(3, 11, 13, 24, 26); B4(4, 12, 14, 19, 27);
 B5(5, 7, 15, 20, 28); B6(6, 8, 16, 21, 29).

Replication 5
 B1(1, 8, 15, 19, 29); B2(2, 9, 16, 20, 30); B3(3, 10, 17, 21, 25); B4(4, 11, 18, 22, 26);
 B5(5, 12, 13, 23, 27); B6(6, 7, 14, 24, 28).

133. $v = 35, b = 14, r = 2, k = 5, AE = 0.8639, DE = 0.9390$ $\alpha(0,1)$

Replication 1
 B1(1, 8, 15, 22, 29); B2(2, 9, 16, 23, 30); B3(3, 10, 17, 24, 31); B4(4, 11, 18, 25, 32);
 B5(5, 12, 19, 26, 33); B6(6, 13, 20, 27, 34); B7(7, 14, 21, 28, 35).

Replication 2

B1(1, 9, 20, 28, 32); B2(2, 10, 21, 22, 33); B3(3, 11, 15, 23, 34); B4(4, 12, 16, 24, 35);
B5(5, 13, 17, 25, 29); B6(6, 14, 18, 26, 30); B7(7, 8, 19, 27, 31).

134. $v = 35, b = 21, r = 3, k = 5, AE = 0.9406, DE = 0.9712$ $\alpha(0,1)$

Replication 1

B1(1, 8, 15, 22, 29); B2(2, 9, 16, 23, 30); B3(3, 10, 17, 24, 31); B4(4, 11, 18, 25, 32);
B5(5, 12, 19, 26, 33); B6(6, 13, 20, 27, 34); B7(7, 14, 21, 28, 35).

Replication 2

B1(1, 14, 16, 26, 34); B2(2, 8, 17, 27, 35); B3(3, 9, 18, 28, 29); B4(4, 10, 19, 22, 30);
B5(5, 11, 20, 23, 31); B6(6, 12, 21, 24, 32); B7(7, 13, 15, 25, 33).

Replication 3

B1(1, 11, 19, 24, 35); B2(2, 12, 20, 25, 29); B3(3, 13, 21, 26, 30); B4(4, 14, 15, 27, 31);
B5(5, 8, 16, 28, 32); B6(6, 9, 17, 22, 33); B7(7, 10, 18, 23, 34).

135. $v = 35, b = 28, r = 4, k = 5, AE = 0.9658, DE = 0.9832$ $\alpha(0,1)$

Replication 1

B1(1, 8, 15, 22, 29); B2(2, 9, 16, 23, 30); B3(3, 10, 17, 24, 31); B4(4, 11, 18, 25, 32);
B5(5, 12, 19, 26, 33); B6(6, 13, 20, 27, 34); B7(7, 14, 21, 28, 35).

Replication 2

B1(1, 12, 20, 24, 32); B2(2, 13, 21, 25, 33); B3(3, 14, 15, 26, 34); B4(4, 8, 16, 27, 35);
B5(5, 9, 17, 28, 29); B6(6, 10, 18, 22, 30); B7(7, 11, 19, 23, 31).

Replication 3

B1(1, 10, 19, 25, 35); B2(2, 11, 20, 26, 29); B3(3, 12, 21, 27, 30); B4(4, 13, 15, 28, 31);
B5(5, 14, 16, 22, 32); B6(6, 8, 17, 23, 33); B7(7, 9, 18, 24, 34).

Replication 4

B1(1, 9, 21, 26, 31); B2(2, 10, 15, 27, 32); B3(3, 11, 16, 28, 33); B4(4, 12, 17, 22, 34);
B5(5, 13, 18, 23, 35); B6(6, 14, 19, 24, 29); B7(7, 8, 20, 25, 30).

136. $v = 35, b = 35, r = 5, k = 5, AE = 0.9771, DE = 0.9887$ $\alpha(0,1,2)$

Replication 1

B1(1, 8, 15, 22, 29); B2(2, 9, 16, 23, 30); B3(3, 10, 17, 24, 31); B4(4, 11, 18, 25, 32);
B5(5, 12, 19, 26, 33); B6(6, 13, 20, 27, 34); B7(7, 14, 21, 28, 35).

Replication 2

B1(1, 14, 16, 24, 33); B2(2, 8, 17, 25, 34); B3(3, 9, 18, 26, 35); B4(4, 10, 19, 27, 29);
B5(5, 11, 20, 28, 30); B6(6, 12, 21, 22, 31); B7(7, 13, 15, 23, 32).

Replication 3

B1(1, 12, 18, 27, 30); B2(2, 13, 19, 28, 31); B3(3, 14, 20, 22, 32); B4(4, 8, 21, 23, 33);
B5(5, 9, 15, 24, 34); B6(6, 10, 16, 25, 35); B7(7, 11, 17, 26, 29).

Replication 4

B1(1, 9, 17, 28, 32); B2(2, 10, 18, 22, 33); B3(3, 11, 19, 23, 34); B4(4, 12, 20, 24, 35);
B5(5, 13, 21, 25, 29); B6(6, 14, 15, 26, 30); B7(7, 8, 16, 27, 31).

Replication 5

B1(1, 10, 20, 23, 31); B2(2, 11, 21, 24, 32); B3(3, 12, 15, 25, 33); B4(4, 13, 16, 26, 34);
B5(5, 14, 17, 27, 35); B6(6, 8, 18, 28, 29); B7(7, 9, 19, 22, 30).

137. $v = 40, b = 16, r = 2, k = 5, AE = 0.8536, DE = 0.9350$ $\alpha(0,1)$

Replication 1
B1(1, 9, 17, 25, 33); B2(2, 10, 18, 26, 34); B3(3, 11, 19, 27, 35); B4(4, 12, 20, 28, 36);
B5(5, 13, 21, 29, 37); B6(6, 14, 22, 30, 38); B7(7, 15, 23, 31, 39); B8(8, 16, 24, 32, 40).

Replication 2
B1(1, 16, 21, 26, 35); B2(2, 9, 22, 27, 36); B3(3, 10, 23, 28, 37); B4(4, 11, 24, 29, 38);
B5(5, 12, 17, 30, 39); B6(6, 13, 18, 31, 40); B7(7, 14, 19, 32, 33); B8(8, 15, 20, 25, 34).

138. $v = 40, b = 24, r = 3, k = 5, AE = 0.9337, DE = 0.9683$ $\alpha(0,1)$

Replication 1
B1(1, 9, 17, 25, 33); B2(2, 10, 18, 26, 34); B3(3, 11, 19, 27, 35); B4(4, 12, 20, 28, 36);
B5(5, 13, 21, 29, 37); B6(6, 14, 22, 30, 38); B7(7, 15, 23, 31, 39); B8(8, 16, 24, 32, 40).

Replication 2
B1(1, 16, 19, 26, 38); B2(2, 9, 20, 27, 39); B3(3, 10, 21, 28, 40); B4(4, 11, 22, 29, 33);
B5(5, 12, 23, 30, 34); B6(6, 13, 24, 31, 35); B7(7, 14, 17, 32, 36); B8(8, 15, 18, 25, 37).

Replication 3
B1(1, 10, 23, 29, 35); B2(2, 11, 24, 30, 36); B3(3, 12, 17, 31, 37); B4(4, 13, 18, 32, 38);
B5(5, 14, 19, 25, 39); B6(6, 15, 20, 26, 40); B7(7, 16, 21, 27, 33); B8(8, 9, 22, 28, 34).

139. $v = 40, b = 32, r = 4, k = 5, AE = 0.9610, DE = 0.9810$ $\alpha(0,1)$

Replication 1
B1(1, 9, 17, 25, 33); B2(2, 10, 18, 26, 34); B3(3, 11, 19, 27, 35); B4(4, 12, 20, 28, 36);
B5(5, 13, 21, 29, 37); B6(6, 14, 22, 30, 38); B7(7, 15, 23, 31, 39); B8(8, 16, 24, 32, 40).

Replication 2
B1(1, 13, 20, 27, 39); B2(2, 14, 21, 28, 40); B3(3, 15, 22, 29, 33); B4(4, 16, 23, 30, 34);
B5(5, 9, 24, 31, 35); B6(6, 10, 17, 32, 36); B7(7, 11, 18, 25, 37); B8(8, 12, 19, 26, 38).

Replication 3
B1(1, 14, 19, 31, 34); B2(2, 15, 20, 32, 35); B3(3, 16, 21, 25, 36); B4(4, 9, 22, 26, 37);
B5(5, 10, 23, 27, 38); B6(6, 11, 24, 28, 39); B7(7, 12, 17, 29, 40); B8(8, 13, 18, 30, 33).

Replication 4
B1(1, 16, 18, 28, 38); B2(2, 9, 19, 29, 39); B3(3, 10, 20, 30, 40); B4(4, 11, 21, 31, 33);
B5(5, 12, 22, 32, 34); B6(6, 13, 23, 25, 35); B7(7, 14, 24, 26, 36); B8(8, 15, 17, 27, 37).

140. $v = 40, b = 40, r = 5, k = 5, AE = 0.9718, DE = 0.9860$ $\alpha(0,1,2)$

Replication 1
B1(1, 9, 17, 25, 33); B2(2, 10, 18, 26, 34); B3(3, 11, 19, 27, 35); B4(4, 12, 20, 28, 36);
B5(5, 13, 21, 29, 37); B6(6, 14, 22, 30, 38); B7(7, 15, 23, 31, 39); B8(8, 16, 24, 32, 40).

Replication 2
B1(1, 11, 21, 31, 38); B2(2, 12, 22, 32, 39); B3(3, 13, 23, 25, 40); B4(4, 14, 24, 26, 33);
B5(5, 15, 17, 27, 34); B6(6, 16, 18, 28, 35); B7(7, 9, 19, 29, 36); B8(8, 10, 20, 30, 37).

Replication 3
B1(1, 16, 23, 27, 36); B2(2, 9, 24, 28, 37); B3(3, 10, 17, 29, 38); B4(4, 11, 18, 30, 39);
B5(5, 12, 19, 31, 40); B6(6, 13, 20, 32, 33); B7(7, 14, 21, 25, 34); B8(8, 15, 22, 26, 35).

Replication 4

B1(1, 15, 18, 32, 37); B2(2, 16, 19, 25, 38); B3(3, 9, 20, 26, 39); B4(4, 10, 21, 27, 40);
 B5(5, 11, 22, 28, 33); B6(6, 12, 23, 29, 34); B7(7, 13, 24, 30, 35); B8(8, 14, 17, 31, 36).

Replication 5

B1(1, 12, 24, 29, 35); B2(2, 13, 17, 30, 36); B3(3, 14, 18, 31, 37); B4(4, 15, 19, 32, 38);
 B5(5, 16, 20, 25, 39); B6(6, 9, 21, 26, 40); B7(7, 10, 22, 27, 33); B8(8, 11, 23, 28, 34).

141. $v = 45, b = 18, r = 2, k = 5, AE = 0.8439, DE = 0.9315$ $\alpha(0,1)$

Replication 1

B1(1, 10, 19, 28, 37); B2(2, 11, 20, 29, 38); B3(3, 12, 21, 30, 39); B4(4, 13, 22, 31, 40);
 B5(5, 14, 23, 32, 41); B6(6, 15, 24, 33, 42); B7(7, 16, 25, 34, 43); B8(8, 17, 26, 35, 44);
 B9(9, 18, 27, 36, 45).

Replication 2

B1(1, 15, 26, 34, 41); B2(2, 16, 27, 35, 42); B3(3, 17, 19, 36, 43); B4(4, 18, 20, 28, 44);
 B5(5, 10, 21, 29, 45); B6(6, 11, 22, 30, 37); B7(7, 12, 23, 31, 38); B8(8, 13, 24, 32, 39);
 B9(9, 14, 25, 33, 40).

142. $v = 45, b = 27, r = 3, k = 5, AE = 0.9304, DE = 0.9666$ $\alpha(0,1)$

Replication 1

B1(1, 10, 19, 28, 37); B2(2, 11, 20, 29, 38); B3(3, 12, 21, 30, 39); B4(4, 13, 22, 31, 40);
 B5(5, 14, 23, 32, 41); B6(6, 15, 24, 33, 42); B7(7, 16, 25, 34, 43); B8(8, 17, 26, 35, 44);
 B9(9, 18, 27, 36, 45).

Replication 2

B1(1, 18, 24, 32, 38); B2(2, 10, 25, 33, 39); B3(3, 11, 26, 34, 40); B4(4, 12, 27, 35, 41);
 B5(5, 13, 19, 36, 42); B6(6, 14, 20, 28, 43); B7(7, 15, 21, 29, 44); B8(8, 16, 22, 30, 45);
 B9(9, 17, 23, 31, 37).

Replication 3

B1(1, 16, 26, 33, 41); B2(2, 17, 27, 34, 42); B3(3, 18, 19, 35, 43); B4(4, 10, 20, 36, 44);
 B5(5, 11, 21, 28, 45); B6(6, 12, 22, 29, 37); B7(7, 13, 23, 30, 38); B8(8, 14, 24, 31, 39);
 B9(9, 15, 25, 32, 40).

143. $v = 45, b = 36, r = 4, k = 5, AE = 0.9592, DE = 0.9798$ $\alpha(0,1)$

Replication 1

B1(1, 10, 19, 28, 37); B2(2, 11, 20, 29, 38); B3(3, 12, 21, 30, 39); B4(4, 13, 22, 31, 40);
 B5(5, 14, 23, 32, 41); B6(6, 15, 24, 33, 42); B7(7, 16, 25, 34, 43); B8(8, 17, 26, 35, 44);
 B9(9, 18, 27, 36, 45).

Replication 2

B1(1, 16, 27, 31, 41); B2(2, 17, 19, 32, 42); B3(3, 18, 20, 33, 43); B4(4, 10, 21, 34, 44);
 B5(5, 11, 22, 35, 45); B6(6, 12, 23, 36, 37); B7(7, 13, 24, 28, 38); B8(8, 14, 25, 29, 39);
 B9(9, 15, 26, 30, 40).

Replication 3

B1(1, 18, 24, 29, 44); B2(2, 10, 25, 30, 45); B3(3, 11, 26, 31, 37); B4(4, 12, 27, 32, 38);
 B5(5, 13, 19, 33, 39); B6(6, 14, 20, 34, 40); B7(7, 15, 21, 35, 41); B8(8, 16, 22, 36, 42);
 B9(9, 17, 23, 28, 43).

Replication 4

B1(1, 14, 22, 30, 43); B2(2, 15, 23, 31, 44); B3(3, 16, 24, 32, 45); B4(4, 17, 25, 33, 37);
 B5(5, 18, 26, 34, 38); B6(6, 10, 27, 35, 39); B7(7, 11, 19, 36, 40); B8(8, 12, 20, 28, 41);
 B9(9, 13, 21, 29, 42).

144. $v = 45, b = 45, r = 5, k = 5, AE = 0.9685, DE = 0.9843$ $\alpha(0,1,2)$

Replication 1

B1(1, 10, 19, 28, 37); B2(2, 11, 20, 29, 38); B3(3, 12, 21, 30, 39); B4(4, 13, 22, 31, 40);
B5(5, 14, 23, 32, 41); B6(6, 15, 24, 33, 42); B7(7, 16, 25, 34, 43); B8(8, 17, 26, 35, 44);
B9(9, 18, 27, 36, 45).

Replication 2

B1(1, 12, 20, 34, 42); B2(2, 13, 21, 35, 43); B3(3, 14, 22, 36, 44); B4(4, 15, 23, 28, 45);
B5(5, 16, 24, 29, 37); B6(6, 17, 25, 30, 38); B7(7, 18, 26, 31, 39); B8(8, 10, 27, 32, 40);
B9(9, 11, 19, 33, 41).

Replication 3

B1(1, 15, 21, 31, 38); B2(2, 16, 22, 32, 39); B3(3, 17, 23, 33, 40); B4(4, 18, 24, 34, 41);
B5(5, 10, 25, 35, 42); B6(6, 11, 26, 36, 43); B7(7, 12, 27, 28, 44); B8(8, 13, 19, 29, 45);
B9(9, 14, 20, 30, 37).

Replication 4

B1(1, 17, 27, 35, 41); B2(2, 18, 19, 36, 42); B3(3, 10, 20, 28, 43); B4(4, 11, 21, 29, 44);
B5(5, 12, 22, 30, 45); B6(6, 13, 23, 31, 37); B7(7, 14, 24, 32, 38); B8(8, 15, 25, 33, 39);
B9(9, 16, 26, 34, 40).

Replication 5

B1(1, 16, 23, 36, 39); B2(2, 17, 24, 28, 40); B3(3, 18, 25, 29, 41); B4(4, 10, 26, 30, 42);
B5(5, 11, 27, 31, 43); B6(6, 12, 19, 32, 44); B7(7, 13, 20, 33, 45); B8(8, 14, 21, 34, 37);
B9(9, 15, 22, 35, 38).

145. $v = 50, b = 20, r = 2, k = 5, AE = 0.8378, DE = 0.9290$ $\alpha(0,1)$

Replication 1

B1(1, 11, 21, 31, 41); B2(2, 12, 22, 32, 42); B3(3, 13, 23, 33, 43); B4(4, 14, 24, 34, 44);
B5(5, 15, 25, 35, 45); B6(6, 16, 26, 36, 46); B7(7, 17, 27, 37, 47); B8(8, 18, 28, 38, 48);
B9(9, 19, 29, 39, 49); B10(10, 20, 30, 40, 50).

Replication 2

B1(1, 19, 23, 40, 46); B2(2, 20, 24, 31, 47); B3(3, 11, 25, 32, 48); B4(4, 12, 26, 33, 49);
B5(5, 13, 27, 34, 50); B6(6, 14, 28, 35, 41); B7(7, 15, 29, 36, 42); B8(8, 16, 30, 37, 43);
B9(9, 17, 21, 38, 44); B10(10, 18, 22, 39, 45).

146. $v = 50, b = 30, r = 3, k = 5, AE = 0.9271, DE = 0.9651$ $\alpha(0,1)$

Replication 1

B1(1, 11, 21, 31, 41); B2(2, 12, 22, 32, 42); B3(3, 13, 23, 33, 43); B4(4, 14, 24, 34, 44);
B5(5, 15, 25, 35, 45); B6(6, 16, 26, 36, 46); B7(7, 17, 27, 37, 47); B8(8, 18, 28, 38, 48);
B9(9, 19, 29, 39, 49); B10(10, 20, 30, 40, 50).

Replication 2

B1(1, 15, 23, 34, 50); B2(2, 16, 24, 35, 41); B3(3, 17, 25, 36, 42); B4(4, 18, 26, 37, 43);
B5(5, 19, 27, 38, 44); B6(6, 20, 28, 39, 45); B7(7, 11, 29, 40, 46); B8(8, 12, 30, 31, 47);
B9(9, 13, 21, 32, 48); B10(10, 14, 22, 33, 49).

Replication 3

B1(1, 19, 28, 37, 42); B2(2, 20, 29, 38, 43); B3(3, 11, 30, 39, 44); B4(4, 12, 21, 40, 45);
B5(5, 13, 22, 31, 46); B6(6, 14, 23, 32, 47); B7(7, 15, 24, 33, 48); B8(8, 16, 25, 34, 49);
B9(9, 17, 26, 35, 50); B10(10, 18, 27, 36, 41).

147. $v = 50, b = 40, r = 4, k = 5, AE = 0.9552, DE = 0.9781$ $\alpha(0,1)$

Replication 1

B1(1, 11, 21, 31, 41);	B2(2, 12, 22, 32, 42);	B3(3, 13, 23, 33, 43);	B4(4, 14, 24, 34, 44);
B5(5, 15, 25, 35, 45);	B6(6, 16, 26, 36, 46);	B7(7, 17, 27, 37, 47);	B8(8, 18, 28, 38, 48);
B9(9, 19, 29, 39, 49);	B10(10, 20, 30, 40, 50).		

Replication 2

B1(1, 12, 30, 37, 44);	B2(2, 13, 21, 38, 45);	B3(3, 14, 22, 39, 46);	B4(4, 15, 23, 40, 47);
B5(5, 16, 24, 31, 48);	B6(6, 17, 25, 32, 49);	B7(7, 18, 26, 33, 50);	B8(8, 19, 27, 34, 41);
B9(9, 20, 28, 35, 42);	B10(10, 11, 29, 36, 43).		

Replication 3

B1(1, 20, 27, 33, 46);	B2(2, 11, 28, 34, 47);	B3(3, 12, 29, 35, 48);	B4(4, 13, 30, 36, 49);
B5(5, 14, 21, 37, 50);	B6(6, 15, 22, 38, 41);	B7(7, 16, 23, 39, 42);	B8(8, 17, 24, 40, 43);
B9(9, 18, 25, 31, 44);	B10(10, 19, 26, 32, 45).		

Replication 4

B1(1, 16, 29, 38, 47);	B2(2, 17, 30, 39, 48);	B3(3, 18, 21, 40, 49);	B4(4, 19, 22, 31, 50);
B5(5, 20, 23, 32, 41);	B6(6, 11, 24, 33, 42);	B7(7, 12, 25, 34, 43);	B8(8, 13, 26, 35, 44);
B9(9, 14, 27, 36, 45);	B10(10, 15, 28, 37, 46).		

148. $v = 50, b = 50, r = 5, k = 5, AE = 0.9700, DE = 0.9851$ $\alpha(0,1)$

Replication 1

B1(1, 11, 21, 31, 41);	B2(2, 12, 22, 32, 42);	B3(3, 13, 23, 33, 43);	B4(4, 14, 24, 34, 44);
B5(5, 15, 25, 35, 45);	B6(6, 16, 26, 36, 46);	B7(7, 17, 27, 37, 47);	B8(8, 18, 28, 38, 48);
B9(9, 19, 29, 39, 49);	B10(10, 20, 30, 40, 50).		

Replication 2

B1(1, 19, 28, 36, 43);	B2(2, 20, 29, 37, 44);	B3(3, 11, 30, 38, 45);	B4(4, 12, 21, 39, 46);
B5(5, 13, 22, 40, 47);	B6(6, 14, 23, 31, 48);	B7(7, 15, 24, 32, 49);	B8(8, 16, 25, 33, 50);
B9(9, 17, 26, 34, 41);	B10(10, 18, 27, 35, 42).		

Replication 3

B1(1, 17, 24, 40, 46);	B2(2, 18, 25, 31, 47);	B3(3, 19, 26, 32, 48);	B4(4, 20, 27, 33, 49);
B5(5, 11, 28, 34, 50);	B6(6, 12, 29, 35, 41);	B7(7, 13, 30, 36, 42);	B8(8, 14, 21, 37, 43);
B9(9, 15, 22, 38, 44);	B10(10, 16, 23, 39, 45).		

Replication 4

B1(1, 20, 25, 38, 42);	B2(2, 11, 26, 39, 43);	B3(3, 12, 27, 40, 44);	B4(4, 13, 28, 31, 45);
B5(5, 14, 29, 32, 46);	B6(6, 15, 30, 33, 47);	B7(7, 16, 21, 34, 48);	B8(8, 17, 22, 35, 49);
B9(9, 18, 23, 36, 50);	B10(10, 19, 24, 37, 41).		

Replication 5

B1(1, 15, 27, 39, 48);	B2(2, 16, 28, 40, 49);	B3(3, 17, 29, 31, 50);	B4(4, 18, 30, 32, 41);
B5(5, 19, 21, 33, 42);	B6(6, 20, 22, 34, 43);	B7(7, 11, 23, 35, 44);	B8(8, 12, 24, 36, 45);
B9(9, 13, 25, 37, 46);	B10(10, 14, 26, 38, 47).		

149. $v = 55, b = 22, r = 2, k = 5, AE = 0.8341, DE = 0.9272$ $\alpha(0,1)$

Replication 1

B1(1, 12, 23, 34, 45);	B2(2, 13, 24, 35, 46);	B3(3, 14, 25, 36, 47);	B4(4, 15, 26, 37, 48);
B5(5, 16, 27, 38, 49);	B6(6, 17, 28, 39, 50);	B7(7, 18, 29, 40, 51);	B8(8, 19, 30, 41, 52);
B9(9, 20, 31, 42, 53);	B10(10, 21, 32, 43, 54);	B11(11, 22, 33, 44, 55).	

Replication 2

B1(1, 21, 29, 36, 46); B2(2, 22, 30, 37, 47); B3(3, 12, 31, 38, 48); B4(4, 13, 32, 39, 49);
B5(5, 14, 33, 40, 50); B6(6, 15, 23, 41, 51); B7(7, 16, 24, 42, 52); B8(8, 17, 25, 43, 53);
B9(9, 18, 26, 44, 54); B10(10, 19, 27, 34, 55); B11(11, 20, 28, 35, 45).

150. $v = 55, b = 33, r = 3, k = 5, AE = 0.9239, DE = 0.9637$ $\alpha(0,1)$

Replication 1

B1(1, 12, 23, 34, 45); B2(2, 13, 24, 35, 46); B3(3, 14, 25, 36, 47); B4(4, 15, 26, 37, 48);
B5(5, 16, 27, 38, 49); B6(6, 17, 28, 39, 50); B7(7, 18, 29, 40, 51); B8(8, 19, 30, 41, 52);
B9(9, 20, 31, 42, 53); B10(10, 21, 32, 43, 54); B11(11, 22, 33, 44, 55).

Replication 2

B1(1, 22, 30, 42, 47); B2(2, 12, 31, 43, 48); B3(3, 13, 32, 44, 49); B4(4, 14, 33, 34, 50);
B5(5, 15, 23, 35, 51); B6(6, 16, 24, 36, 52); B7(7, 17, 25, 37, 53); B8(8, 18, 26, 38, 54);
B9(9, 19, 27, 39, 55); B10(10, 20, 28, 40, 45); B11(11, 21, 29, 41, 46).

Replication 3

B1(1, 13, 27, 37, 54); B2(2, 14, 28, 38, 55); B3(3, 15, 29, 39, 45); B4(4, 16, 30, 40, 46);
B5(5, 17, 31, 41, 47); B6(6, 18, 32, 42, 48); B7(7, 19, 33, 43, 49); B8(8, 20, 23, 44, 50);
B9(9, 21, 24, 34, 51); B10(10, 22, 25, 35, 52); B11(11, 12, 26, 36, 53).

151. $v = 55, b = 44, r = 4, k = 5, AE = 0.9538, DE = 0.9773$ $\alpha(0,1)$

Replication 1

B1(1, 12, 23, 34, 45); B2(2, 13, 24, 35, 46); B3(3, 14, 25, 36, 47); B4(4, 15, 26, 37, 48);
B5(5, 16, 27, 38, 49); B6(6, 17, 28, 39, 50); B7(7, 18, 29, 40, 51); B8(8, 19, 30, 41, 52);
B9(9, 20, 31, 42, 53); B10(10, 21, 32, 43, 54); B11(11, 22, 33, 44, 55).

Replication 2

B1(1, 21, 33, 40, 50); B2(2, 22, 23, 41, 51); B3(3, 12, 24, 42, 52); B4(4, 13, 25, 43, 53);
B5(5, 14, 26, 44, 54); B6(6, 15, 27, 34, 55); B7(7, 16, 28, 35, 45); B8(8, 17, 29, 36, 46);
B9(9, 18, 30, 37, 47); B10(10, 19, 31, 38, 48); B11(11, 20, 32, 39, 49).

Replication 3

B1(1, 16, 31, 36, 55); B2(2, 17, 32, 37, 45); B3(3, 18, 33, 38, 46); B4(4, 19, 23, 39, 47);
B5(5, 20, 24, 40, 48); B6(6, 21, 25, 41, 49); B7(7, 22, 26, 42, 50); B8(8, 12, 27, 43, 51);
B9(9, 13, 28, 44, 52); B10(10, 14, 29, 34, 53); B11(11, 15, 30, 35, 54).

Replication 4

B1(1, 13, 29, 37, 49); B2(2, 14, 30, 38, 50); B3(3, 15, 31, 39, 51); B4(4, 16, 32, 40, 52);
B5(5, 17, 33, 41, 53); B6(6, 18, 23, 42, 54); B7(7, 19, 24, 43, 55); B8(8, 20, 25, 44, 45);
B9(9, 21, 26, 34, 46); B10(10, 22, 27, 35, 47); B11(11, 12, 28, 36, 48).

152. $v = 55, b = 55, r = 5, k = 5, AE = 0.9677, DE = 0.9840$ $\alpha(0,1)$

Replication 1

B1(1, 12, 23, 34, 45); B2(2, 13, 24, 35, 46); B3(3, 14, 25, 36, 47); B4(4, 15, 26, 37, 48);
B5(5, 16, 27, 38, 49); B6(6, 17, 28, 39, 50); B7(7, 18, 29, 40, 51); B8(8, 19, 30, 41, 52);
B9(9, 20, 31, 42, 53); B10(10, 21, 32, 43, 54); B11(11, 22, 33, 44, 55).

Replication 2

B1(1, 18, 26, 36, 52); B2(2, 19, 27, 37, 53); B3(3, 20, 28, 38, 54); B4(4, 21, 29, 39, 55);
B5(5, 22, 30, 40, 45); B6(6, 12, 31, 41, 46); B7(7, 13, 32, 42, 47); B8(8, 14, 33, 43, 48);
B9(9, 15, 23, 44, 49); B10(10, 16, 24, 34, 50); B11(11, 17, 25, 35, 51).

Replication 3

B1(1, 13, 25, 39, 49); B2(2, 14, 26, 40, 50); B3(3, 15, 27, 41, 51); B4(4, 16, 28, 42, 52);
 B5(5, 17, 29, 43, 53); B6(6, 18, 30, 44, 54); B7(7, 19, 31, 34, 55); B8(8, 20, 32, 35, 45);
 B9(9, 21, 33, 36, 46); B10(10, 22, 23, 37, 47); B11(11, 12, 24, 38, 48).

Replication 4

B1(1, 16, 33, 41, 53); B2(2, 17, 23, 42, 54); B3(3, 18, 24, 43, 55); B4(4, 19, 25, 44, 45);
 B5(5, 20, 26, 34, 46); B6(6, 21, 27, 35, 47); B7(7, 22, 28, 36, 48); B8(8, 12, 29, 37, 49);
 B9(9, 13, 30, 38, 50); B10(10, 14, 31, 39, 51); B11(11, 15, 32, 40, 52).

Replication 5

B1(1, 15, 30, 43, 47); B2(2, 16, 31, 44, 48); B3(3, 17, 32, 34, 49); B4(4, 18, 33, 35, 50);
 B5(5, 19, 23, 36, 51); B6(6, 20, 24, 37, 52); B7(7, 21, 25, 38, 53); B8(8, 22, 26, 39, 54);
 B9(9, 12, 27, 40, 55); B10(10, 13, 28, 41, 45); B11(11, 14, 29, 42, 46).

153. $v = 60, b = 24, r = 2, k = 5, AE = 0.8279, DE = 0.9251$ $\alpha(0,1)$

Replication 1

B1(1, 13, 25, 37, 49); B2(2, 14, 26, 38, 50); B3(3, 15, 27, 39, 51); B4(4, 16, 28, 40, 52);
 B5(5, 17, 29, 41, 53); B6(6, 18, 30, 42, 54); B7(7, 19, 31, 43, 55); B8(8, 20, 32, 44, 56);
 B9(9, 21, 33, 45, 57); B10(10, 22, 34, 46, 58); B11(11, 23, 35, 47, 59); B12(12, 24, 36, 48, 60).

Replication 2

B1(1, 23, 36, 45, 54); B2(2, 24, 25, 46, 55); B3(3, 13, 26, 47, 56); B4(4, 14, 27, 48, 57);
 B5(5, 15, 28, 37, 58); B6(6, 16, 29, 38, 59); B7(7, 17, 30, 39, 60); B8(8, 18, 31, 40, 49);
 B9(9, 19, 32, 41, 50); B10(10, 20, 33, 42, 51); B11(11, 21, 34, 43, 52); B12(12, 22, 35, 44, 53).

154. $v = 60, b = 36, r = 3, k = 5, AE = 0.9210, DE = 0.9625$ $\alpha(0,1)$

Replication 1

B1(1, 13, 25, 37, 49); B2(2, 14, 26, 38, 50); B3(3, 15, 27, 39, 51); B4(4, 16, 28, 40, 52);
 B5(5, 17, 29, 41, 53); B6(6, 18, 30, 42, 54); B7(7, 19, 31, 43, 55); B8(8, 20, 32, 44, 56);
 B9(9, 21, 33, 45, 57); B10(10, 22, 34, 46, 58); B11(11, 23, 35, 47, 59); B12(12, 24, 36, 48, 60).

Replication 2

B1(1, 17, 31, 48, 59); B2(2, 18, 32, 37, 60); B3(3, 19, 33, 38, 49); B4(4, 20, 34, 39, 50);
 B5(5, 21, 35, 40, 51); B6(6, 22, 36, 41, 52); B7(7, 23, 25, 42, 53); B8(8, 24, 26, 43, 54);
 B9(9, 13, 27, 44, 55); B10(10, 14, 28, 45, 56); B11(11, 15, 29, 46, 57); B12(12, 16, 30, 47, 58).

Replication 3

B1(1, 22, 26, 40, 57); B2(2, 23, 27, 41, 58); B3(3, 24, 28, 42, 59); B4(4, 13, 29, 43, 60);
 B5(5, 14, 30, 44, 49); B6(6, 15, 31, 45, 50); B7(7, 16, 32, 46, 51); B8(8, 17, 33, 47, 52);
 B9(9, 18, 34, 48, 53); B10(10, 19, 35, 37, 54); B11(11, 20, 36, 38, 55); B12(12, 21, 25, 39, 56).

155. $v = 60, b = 48, r = 4, k = 5, AE = 0.9509, DE = 0.9760$ $\alpha(0,1)$

Replication 1

B1(1, 13, 25, 37, 49); B2(2, 14, 26, 38, 50); B3(3, 15, 27, 39, 51); B4(4, 16, 28, 40, 52);
 B5(5, 17, 29, 41, 53); B6(6, 18, 30, 42, 54); B7(7, 19, 31, 43, 55); B8(8, 20, 32, 44, 56);
 B9(9, 21, 33, 45, 57); B10(10, 22, 34, 46, 58); B11(11, 23, 35, 47, 59); B12(12, 24, 36, 48, 60).

Replication 2

B1(1, 24, 26, 43, 59); B2(2, 13, 27, 44, 60); B3(3, 14, 28, 45, 49); B4(4, 15, 29, 46, 50);
 B5(5, 16, 30, 47, 51); B6(6, 17, 31, 48, 52); B7(7, 18, 32, 37, 53); B8(8, 19, 33, 38, 54);
 B9(9, 20, 34, 39, 55); B10(10, 21, 35, 40, 56); B11(11, 22, 36, 41, 57); B12(12, 23, 25, 42, 58).

Replication 3

B1(1, 15, 31, 41, 56); B2(2, 16, 32, 42, 57); B3(3, 17, 33, 43, 58); B4(4, 18, 34, 44, 59);
 B5(5, 19, 35, 45, 60); B6(6, 20, 36, 46, 49); B7(7, 21, 25, 47, 50); B8(8, 22, 26, 48, 51);
 B9(9, 23, 27, 37, 52); B10(10, 24, 28, 38, 53); B11(11, 13, 29, 39, 54); B12(12, 14, 30, 40, 55).

Replication 4

B1(1, 22, 30, 45, 50); B2(2, 23, 31, 46, 51); B3(3, 24, 32, 47, 52); B4(4, 13, 33, 48, 53);
 B5(5, 14, 34, 37, 54); B6(6, 15, 35, 38, 55); B7(7, 16, 36, 39, 56); B8(8, 17, 25, 40, 57);
 B9(9, 18, 26, 41, 58); B10(10, 19, 27, 42, 59); B11(11, 20, 28, 43, 60); B12(12, 21, 29, 44, 49).

156. $v = 60, b = 60, r = 5, k = 5, AE = 0.9660, DE = 0.9832$ $\alpha(0,1)$

Replication 1

B1(1, 13, 25, 37, 49); B2(2, 14, 26, 38, 50); B3(3, 15, 27, 39, 51); B4(4, 16, 28, 40, 52);
 B5(5, 17, 29, 41, 53); B6(6, 18, 30, 42, 54); B7(7, 19, 31, 43, 55); B8(8, 20, 32, 44, 56);
 B9(9, 21, 33, 45, 57); B10(10, 22, 34, 46, 58); B11(11, 23, 35, 47, 59); B12(12, 24, 36, 48, 60).

Replication 2

B1(1, 19, 34, 41, 50); B2(2, 20, 35, 42, 51); B3(3, 21, 36, 43, 52); B4(4, 22, 25, 44, 53);
 B5(5, 23, 26, 45, 54); B6(6, 24, 27, 46, 55); B7(7, 13, 28, 47, 56); B8(8, 14, 29, 48, 57);
 B9(9, 15, 30, 37, 58); B10(10, 16, 31, 38, 59); B11(11, 17, 32, 39, 60); B12(12, 18, 33, 40, 49).

Replication 3

B1(1, 14, 31, 40, 51); B2(2, 15, 32, 41, 52); B3(3, 16, 33, 42, 53); B4(4, 17, 34, 43, 54);
 B5(5, 18, 35, 44, 55); B6(6, 19, 36, 45, 56); B7(7, 20, 25, 46, 57); B8(8, 21, 26, 47, 58);
 B9(9, 22, 27, 48, 59); B10(10, 23, 28, 37, 60); B11(11, 24, 29, 38, 49); B12(12, 13, 30, 39, 50).

Replication 4

B1(1, 21, 27, 44, 60); B2(2, 22, 28, 45, 49); B3(3, 23, 29, 46, 50); B4(4, 24, 30, 47, 51);
 B5(5, 13, 31, 48, 52); B6(6, 14, 32, 37, 53); B7(7, 15, 33, 38, 54); B8(8, 16, 34, 39, 55);
 B9(9, 17, 35, 40, 56); B10(10, 18, 36, 41, 57); B11(11, 19, 25, 42, 58); B12(12, 20, 26, 43, 59).

Replication 5

B1(1, 20, 36, 47, 53); B2(2, 21, 25, 48, 54); B3(3, 22, 26, 37, 55); B4(4, 23, 27, 38, 56);
 B5(5, 24, 28, 39, 57); B6(6, 13, 29, 40, 58); B7(7, 14, 30, 41, 59); B8(8, 15, 31, 42, 60);
 B9(9, 16, 32, 43, 49); B10(10, 17, 33, 44, 50); B11(11, 18, 34, 45, 51); B12(12, 19, 35, 46, 52).

157. $v = 65, b = 26, r = 2, k = 5, AE = 0.8227, DE = 0.9234$ $\alpha(0,1)$

Replication 1

B1(1, 14, 27, 40, 53); B2(2, 15, 28, 41, 54); B3(3, 16, 29, 42, 55); B4(4, 17, 30, 43, 56);
 B5(5, 18, 31, 44, 57); B6(6, 19, 32, 45, 58); B7(7, 20, 33, 46, 59); B8(8, 21, 34, 47, 60);
 B9(9, 22, 35, 48, 61); B10(10, 23, 36, 49, 62); B11(11, 24, 37, 50, 63); B12(12, 25, 38, 51, 64);
 B13(13, 26, 39, 52, 65).

Replication 2

B1(1, 26, 29, 43, 60); B2(2, 14, 30, 44, 61); B3(3, 15, 31, 45, 62); B4(4, 16, 32, 46, 63);
 B5(5, 17, 33, 47, 64); B6(6, 18, 34, 48, 65); B7(7, 19, 35, 49, 53); B8(8, 20, 36, 50, 54);
 B9(9, 21, 37, 51, 55); B10(10, 22, 38, 52, 56); B11(11, 23, 39, 40, 57); B12(12, 24, 27, 41, 58);
 B13(13, 25, 28, 42, 59).

158. $v = 65, b = 39, r = 3, k = 5, AE = 0.9210, DE = 0.9621$ $\alpha(0,1)$

Replication 1

B1(1, 14, 27, 40, 53); B2(2, 15, 28, 41, 54); B3(3, 16, 29, 42, 55); B4(4, 17, 30, 43, 56);
 B5(5, 18, 31, 44, 57); B6(6, 19, 32, 45, 58); B7(7, 20, 33, 46, 59); B8(8, 21, 34, 47, 60);

B9(9, 22, 35, 48, 61); B10(10, 23, 36, 49, 62); B11(11, 24, 37, 50, 63); B12(12, 25, 38, 51, 64);
 B13(13, 26, 39, 52, 65).

Replication 2

B1(1, 24, 30, 42, 54); B2(2, 25, 31, 43, 55); B3(3, 26, 32, 44, 56); B4(4, 14, 33, 45, 57);
 B5(5, 15, 34, 46, 58); B6(6, 16, 35, 47, 59); B7(7, 17, 36, 48, 60); B8(8, 18, 37, 49, 61);
 B9(9, 19, 38, 50, 62); B10(10, 20, 39, 51, 63); B11(11, 21, 27, 52, 64); B12(12, 22, 28, 40, 65);
 B13(13, 23, 29, 41, 53).

Replication 3

B1(1, 26, 38, 46, 61); B2(2, 14, 39, 47, 62); B3(3, 15, 27, 48, 63); B4(4, 16, 28, 49, 64);
 B5(5, 17, 29, 50, 65); B6(6, 18, 30, 51, 53); B7(7, 19, 31, 52, 54); B8(8, 20, 32, 40, 55);
 B9(9, 21, 33, 41, 56); B10(10, 22, 34, 42, 57); B11(11, 23, 35, 43, 58); B12(12, 24, 36, 44, 59);
 B13(13, 25, 37, 45, 60).

159. $v = 65, b = 52, r = 4, k = 5, AE = 0.9493, DE = 0.9752$ $\alpha(0,1)$

Replication 1

B1(1, 14, 27, 40, 53); B2(2, 15, 28, 41, 54); B3(3, 16, 29, 42, 55); B4(4, 17, 30, 43, 56);
 B5(5, 18, 31, 44, 57); B6(6, 19, 32, 45, 58); B7(7, 20, 33, 46, 59); B8(8, 21, 34, 47, 60);
 B9(9, 22, 35, 48, 61); B10(10, 23, 36, 49, 62); B11(11, 24, 37, 50, 63); B12(12, 25, 38, 51, 64);
 B13(13, 26, 39, 52, 65).

Replication 2

B1(1, 15, 37, 42, 65); B2(2, 16, 38, 43, 53); B3(3, 17, 39, 44, 54); B4(4, 18, 27, 45, 55);
 B5(5, 19, 28, 46, 56); B6(6, 20, 29, 47, 57); B7(7, 21, 30, 48, 58); B8(8, 22, 31, 49, 59);
 B9(9, 23, 32, 50, 60); B10(10, 24, 33, 51, 61); B11(11, 25, 34, 52, 62); B12(12, 26, 35, 40, 63);
 B13(13, 14, 36, 41, 64).

Replication 3

B1(1, 20, 38, 52, 56); B2(2, 21, 39, 40, 57); B3(3, 22, 27, 41, 58); B4(4, 23, 28, 42, 59);
 B5(5, 24, 29, 43, 60); B6(6, 25, 30, 44, 61); B7(7, 26, 31, 45, 62); B8(8, 14, 32, 46, 63);
 B9(9, 15, 33, 47, 64); B10(10, 16, 34, 48, 65); B11(11, 17, 35, 49, 53); B12(12, 18, 36, 50, 54);
 B13(13, 19, 37, 51, 55).

Replication 4

B1(1, 24, 34, 45, 54); B2(2, 25, 35, 46, 55); B3(3, 26, 36, 47, 56); B4(4, 14, 37, 48, 57);
 B5(5, 15, 38, 49, 58); B6(6, 16, 39, 50, 59); B7(7, 17, 27, 51, 60); B8(8, 18, 28, 52, 61);
 B9(9, 19, 29, 40, 62); B10(10, 20, 30, 41, 63); B11(11, 21, 31, 42, 64); B12(12, 22, 32, 43, 65);
 B13(13, 23, 33, 44, 53).

160. $v = 65, b = 65, r = 5, k = 5, AE = 0.9644, DE = 0.9824$ $\alpha(0,1)$

Replication 1

B1(1, 14, 27, 40, 53); B2(2, 15, 28, 41, 54); B3(3, 16, 29, 42, 55); B4(4, 17, 30, 43, 56);
 B5(5, 18, 31, 44, 57); B6(6, 19, 32, 45, 58); B7(7, 20, 33, 46, 59); B8(8, 21, 34, 47, 60);
 B9(9, 22, 35, 48, 61); B10(10, 23, 36, 49, 62); B11(11, 24, 37, 50, 63); B12(12, 25, 38, 51, 64);
 B13(13, 26, 39, 52, 65).

Replication 2

B1(1, 26, 35, 42, 60); B2(2, 14, 36, 43, 61); B3(3, 15, 37, 44, 62); B4(4, 16, 38, 45, 63);
 B5(5, 17, 39, 46, 64); B6(6, 18, 27, 47, 65); B7(7, 19, 28, 48, 53); B8(8, 20, 29, 49, 54);
 B9(9, 21, 30, 50, 55); B10(10, 22, 31, 51, 56); B11(11, 23, 32, 52, 57); B12(12, 24, 33, 40, 58);
 B13(13, 25, 34, 41, 59).

Replication 3

B1(1, 15, 38, 50, 56); B2(2, 16, 39, 51, 57); B3(3, 17, 27, 52, 58); B4(4, 18, 28, 40, 59);
 B5(5, 19, 29, 41, 60); B6(6, 20, 30, 42, 61); B7(7, 21, 31, 43, 62); B8(8, 22, 32, 44, 63);

B9(9, 23, 33, 45, 64); B10(10, 24, 34, 46, 65); B11(11, 25, 35, 47, 53); B12(12, 26, 36, 48, 54);
 B13(13, 14, 37, 49, 55).

Replication 4

B1(1, 22, 39, 43, 58); B2(2, 23, 27, 44, 59); B3(3, 24, 28, 45, 60); B4(4, 25, 29, 46, 61);
 B5(5, 26, 30, 47, 62); B6(6, 14, 31, 48, 63); B7(7, 15, 32, 49, 64); B8(8, 16, 33, 50, 65);
 B9(9, 17, 34, 51, 53); B10(10, 18, 35, 52, 54); B11(11, 19, 36, 40, 55); B12(12, 20, 37, 41, 56);
 B13(13, 21, 38, 42, 57).

Replication 5

B1(1, 23, 29, 48, 65); B2(2, 24, 30, 49, 53); B3(3, 25, 31, 50, 54); B4(4, 26, 32, 51, 55);
 B5(5, 14, 33, 52, 56); B6(6, 15, 34, 40, 57); B7(7, 16, 35, 41, 58); B8(8, 17, 36, 42, 59);
 B9(9, 18, 37, 43, 60); B10(10, 19, 38, 44, 61); B11(11, 20, 39, 45, 62); B12(12, 21, 27, 46, 63);
 B13(13, 22, 28, 47, 64).

161. $v = 70, b = 28, r = 2, k = 5, AE = 0.8190, DE = 0.9220$ $\alpha(0,1)$

Replication 1

B1(1, 15, 29, 43, 57); B2(2, 16, 30, 44, 58); B3(3, 17, 31, 45, 59); B4(4, 18, 32, 46, 60);
 B5(5, 19, 33, 47, 61); B6(6, 20, 34, 48, 62); B7(7, 21, 35, 49, 63); B8(8, 22, 36, 50, 64);
 B9(9, 23, 37, 51, 65); B10(10, 24, 38, 52, 66); B11(11, 25, 39, 53, 67); B12(12, 26, 40, 54, 68);
 B13(13, 27, 41, 55, 69); B14(14, 28, 42, 56, 70).

Replication 2

B1(1, 20, 38, 49, 59); B2(2, 21, 39, 50, 60); B3(3, 22, 40, 51, 61); B4(4, 23, 41, 52, 62);
 B5(5, 24, 42, 53, 63); B6(6, 25, 29, 54, 64); B7(7, 26, 30, 55, 65); B8(8, 27, 31, 56, 66);
 B9(9, 28, 32, 43, 67); B10(10, 15, 33, 44, 68); B11(11, 16, 34, 45, 69); B12(12, 17, 35, 46, 70);
 B13(13, 18, 36, 47, 57); B14(14, 19, 37, 48, 58).

162. $v = 70, b = 42, r = 3, k = 5, AE = 0.9179, DE = 0.9609$ $\alpha(0,1)$

Replication 1

B1(1, 15, 29, 43, 57); B2(2, 16, 30, 44, 58); B3(3, 17, 31, 45, 59); B4(4, 18, 32, 46, 60);
 B5(5, 19, 33, 47, 61); B6(6, 20, 34, 48, 62); B7(7, 21, 35, 49, 63); B8(8, 22, 36, 50, 64);
 B9(9, 23, 37, 51, 65); B10(10, 24, 38, 52, 66); B11(11, 25, 39, 53, 67); B12(12, 26, 40, 54, 68);
 B13(13, 27, 41, 55, 69); B14(14, 28, 42, 56, 70).

Replication 2

B1(1, 16, 33, 54, 62); B2(2, 17, 34, 55, 63); B3(3, 18, 35, 56, 64); B4(4, 19, 36, 43, 65);
 B5(5, 20, 37, 44, 66); B6(6, 21, 38, 45, 67); B7(7, 22, 39, 46, 68); B8(8, 23, 40, 47, 69);
 B9(9, 24, 41, 48, 70); B10(10, 25, 42, 49, 57); B11(11, 26, 29, 50, 58); B12(12, 27, 30, 51, 59);
 B13(13, 28, 31, 52, 60); B14(14, 15, 32, 53, 61).

Replication 3

B1(1, 27, 37, 56, 67); B2(2, 28, 38, 43, 68); B3(3, 15, 39, 44, 69); B4(4, 16, 40, 45, 70);
 B5(5, 17, 41, 46, 57); B6(6, 18, 42, 47, 58); B7(7, 19, 29, 48, 59); B8(8, 20, 30, 49, 60);
 B9(9, 21, 31, 50, 61); B10(10, 22, 32, 51, 62); B11(11, 23, 33, 52, 63); B12(12, 24, 34, 53, 64);
 B13(13, 25, 35, 54, 65); B14(14, 26, 36, 55, 66).

163. $v = 70, b = 56, r = 4, k = 5, AE = 0.9484, DE = 0.9747$ $\alpha(0,1)$

Replication 1

B1(1, 15, 29, 43, 57); B2(2, 16, 30, 44, 58); B3(3, 17, 31, 45, 59); B4(4, 18, 32, 46, 60);
 B5(5, 19, 33, 47, 61); B6(6, 20, 34, 48, 62); B7(7, 21, 35, 49, 63); B8(8, 22, 36, 50, 64);

B9(9, 23, 37, 51, 65); B10(10, 24, 38, 52, 66); B11(11, 25, 39, 53, 67); B12(12, 26, 40, 54, 68);
 B13(13, 27, 41, 55, 69); B14(14, 28, 42, 56, 70).

Replication 2

B1(1, 19, 37, 52, 68); B2(2, 20, 38, 53, 69); B3(3, 21, 39, 54, 70); B4(4, 22, 40, 55, 57);
 B5(5, 23, 41, 56, 58); B6(6, 24, 42, 43, 59); B7(7, 25, 29, 44, 60); B8(8, 26, 30, 45, 61);
 B9(9, 27, 31, 46, 62); B10(10, 28, 32, 47, 63); B11(11, 15, 33, 48, 64); B12(12, 16, 34, 49, 65);
 B13(13, 17, 35, 50, 66); B14(14, 18, 36, 51, 67).

Replication 3

B1(1, 21, 36, 46, 58); B2(2, 22, 37, 47, 59); B3(3, 23, 38, 48, 60); B4(4, 24, 39, 49, 61);
 B5(5, 25, 40, 50, 62); B6(6, 26, 41, 51, 63); B7(7, 27, 42, 52, 64); B8(8, 28, 29, 53, 65);
 B9(9, 15, 30, 54, 66); B10(10, 16, 31, 55, 67); B11(11, 17, 32, 56, 68); B12(12, 18, 33, 43, 69);
 B13(13, 19, 34, 44, 70); B14(14, 20, 35, 45, 57).

Replication 4

B1(1, 25, 32, 45, 69); B2(2, 26, 33, 46, 70); B3(3, 27, 34, 47, 57); B4(4, 28, 35, 48, 58);
 B5(5, 15, 36, 49, 59); B6(6, 16, 37, 50, 60); B7(7, 17, 38, 51, 61); B8(8, 18, 39, 52, 62);
 B9(9, 19, 40, 53, 63); B10(10, 20, 41, 54, 64); B11(11, 21, 42, 55, 65); B12(12, 22, 29, 56, 66);
 B13(13, 23, 30, 43, 67); B14(14, 24, 31, 44, 68).

164. $v = 70, b = 70, r = 5, k = 5, AE = 0.9630, DE = 0.9818$ $\alpha(0,1)$

Replication 1

B1(1, 15, 29, 43, 57); B2(2, 16, 30, 44, 58); B3(3, 17, 31, 45, 59); B4(4, 18, 32, 46, 60);
 B5(5, 19, 33, 47, 61); B6(6, 20, 34, 48, 62); B7(7, 21, 35, 49, 63); B8(8, 22, 36, 50, 64);
 B9(9, 23, 37, 51, 65); B10(10, 24, 38, 52, 66); B11(11, 25, 39, 53, 67); B12(12, 26, 40, 54, 68);
 B13(13, 27, 41, 55, 69); B14(14, 28, 42, 56, 70).

Replication 2

B1(1, 17, 33, 52, 69); B2(2, 18, 34, 53, 70); B3(3, 19, 35, 54, 57); B4(4, 20, 36, 55, 58);
 B5(5, 21, 37, 56, 59); B6(6, 22, 38, 43, 60); B7(7, 23, 39, 44, 61); B8(8, 24, 40, 45, 62);
 B9(9, 25, 41, 46, 63); B10(10, 26, 42, 47, 64); B11(11, 27, 29, 48, 65); B12(12, 28, 30, 49, 66);
 B13(13, 15, 31, 50, 67); B14(14, 16, 32, 51, 68).

Replication 3

B1(1, 28, 32, 45, 63); B2(2, 15, 33, 46, 64); B3(3, 16, 34, 47, 65); B4(4, 17, 35, 48, 66);
 B5(5, 18, 36, 49, 67); B6(6, 19, 37, 50, 68); B7(7, 20, 38, 51, 69); B8(8, 21, 39, 52, 70);
 B9(9, 22, 40, 53, 57); B10(10, 23, 41, 54, 58); B11(11, 24, 42, 55, 59); B12(12, 25, 29, 56, 60);
 B13(13, 26, 30, 43, 61); B14(14, 27, 31, 44, 62).

Replication 4

B1(1, 21, 34, 55, 68); B2(2, 22, 35, 56, 69); B3(3, 23, 36, 43, 70); B4(4, 24, 37, 44, 57);
 B5(5, 25, 38, 45, 58); B6(6, 26, 39, 46, 59); B7(7, 27, 40, 47, 60); B8(8, 28, 41, 48, 61);
 B9(9, 15, 42, 49, 62); B10(10, 16, 29, 50, 63); B11(11, 17, 30, 51, 64); B12(12, 18, 31, 52, 65);
 B13(13, 19, 32, 53, 66); B14(14, 20, 33, 54, 67).

Replication 5

B1(1, 24, 30, 54, 60); B2(2, 25, 31, 55, 61); B3(3, 26, 32, 56, 62); B4(4, 27, 33, 43, 63);
 B5(5, 28, 34, 44, 64); B6(6, 15, 35, 45, 65); B7(7, 16, 36, 46, 66); B8(8, 17, 37, 47, 67);
 B9(9, 18, 38, 48, 68); B10(10, 19, 39, 49, 69); B11(11, 20, 40, 50, 70); B12(12, 21, 41, 51, 57);
 B13(13, 22, 42, 52, 58); B14(14, 23, 29, 53, 59).

165. $v = 75, b = 30, r = 2, k = 5, AE = 0.8158, DE = 0.9208$ $\alpha(0,1)$

Replication 1

B1(1, 16, 31, 46, 61); B2(2, 17, 32, 47, 62); B3(3, 18, 33, 48, 63); B4(4, 19, 34, 49, 64);
 B5(5, 20, 35, 50, 65); B6(6, 21, 36, 51, 66); B7(7, 22, 37, 52, 67); B8(8, 23, 38, 53, 68);

B9(9, 24, 39, 54, 69); B10(10, 25, 40, 55, 70); B11(11, 26, 41, 56, 71); B12(12, 27, 42, 57, 72);
 B13(13, 28, 43, 58, 73); B14(14, 29, 44, 59, 74); B15(15, 30, 45, 60, 75).

Replication 2

B1(1, 24, 43, 55, 74); B2(2, 25, 44, 56, 75); B3(3, 26, 45, 57, 61); B4(4, 27, 31, 58, 62);
 B5(5, 28, 32, 59, 63); B6(6, 29, 33, 60, 64); B7(7, 30, 34, 46, 65); B8(8, 16, 35, 47, 66);
 B9(9, 17, 36, 48, 67); B10(10, 18, 37, 49, 68); B11(11, 19, 38, 50, 69); B12(12, 20, 39, 51, 70);
 B13(13, 21, 40, 52, 71); B14(14, 22, 41, 53, 72); B15(15, 23, 42, 54, 73).

166. $v = 75, b = 45, r = 3, k = 5, AE = 0.9153, DE = 0.9599$ $\alpha(0,1)$

Replication 1

B1(1, 16, 31, 46, 61); B2(2, 17, 32, 47, 62); B3(3, 18, 33, 48, 63); B4(4, 19, 34, 49, 64);
 B5(5, 20, 35, 50, 65); B6(6, 21, 36, 51, 66); B7(7, 22, 37, 52, 67); B8(8, 23, 38, 53, 68);
 B9(9, 24, 39, 54, 69); B10(10, 25, 40, 55, 70); B11(11, 26, 41, 56, 71); B12(12, 27, 42, 57, 72);
 B13(13, 28, 43, 58, 73); B14(14, 29, 44, 59, 74); B15(15, 30, 45, 60, 75).

Replication 2

B1(1, 19, 33, 58, 71); B2(2, 20, 34, 59, 72); B3(3, 21, 35, 60, 73); B4(4, 22, 36, 46, 74);
 B5(5, 23, 37, 47, 75); B6(6, 24, 38, 48, 61); B7(7, 25, 39, 49, 62); B8(8, 26, 40, 50, 63);
 B9(9, 27, 41, 51, 64); B10(10, 28, 42, 52, 65); B11(11, 29, 43, 53, 66); B12(12, 30, 44, 54, 67);
 B13(13, 16, 45, 55, 68); B14(14, 17, 31, 56, 69); B15(15, 18, 32, 57, 70).

Replication 3

B1(1, 25, 44, 51, 75); B2(2, 26, 45, 52, 61); B3(3, 27, 31, 53, 62); B4(4, 28, 32, 54, 63);
 B5(5, 29, 33, 55, 64); B6(6, 30, 34, 56, 65); B7(7, 16, 35, 57, 66); B8(8, 17, 36, 58, 67);
 B9(9, 18, 37, 59, 68); B10(10, 19, 38, 60, 69); B11(11, 20, 39, 46, 70); B12(12, 21, 40, 47, 71);
 B13(13, 22, 41, 48, 72); B14(14, 23, 42, 49, 73); B15(15, 24, 43, 50, 74).

167. $v = 75, b = 60, r = 4, k = 5, AE = 0.9463, DE = 0.9738$ $\alpha(0,1)$

Replication 1

B1(1, 16, 31, 46, 61); B2(2, 17, 32, 47, 62); B3(3, 18, 33, 48, 63); B4(4, 19, 34, 49, 64);
 B5(5, 20, 35, 50, 65); B6(6, 21, 36, 51, 66); B7(7, 22, 37, 52, 67); B8(8, 23, 38, 53, 68);
 B9(9, 24, 39, 54, 69); B10(10, 25, 40, 55, 70); B11(11, 26, 41, 56, 71); B12(12, 27, 42, 57, 72);
 B13(13, 28, 43, 58, 73); B14(14, 29, 44, 59, 74); B15(15, 30, 45, 60, 75).

Replication 2

B1(1, 24, 38, 49, 70); B2(2, 25, 39, 50, 71); B3(3, 26, 40, 51, 72); B4(4, 27, 41, 52, 73);
 B5(5, 28, 42, 53, 74); B6(6, 29, 43, 54, 75); B7(7, 30, 44, 55, 61); B8(8, 16, 45, 56, 62);
 B9(9, 17, 31, 57, 63); B10(10, 18, 32, 58, 64); B11(11, 19, 33, 59, 65); B12(12, 20, 34, 60, 66);
 B13(13, 21, 35, 46, 67); B14(14, 22, 36, 47, 68); B15(15, 23, 37, 48, 69).

Replication 3

B1(1, 18, 43, 57, 74); B2(2, 19, 44, 58, 75); B3(3, 20, 45, 59, 61); B4(4, 21, 31, 60, 62);
 B5(5, 22, 32, 46, 63); B6(6, 23, 33, 47, 64); B7(7, 24, 34, 48, 65); B8(8, 25, 35, 49, 66);
 B9(9, 26, 36, 50, 67); B10(10, 27, 37, 51, 68); B11(11, 28, 38, 52, 69); B12(12, 29, 39, 53, 70);
 B13(13, 30, 40, 54, 71); B14(14, 16, 41, 55, 72); B15(15, 17, 42, 56, 73).

Replication 4

B1(1, 20, 37, 47, 71); B2(2, 21, 38, 48, 72); B3(3, 22, 39, 49, 73); B4(4, 23, 40, 50, 74);
 B5(5, 24, 41, 51, 75); B6(6, 25, 42, 52, 61); B7(7, 26, 43, 53, 62); B8(8, 27, 44, 54, 63);
 B9(9, 28, 45, 55, 64); B10(10, 29, 31, 56, 65); B11(11, 30, 32, 57, 66); B12(12, 16, 33, 58, 67);
 B13(13, 17, 34, 59, 68); B14(14, 18, 35, 60, 69); B15(15, 19, 36, 46, 70).

168. $v = 75, b = 75, r = 5, k = 5, AE = 0.9628, DE = 0.9815$ $\alpha(0,1)$

Replication 1

B1(1, 16, 31, 46, 61); B2(2, 17, 32, 47, 62); B3(3, 18, 33, 48, 63); B4(4, 19, 34, 49, 64);
 B5(5, 20, 35, 50, 65); B6(6, 21, 36, 51, 66); B7(7, 22, 37, 52, 67); B8(8, 23, 38, 53, 68);

B9(9, 24, 39, 54, 69); B10(10, 25, 40, 55, 70); B11(11, 26, 41, 56, 71); B12(12, 27, 42, 57, 72);
 B13(13, 28, 43, 58, 73); B14(14, 29, 44, 59, 74); B15(15, 30, 45, 60, 75).

Replication 2

B1(1, 28, 38, 60, 70); B2(2, 29, 39, 46, 71); B3(3, 30, 40, 47, 72); B4(4, 16, 41, 48, 73);
 B5(5, 17, 42, 49, 74); B6(6, 18, 43, 50, 75); B7(7, 19, 44, 51, 61); B8(8, 20, 45, 52, 62);
 B9(9, 21, 31, 53, 63); B10(10, 22, 32, 54, 64); B11(11, 23, 33, 55, 65); B12(12, 24, 34, 56, 66);
 B13(13, 25, 35, 57, 67); B14(14, 26, 36, 58, 68); B15(15, 27, 37, 59, 69).

Replication 3

B1(1, 29, 40, 56, 67); B2(2, 30, 41, 57, 68); B3(3, 16, 42, 58, 69); B4(4, 17, 43, 59, 70);
 B5(5, 18, 44, 60, 71); B6(6, 19, 45, 46, 72); B7(7, 20, 31, 47, 73); B8(8, 21, 32, 48, 74);
 B9(9, 22, 33, 49, 75); B10(10, 23, 34, 50, 61); B11(11, 24, 35, 51, 62); B12(12, 25, 36, 52, 63);
 B13(13, 26, 37, 53, 64); B14(14, 27, 38, 54, 65); B15(15, 28, 39, 55, 66).

Replication 4

B1(1, 30, 36, 49, 65); B2(2, 16, 37, 50, 66); B3(3, 17, 38, 51, 67); B4(4, 18, 39, 52, 68);
 B5(5, 19, 40, 53, 69); B6(6, 20, 41, 54, 70); B7(7, 21, 42, 55, 71); B8(8, 22, 43, 56, 72);
 B9(9, 23, 44, 57, 73); B10(10, 24, 45, 58, 74); B11(11, 25, 31, 59, 75); B12(12, 26, 32, 60, 61);
 B13(13, 27, 33, 46, 62); B14(14, 28, 34, 47, 63); B15(15, 29, 35, 48, 64).

Replication 5

B1(1, 18, 37, 57, 74); B2(2, 19, 38, 58, 75); B3(3, 20, 39, 59, 61); B4(4, 21, 40, 60, 62);
 B5(5, 22, 41, 46, 63); B6(6, 23, 42, 47, 64); B7(7, 24, 43, 48, 65); B8(8, 25, 44, 49, 66);
 B9(9, 26, 45, 50, 67); B10(10, 27, 31, 51, 68); B11(11, 28, 32, 52, 69); B12(12, 29, 33, 53, 70);
 B13(13, 30, 34, 54, 71); B14(14, 16, 35, 55, 72); B15(15, 17, 36, 56, 73).

BLOCK SIZE 6

169. $v = 12, b = 4, r = 2, k = 6, AE = 0.9308, DE = 0.9698$ $\alpha(0,1,2)$

Replication 1

B1(1, 3, 5, 7, 9, 11); B2(2, 4, 6, 8, 10, 12).

Replication 2

B1(1, 3, 6, 7, 10, 12); B2(2, 4, 5, 8, 9, 11).

170. $v = 12, b = 6, r = 3, k = 6, AE = 0.9614, DE = 0.9823$ $\alpha(0,1,2,3)$

Replication 1

B1(1, 3, 5, 7, 9, 11); B2(2, 4, 6, 10, 8, 12).

Replication 2

B1(1, 4, 6, 8, 9, 12); B2(2, 3, 5, 7, 10, 11).

Replication 3

B1(1, 3, 5, 8, 10, 12); B2(2, 4, 6, 7, 9, 11).

171. $v = 12, b = 8, r = 4, k = 6, AE = 0.9758, DE = 0.9885$ $\alpha(0,2,4)$

Replication 1

B1(1, 3, 5, 7, 9, 11); B2(2, 4, 6, 8, 10, 12).

Replication 2

B1(1, 4, 6, 7, 10, 11); B2(2, 3, 5, 8, 9, 12).

Replication 3

B1(1, 4, 6, 8, 9, 12); B2(2, 3, 5, 7, 10, 11).

Replication 4

B1(1, 3, 5, 8, 10, 12); B2(2, 4, 6, 7, 9, 11).

172. $v = 12, b = 10, r = 5, k = 6, AE = 0.9824, DE = 0.9915$

$\alpha(0,1,2,3,4)\$$

Replication 1

B1(1, 3, 5, 7, 9, 11); B2(2, 4, 6, 8, 10, 12).

Replication 2

B1(1, 4, 6, 7, 9, 11); B2(2, 3, 5, 8, 10, 12).

Replication 3

B1(1, 3, 5, 8, 10, 11); B2(2, 4, 6, 7, 9, 12).

Replication 4

B1(1, 3, 6, 8, 9, 12); B2(2, 4, 5, 7, 10, 11).

Replication 5

B1(1, 4, 5, 7, 10, 12); B2(2, 3, 6, 8, 9, 11).

173. $v = 18, b = 6, r = 2, k = 6, AE = 0.9175, DE = 0.9628$

$\alpha(0,1,2)$

Replication 1

B1(1, 4, 7, 10, 13, 16); B2(2, 5, 8, 11, 14, 17); B3(3, 6, 9, 12, 15, 18).

Replication 2

B1(1, 4, 9, 12, 14, 17); B2(2, 5, 7, 10, 15, 18); B3(3, 6, 8, 11, 13, 16).

174. $v = 18, b = 9, r = 3, k = 6, AE = 0.9633, DE = 0.9822$

$\alpha(0,1,2)$

Replication 1

B1(1, 4, 7, 10, 13, 16); B2(2, 5, 8, 11, 14, 17); B3(3, 6, 9, 12, 15, 18).

Replication 2

B1(1, 5, 9, 11, 13, 18); B2(2, 6, 7, 12, 14, 16); B3(3, 4, 8, 10, 15, 17).

Replication 3

B1(1, 6, 8, 11, 15, 16); B2(2, 4, 9, 12, 13, 17); B3(3, 5, 7, 10, 14, 18).

175. $v = 18, b = 12, r = 4, k = 6, AE = 0.9721, DE = 0.9866$

$\alpha(0,1,2,3)\$$

Replication 1

B1(1, 4, 7, 10, 13, 16); B2(2, 5, 8, 11, 14, 17); B3(3, 6, 9, 12, 15, 18).

Replication 2

B1(1, 5, 8, 11, 15, 18); B2(2, 6, 9, 12, 13, 16); B3(3, 4, 7, 10, 14, 17).

Replication 3

B1(1, 4, 9, 12, 14, 18); B2(2, 5, 7, 10, 15, 16); B3(3, 6, 8, 11, 13, 17).

Replication 4

B1(1, 6, 7, 12, 15, 17); B2(2, 4, 8, 10, 13, 18); B3(3, 5, 9, 11, 14, 16).

176. $v = 18, b = 15, r = 5, k = 6, AE = 0.9827, DE = 0.9915$

$\alpha(0,1,2,3)$

Replication 1

B1(1, 4, 7, 10, 13, 16); B2(2, 5, 8, 11, 14, 17); B3(3, 6, 9, 12, 15, 18).

Replication 2

B1(1, 6, 9, 11, 15, 16); B2(2, 4, 7, 12, 13, 17); B3(3, 5, 8, 10, 14, 18).

Replication 3

B1(1, 5, 9, 12, 14, 17); B2(2, 6, 7, 10, 15, 18); B3(3, 4, 8, 11, 13, 16).

Replication 4

B1(1, 4, 8, 12, 15, 18); B2(2, 5, 9, 10, 13, 16); B3(3, 6, 7, 11, 14, 17).

Replication 5

B1(1, 6, 8, 10, 13, 17); B2(2, 4, 9, 11, 14, 18); B3(3, 5, 7, 12, 15, 16).

177. $v = 24, b = 8, r = 2, k = 6, AE = 0.8975, DE = 0.9550$ $\alpha(0,1,2)$

Replication 1

B1(1, 5, 9, 13, 17, 21); B2(2, 6, 10, 14, 18, 22); B3(3, 7, 11, 15, 19, 23); B4(4, 8, 12, 16, 20, 24).

Replication 2

B1(1, 8, 10, 15, 18, 23); B2(2, 5, 11, 16, 19, 24); B3(3, 6, 12, 13, 20, 21); B4(4, 7, 9, 14, 17, 22).

178. $v = 24, b = 12, r = 3, k = 6, AE = 0.9529, DE = 0.9777$ $\alpha(0,1,2)$

Replication 1

B1(1, 5, 9, 13, 17, 21); B2(2, 6, 10, 14, 18, 22); B3(3, 7, 11, 15, 19, 23); B4(4, 8, 12, 16, 20, 24).

Replication 2

B1(1, 6, 11, 16, 19, 22); B2(2, 7, 12, 13, 20, 23); B3(3, 8, 9, 14, 17, 24); B4(4, 5, 10, 15, 18, 21).

Replication 3

B1(1, 7, 12, 15, 18, 24); B2(2, 8, 9, 16, 19, 21); B3(3, 5, 10, 13, 20, 22); B4(4, 6, 11, 14, 17, 23).

179. $v = 24, b = 16, r = 4, k = 6, AE = 0.9699, DE = 0.9854$ $\alpha(0,1,2,3)$

Replication 1

B1(1, 5, 9, 13, 17, 21); B2(2, 6, 10, 14, 18, 22); B3(3, 7, 11, 15, 19, 23); B4(4, 8, 12, 16, 20, 24).

Replication 2

B1(1, 8, 11, 15, 18, 22); B2(2, 5, 12, 16, 19, 23); B3(3, 6, 9, 13, 20, 24); B4(4, 7, 10, 14, 17, 21).

Replication 3

B1(1, 6, 12, 14, 17, 23); B2(2, 7, 9, 15, 18, 24); B3(3, 8, 10, 16, 19, 21); B4(4, 5, 11, 13, 20, 22).

Replication 4

B1(1, 7, 10, 16, 20, 24); B2(2, 8, 11, 13, 17, 21); B3(3, 5, 12, 14, 18, 22); B4(4, 6, 9, 15, 19, 23).

180. $v = 24, b = 20, r = 5, k = 6, AE = 0.9812, DE = 0.9907$ $\alpha(0,1,2,3)$

Replication 1

B1(1, 5, 9, 13, 17, 21); B2(2, 6, 10, 14, 18, 22); B3(3, 7, 11, 15, 19, 23); B4(4, 8, 12, 16, 20, 24).

Replication 2

B1(1, 8, 11, 14, 17, 22); B2(2, 5, 12, 15, 18, 23); B3(3, 6, 9, 16, 19, 24); B4(4, 7, 10, 13, 20, 21).

Replication 3

B1(1, 6, 12, 15, 20, 21); B2(2, 7, 9, 16, 17, 22); B3(3, 8, 10, 13, 18, 23); B4(4, 5, 11, 14, 19, 24).

Replication 4

B1(1, 7, 12, 14, 19, 23); B2(2, 8, 9, 15, 20, 24); B3(3, 5, 10, 16, 17, 21); B4(4, 6, 11, 13, 18, 22).

Replication 5

B1(1, 7, 10, 16, 18, 24); B2(2, 8, 11, 13, 19, 21); B3(3, 5, 12, 14, 20, 22); B4(4, 6, 9, 15, 17, 23).

181. $v = 30, b = 10, r = 2, k = 6, AE = 0.8981, DE = 0.9544$ $\alpha(0,1,2)$

Replication 1

B1(1, 6, 11, 16, 21, 26); B2(2, 7, 12, 17, 22, 27); B3(3, 8, 13, 18, 23, 28); B4(4, 9, 14, 19, 24, 29);
B5(5, 10, 15, 20, 25, 30).

Replication 2

B1(1, 9, 15, 18, 22, 27); B2(2, 10, 11, 19, 23, 28); B3(3, 6, 12, 20, 24, 29); B4(4, 7, 13, 16, 25, 30);
B5(5, 8, 14, 17, 21, 26).

182. $v = 30, b = 15, r = 3, k = 6, AE = 0.9536, DE = 0.9778$ $\alpha(0,1,3)$

Replication 1

B1(1, 6, 11, 16, 21, 26); B2(2, 7, 12, 17, 22, 27); B3(3, 8, 13, 18, 23, 28); B4(4, 9, 14, 19, 24, 29);
B5(5, 10, 15, 20, 25, 30).

Replication 2

B1(1, 7, 15, 19, 23, 27); B2(2, 8, 11, 20, 24, 28); B3(3, 9, 12, 16, 25, 29); B4(4, 10, 13, 17, 21, 30);
B5(5, 6, 14, 18, 22, 26).

Replication 3

B1(1, 9, 13, 20, 22, 29); B2(2, 10, 14, 16, 23, 30); B3(3, 6, 15, 17, 24, 26); B4(4, 7, 11, 18, 25, 27);
B5(5, 8, 12, 19, 21, 28).

183. $v = 30, b = 20, r = 4, k = 6, AE = 0.9734, DE = 0.9870$ $\alpha(0,1,2,3)$

Replication 1

B1(1, 6, 11, 16, 21, 26); B2(2, 7, 12, 17, 22, 27); B3(3, 8, 13, 18, 23, 28); B4(4, 9, 14, 19, 24, 29);
B5(5, 10, 15, 20, 25, 30).

Replication 2

B1(1, 7, 13, 20, 25, 29); B2(2, 8, 14, 16, 21, 30); B3(3, 9, 15, 17, 22, 26); B4(4, 10, 11, 18, 23, 27);
B5(5, 6, 12, 19, 24, 28).

Replication 3

B1(1, 9, 12, 18, 24, 30); B2(2, 10, 13, 19, 25, 26); B3(3, 6, 14, 20, 21, 27); B4(4, 7, 15, 16, 22, 28);
B5(5, 8, 11, 17, 23, 29).

Replication 4

B1(1, 8, 15, 19, 22, 27); B2(2, 9, 11, 20, 23, 28); B3(3, 10, 12, 16, 24, 29); B4(4, 6, 13, 17, 25, 30);
B5(5, 7, 14, 18, 21, 26).

184. $v = 30, b = 25, r = 5, k = 6, AE = 0.9836, DE = 0.9919$ $\alpha(0,1,2,3)\$$

Replication 1

B1(1, 6, 11, 16, 21, 26); B2(2, 7, 12, 17, 22, 27); B3(3, 8, 13, 18, 23, 28); B4(4, 9, 14, 19, 24, 29);
B5(5, 10, 15, 20, 25, 30).

Replication 2

B1(1, 8, 14, 17, 23, 30); B2(2, 9, 15, 18, 24, 26); B3(3, 10, 11, 19, 25, 27); B4(4, 6, 12, 20, 21, 28);
B5(5, 7, 13, 16, 22, 29).

Replication 3

B1(1, 10, 15, 19, 22, 28); B2(2, 6, 11, 20, 23, 29); B3(3, 7, 12, 16, 24, 30); B4(4, 8, 13, 17, 25, 26);
B5(5, 9, 14, 18, 21, 27).

Replication 4

B1(1, 9, 13, 20, 24, 27); B2(2, 10, 14, 16, 25, 28); B3(3, 6, 15, 17, 21, 29); B4(4, 7, 11, 18, 22, 30);
B5(5, 8, 12, 19, 23, 26).

Replication 5

B1(1, 7, 12, 18, 25, 29); B2(2, 8, 13, 19, 21, 30); B3(3, 9, 14, 20, 22, 26); B4(4, 10, 15, 16, 23, 27);
B5(5, 6, 11, 17, 24, 28).

185. $v = 36, b = 12, r = 2, k = 6, AE = 0.9074, DE = 0.9571$ $\alpha(0,1)$, LS74, Square-Lattice

Replication 1

B1(1, 7, 13, 19, 25, 31); B2(2, 8, 14, 20, 26, 32); B3(3, 9, 15, 21, 27, 33); B4(4, 10, 16, 22, 28, 34);
B5(5, 11, 17, 23, 29, 35); B6(6, 12, 18, 24, 30, 36).

Replication 2

B1(1, 8, 18, 21, 29, 34); B2(2, 9, 13, 22, 30, 35); B3(3, 10, 14, 23, 25, 36); B4(4, 11, 15, 24, 26, 31);
B5(5, 12, 16, 19, 27, 32); B6(6, 7, 17, 20, 28, 33).

186. $v = 36, b = 18, r = 3, k = 6, AE = 0.9550, DE = 0.9782$ $\alpha(0,1,2)$;

Replication 1

B1(1, 7, 13, 19, 25, 31); B2(2, 8, 14, 20, 26, 32); B3(3, 9, 15, 21, 27, 33); B4(4, 10, 16, 22, 28, 34);
B5(5, 11, 17, 23, 29, 35); B6(6, 12, 18, 24, 30, 36).

Replication 2

B1(1, 10, 15, 23, 30, 35); B2(2, 11, 16, 24, 25, 36); B3(3, 12, 17, 19, 26, 31); B4(4, 7, 18, 20, 27, 32);
B5(5, 8, 13, 21, 28, 33); B6(6, 9, 14, 22, 29, 34).

Replication 3

B1(1, 12, 16, 20, 29, 33); B2(2, 7, 17, 21, 30, 34); B3(3, 8, 18, 22, 25, 35); B4(4, 9, 13, 23, 26, 36);
B5(5, 10, 14, 24, 27, 31); B6(6, 11, 15, 19, 28, 32).

187. $v = 36, b = 24, r = 4, k = 6, AE = 0.9753, DE = 0.9877$ $\alpha(0,1,2)$;

Replication 1

B1(1, 7, 13, 19, 25, 31); B2(2, 8, 14, 20, 26, 32); B3(3, 9, 15, 21, 27, 33); B4(4, 10, 16, 22, 28, 34);
B5(5, 11, 17, 23, 29, 35); B6(6, 12, 18, 24, 30, 36).

Replication 2

B1(1, 10, 18, 20, 26, 33); B2(2, 11, 13, 21, 27, 34); B3(3, 12, 14, 22, 28, 35); B4(4, 7, 15, 23, 29, 36);
B5(5, 8, 16, 24, 30, 31); B6(6, 9, 17, 19, 25, 32).

Replication 3

B1(1, 9, 14, 24, 29, 34); B2(2, 10, 15, 19, 30, 35); B3(3, 11, 16, 20, 25, 36); B4(4, 12, 17, 21, 26, 31);
B5(5, 7, 18, 22, 27, 32); B6(6, 8, 13, 23, 28, 33).

Replication 4

B1(1, 8, 17, 22, 27, 36); B2(2, 9, 18, 23, 28, 31); B3(3, 10, 13, 24, 29, 32); B4(4, 11, 14, 19, 30, 33);
B5(5, 12, 15, 20, 25, 34); B6(6, 7, 16, 21, 26, 35).

188. $v = 36, b = 30, r = 5, k = 6, AE = 0.9826, DE = 0.9913$ $\alpha(0,1,2)$

Replication 1

B1(1, 7, 13, 19, 25, 31); B2(2, 8, 14, 20, 26, 32); B3(3, 9, 15, 21, 27, 33); B4(4, 10, 16, 22, 28, 34);
B5(5, 11, 17, 23, 29, 35); B6(6, 12, 18, 24, 30, 36).

Replication 2

B1(1, 10, 15, 23, 26, 36); B2(2, 11, 16, 24, 27, 31); B3(3, 12, 17, 19, 28, 32); B4(4, 7, 18, 20, 29, 33);
B5(5, 8, 13, 21, 30, 34); B6(6, 9, 14, 22, 25, 35).

Replication 3

B1(1, 11, 14, 20, 30, 34); B2(2, 12, 15, 21, 25, 35); B3(3, 7, 16, 22, 26, 36); B4(4, 8, 17, 23, 27, 31);
B5(5, 9, 18, 24, 28, 32); B6(6, 10, 13, 19, 29, 33).

Replication 4

B1(1, 8, 18, 22, 27, 35); B2(2, 9, 13, 23, 28, 36); B3(3, 10, 14, 24, 29, 31); B4(4, 11, 15, 19, 30, 32);
B5(5, 12, 16, 20, 25, 33); B6(6, 7, 17, 21, 26, 34).

Replication 5

B1(1, 9, 16, 21, 29, 32); B2(2, 10, 17, 22, 30, 33); B3(3, 11, 18, 23, 25, 34); B4(4, 12, 13, 24, 26, 35);
B5(5, 7, 14, 19, 27, 36); B6(6, 8, 15, 20, 28, 31).

189. $v = 42, b = 14, r = 2, k = 6, AE = 0.8946, DE = 0.9524$ $\alpha(0,1)$, Rect.-Lattice

Replication 1

B1(1, 8, 15, 22, 29, 36); B2(2, 9, 16, 23, 30, 37); B3(3, 10, 17, 24, 31, 38); B4(4, 11, 18, 25, 32, 39);
B5(5, 12, 19, 26, 33, 40); B6(6, 13, 20, 27, 34, 41); B7(7, 14, 21, 28, 35, 42).

Replication 2

B1(1, 9, 21, 25, 34, 40); B2(2, 10, 15, 26, 35, 41); B3(3, 11, 16, 27, 29, 42); B4(4, 12, 17, 28, 30, 36);
B5(5, 13, 18, 22, 31, 37); B6(6, 14, 19, 23, 32, 38); B7(7, 8, 20, 24, 33, 39).

190. $v = 42, b = 21, r = 3, k = 6, AE = 0.9539, DE = 0.9776$ $\alpha(0,1)$, Rect-Lattice

Replication 1

B1(1, 8, 15, 22, 29, 36); B2(2, 9, 16, 23, 30, 37); B3(3, 10, 17, 24, 31, 38); B4(4, 11, 18, 25, 32, 39);
B5(5, 12, 19, 26, 33, 40); B6(6, 13, 20, 27, 34, 41); B7(7, 14, 21, 28, 35, 42).

Replication 2

B1(1, 11, 20, 28, 31, 40); B2(2, 12, 21, 22, 32, 41); B3(3, 13, 15, 23, 33, 42); B4(4, 14, 16, 24, 34, 36);
B5(5, 8, 17, 25, 35, 37); B6(6, 9, 18, 26, 29, 38); B7(7, 10, 19, 27, 30, 39).

Replication 3

B1(1, 14, 17, 26, 30, 41); B2(2, 8, 18, 27, 31, 42); B3(3, 9, 19, 28, 32, 36); B4(4, 10, 20, 22, 33, 37);
B5(5, 11, 21, 23, 34, 38); B6(6, 12, 15, 24, 35, 39); B7(7, 13, 16, 25, 29, 40).

191. $v = 42, b = 28, r = 4, k = 6, AE = 0.9721, DE = 0.9862$ $\alpha(0,1,2)$

Replication 1

B1(1, 8, 15, 22, 29, 36); B2(2, 9, 16, 23, 30, 37); B3(3, 10, 17, 24, 31, 38); B4(4, 11, 18, 25, 32, 39);
B5(5, 12, 19, 26, 33, 40); B6(6, 13, 20, 27, 34, 41); B7(7, 14, 21, 28, 35, 42).

Replication 2

B1(1, 14, 19, 24, 32, 41); B2(2, 8, 20, 25, 33, 42); B3(3, 9, 21, 26, 34, 36); B4(4, 10, 15, 27, 35, 37);
B5(5, 11, 16, 28, 29, 38); B6(6, 12, 17, 22, 30, 39); B7(7, 13, 18, 23, 31, 40).

Replication 3

B1(1, 9, 20, 28, 31, 39); B2(2, 10, 21, 22, 32, 40); B3(3, 11, 15, 23, 33, 41); B4(4, 12, 16, 24, 34, 42);
B5(5, 13, 17, 25, 35, 36); B6(6, 14, 18, 26, 29, 37); B7(7, 8, 19, 27, 30, 38).

Replication 4

B1(1, 11, 17, 27, 34, 40); B2(2, 12, 18, 28, 35, 41); B3(3, 13, 19, 22, 29, 42); B4(4, 14, 20, 23, 30, 36);
B5(5, 8, 21, 24, 31, 37); B6(6, 9, 15, 25, 32, 38); B7(7, 10, 16, 26, 33, 39).

192. $v = 42, b = 35, r = 5, k = 6, AE = 0.9802, DE = 0.9901$ $\alpha(0,1,2)$

Replication 1

B1(1, 8, 15, 22, 29, 36); B2(2, 9, 16, 23, 30, 37); B3(3, 10, 17, 24, 31, 38); B4(4, 11, 18, 25, 32, 39);
B5(5, 12, 19, 26, 33, 40); B6(6, 13, 20, 27, 34, 41); B7(7, 14, 21, 28, 35, 42).

Replication 2

B1(1, 9, 18, 25, 31, 40); B2(2, 10, 19, 26, 32, 41); B3(3, 11, 20, 27, 33, 42); B4(4, 12, 21, 28, 34, 36);
B5(5, 13, 15, 22, 35, 37); B6(6, 14, 16, 23, 29, 38); B7(7, 8, 17, 24, 30, 39).

Replication 3

B1(1, 10, 21, 23, 33, 39); B2(2, 11, 15, 24, 34, 40); B3(3, 12, 16, 25, 35, 41); B4(4, 13, 17, 26, 29, 42);
B5(5, 14, 18, 27, 30, 36); B6(6, 8, 19, 28, 31, 37); B7(7, 9, 20, 22, 32, 38).

Replication 4

B1(1, 14, 20, 26, 30, 41); B2(2, 8, 21, 27, 31, 42); B3(3, 9, 15, 28, 32, 36); B4(4, 10, 16, 22, 33, 37);
B5(5, 11, 17, 23, 34, 38); B6(6, 12, 18, 24, 35, 39); B7(7, 13, 19, 25, 29, 40).

Replication 5

B1(1, 12, 17, 27, 32, 37); B2(2, 13, 18, 28, 33, 38); B3(3, 14, 19, 22, 34, 39); B4(4, 8, 20, 23, 35, 40);
B5(5, 9, 21, 24, 29, 41); B6(6, 10, 15, 25, 30, 42); B7(7, 11, 16, 26, 31, 36).

193. $v = 48, b = 16, r = 2, k = 6, AE = 0.8844, DE = 0.9488$ $\alpha(0,1)$

Replication 1

B1(1, 9, 17, 25, 33, 41); B2(2, 10, 18, 26, 34, 42); B3(3, 11, 19, 27, 35, 43); B4(4, 12, 20, 28, 36, 44);
B5(5, 13, 21, 29, 37, 45); B6(6, 14, 22, 30, 38, 46); B7(7, 15, 23, 31, 39, 47); B8(8, 16, 24, 32, 40, 48).

Replication 2

B1(1, 10, 22, 27, 40, 44); B2(2, 11, 23, 28, 33, 45); B3(3, 12, 24, 29, 34, 46); B4(4, 13, 17, 30, 35, 47);
B5(5, 14, 18, 31, 36, 48); B6(6, 15, 19, 32, 37, 41); B7(7, 16, 20, 25, 38, 42); B8(8, 9, 21, 26, 39, 43).

194. $v = 48, b = 24, r = 3, k = 6, AE = 0.9482, DE = 0.9752$ $\alpha(0,1)$

Replication 1

B1(1, 9, 17, 25, 33, 41); B2(2, 10, 18, 26, 34, 42); B3(3, 11, 19, 27, 35, 43); B4(4, 12, 20, 28, 36, 44);
B5(5, 13, 21, 29, 37, 45); B6(6, 14, 22, 30, 38, 46); B7(7, 15, 23, 31, 39, 47); B8(8, 16, 24, 32, 40, 48).

Replication 2

B1(1, 16, 20, 30, 37, 43); B2(2, 9, 21, 31, 38, 44); B3(3, 10, 22, 32, 39, 45); B4(4, 11, 23, 25, 40, 46);
B5(5, 12, 24, 26, 33, 47); B6(6, 13, 17, 27, 34, 48); B7(7, 14, 18, 28, 35, 41); B8(8, 15, 19, 29, 36, 42).

Replication 3

B1(1, 14, 19, 26, 40, 45); B2(2, 15, 20, 27, 33, 46); B3(3, 16, 21, 28, 34, 47); B4(4, 9, 22, 29, 35, 48);
B5(5, 10, 23, 30, 36, 41); B6(6, 11, 24, 31, 37, 42); B7(7, 12, 17, 32, 38, 43); B8(8, 13, 18, 25, 39, 44).

195. $v = 48, b = 32, r = 4, k = 6, AE = 0.9682, DE = 0.9844$ $\alpha(0,1,2)$

Replication 1

B1(1, 9, 17, 25, 33, 41); B2(2, 10, 18, 26, 34, 42); B3(3, 11, 19, 27, 35, 43); B4(4, 12, 20, 28, 36, 44);
B5(5, 13, 21, 29, 37, 45); B6(6, 14, 22, 30, 38, 46); B7(7, 15, 23, 31, 39, 47); B8(8, 16, 24, 32, 40, 48).

Replication 2

B1(1, 12, 21, 26, 40, 43); B2(2, 13, 22, 27, 33, 44); B3(3, 14, 23, 28, 34, 45); B4(4, 15, 24, 29, 35, 46);
B5(5, 16, 17, 30, 36, 47); B6(6, 9, 18, 31, 37, 48); B7(7, 10, 19, 32, 38, 41); B8(8, 11, 20, 25, 39, 42).

Replication 3

B1(1, 15, 24, 30, 34, 44); B2(2, 16, 17, 31, 35, 45); B3(3, 9, 18, 32, 36, 46); B4(4, 10, 19, 25, 37, 47);
B5(5, 11, 20, 26, 38, 48); B6(6, 12, 21, 27, 39, 41); B7(7, 13, 22, 28, 40, 42); B8(8, 14, 23, 29, 33, 43).

Replication 4

B1(1, 10, 23, 27, 36, 48); B2(2, 11, 24, 28, 37, 41); B3(3, 12, 17, 29, 38, 42); B4(4, 13, 18, 30, 39, 43);
B5(5, 14, 19, 31, 40, 44); B6(6, 15, 20, 32, 33, 45); B7(7, 16, 21, 25, 34, 46); B8(8, 9, 22, 26, 35, 47).

196. $v = 48, b = 40, r = 5, k = 6, AE = 0.9771, DE = 0.9888$ $\alpha(0,1,2)$

Replication 1

B1(1, 9, 17, 25, 33, 41); B2(2, 10, 18, 26, 34, 42); B3(3, 11, 19, 27, 35, 43); B4(4, 12, 20, 28, 36, 44);
B5(5, 13, 21, 29, 37, 45); B6(6, 14, 22, 30, 38, 46); B7(7, 15, 23, 31, 39, 47); B8(8, 16, 24, 32, 40, 48).

Replication 2

B1(1, 11, 23, 30, 34, 48); B2(2, 12, 24, 31, 35, 41); B3(3, 13, 17, 32, 36, 42); B4(4, 14, 18, 25, 37, 43);
B5(5, 15, 19, 26, 38, 44); B6(6, 16, 20, 27, 39, 45); B7(7, 9, 21, 28, 40, 46); B8(8, 10, 22, 29, 33, 47).

Replication 3

B1(1, 12, 18, 27, 40, 44); B2(2, 13, 19, 28, 33, 45); B3(3, 14, 20, 29, 34, 46); B4(4, 15, 21, 30, 35, 47);
B5(5, 16, 22, 31, 36, 48); B6(6, 9, 23, 32, 37, 41); B7(7, 10, 24, 25, 38, 42); B8(8, 11, 17, 26, 39, 43).

Replication 4

B1(1, 15, 22, 32, 35, 45); B2(2, 16, 23, 25, 36, 46); B3(3, 9, 24, 26, 37, 47); B4(4, 10, 17, 27, 38, 48);
B5(5, 11, 18, 28, 39, 41); B6(6, 12, 19, 29, 40, 42); B7(7, 13, 20, 30, 33, 43); B8(8, 14, 21, 31, 34, 44).

Replication 5

B1(1, 10, 20, 31, 37, 46); B2(2, 11, 21, 32, 38, 47); B3(3, 12, 22, 25, 39, 48); B4(4, 13, 23, 26, 40, 41);
B5(5, 14, 24, 27, 33, 42); B6(6, 15, 17, 28, 34, 43); B7(7, 16, 18, 29, 35, 44); B8(8, 9, 19, 30, 36, 45).

197. $v = 54, b = 18, r = 2, k = 6, AE = 0.8769, DE = 0.9460$ $\alpha(0,1)$

Replication 1

B1(1, 10, 19, 28, 37, 46); B2(2, 11, 20, 29, 38, 47); B3(3, 12, 21, 30, 39, 48); B4(4, 13, 22, 31, 40, 49);
B5(5, 14, 23, 32, 41, 50); B6(6, 15, 24, 33, 42, 51); B7(7, 16, 25, 34, 43, 52); B8(8, 17, 26, 35, 44, 53);
B9(9, 18, 27, 36, 45, 54).

Replication 2

B1(1, 18, 25, 31, 39, 53); B2(2, 10, 26, 32, 40, 54); B3(3, 11, 27, 33, 41, 46); B4(4, 12, 19, 34, 42, 47);
B5(5, 13, 20, 35, 43, 48); B6(6, 14, 21, 36, 44, 49); B7(7, 15, 22, 28, 45, 50); B8(8, 16, 23, 29, 37, 51);
B9(9, 17, 24, 30, 38, 52).

198. $v = 54, b = 27, r = 3, k = 6, AE = 0.9431, DE = 0.9731$ $\alpha(0,1)$

Replication 1

B1(1, 10, 19, 28, 37, 46); B2(2, 11, 20, 29, 38, 47); B3(3, 12, 21, 30, 39, 48); B4(4, 13, 22, 31, 40, 49);
B5(5, 14, 23, 32, 41, 50); B6(6, 15, 24, 33, 42, 51); B7(7, 16, 25, 34, 43, 52); B8(8, 17, 26, 35, 44, 53);
B9(9, 18, 27, 36, 45, 54).

Replication 2

B1(1, 12, 22, 29, 42, 54); B2(2, 13, 23, 30, 43, 46); B3(3, 14, 24, 31, 44, 47); B4(4, 15, 25, 32, 45, 48);
B5(5, 16, 26, 33, 37, 49); B6(6, 17, 27, 34, 38, 50); B7(7, 18, 19, 35, 39, 51); B8(8, 10, 20, 36, 40, 52);
B9(9, 11, 21, 28, 41, 53).

Replication 3

B1(1, 15, 26, 34, 41, 47); B2(2, 16, 27, 35, 42, 48); B3(3, 17, 19, 36, 43, 49); B4(4, 18, 20, 28, 44, 50);
B5(5, 10, 21, 29, 45, 51); B6(6, 11, 22, 30, 37, 52); B7(7, 12, 23, 31, 38, 53); B8(8, 13, 24, 32, 39, 54);
B9(9, 14, 25, 33, 40, 46).

199. $v = 54, b = 36, r = 4, k = 6, AE = 0.9671, DE = 0.9839$ $\alpha(0,1)$

Replication 1

B1(1, 10, 19, 28, 37, 46); B2(2, 11, 20, 29, 38, 47); B3(3, 12, 21, 30, 39, 48); B4(4, 13, 22, 31, 40, 49);
B5(5, 14, 23, 32, 41, 50); B6(6, 15, 24, 33, 42, 51); B7(7, 16, 25, 34, 43, 52); B8(8, 17, 26, 35, 44, 53);

B9(9, 18, 27, 36, 45, 54).

Replication 2

B1(1, 12, 26, 34, 42, 47); B2(2, 13, 27, 35, 43, 48); B3(3, 14, 19, 36, 44, 49); B4(4, 15, 20, 28, 45, 50);
B5(5, 16, 21, 29, 37, 51); B6(6, 17, 22, 30, 38, 52); B7(7, 18, 23, 31, 39, 53); B8(8, 10, 24, 32, 40, 54);
B9(9, 11, 25, 33, 41, 46).

Replication 3

B1(1, 17, 25, 32, 39, 49); B2(2, 18, 26, 33, 40, 50); B3(3, 10, 27, 34, 41, 51); B4(4, 11, 19, 35, 42, 52);
B5(5, 12, 20, 36, 43, 53); B6(6, 13, 21, 28, 44, 54); B7(7, 14, 22, 29, 45, 46); B8(8, 15, 23, 30, 37, 47);
B9(9, 16, 24, 31, 38, 48).

Replication 4

B1(1, 13, 23, 36, 38, 51); B2(2, 14, 24, 28, 39, 52); B3(3, 15, 25, 29, 40, 53); B4(4, 16, 26, 30, 41, 54);
B5(5, 17, 27, 31, 42, 46); B6(6, 18, 19, 32, 43, 47); B7(7, 10, 20, 33, 44, 48); B8(8, 11, 21, 34, 45, 49);
B9(9, 12, 22, 35, 37, 50).

200. $v = 54, b = 45, r = 5, k = 6, AE = 0.9760, DE = 0.9881$ $\alpha(0,1,2)$

Replication 1

B1(1, 10, 19, 28, 37, 46); B2(2, 11, 20, 29, 38, 47); B3(3, 12, 21, 30, 39, 48); B4(4, 13, 22, 31, 40, 49);
B5(5, 14, 23, 32, 41, 50); B6(6, 15, 24, 33, 42, 51); B7(7, 16, 25, 34, 43, 52); B8(8, 17, 26, 35, 44, 53);
B9(9, 18, 27, 36, 45, 54).

Replication 2

B1(1, 16, 20, 32, 39, 52); B2(2, 17, 21, 33, 40, 53); B3(3, 18, 22, 34, 41, 54); B4(4, 10, 23, 35, 42, 46);
B5(5, 11, 24, 36, 43, 47); B6(6, 12, 25, 28, 44, 48); B7(7, 13, 26, 29, 45, 49); B8(8, 14, 27, 30, 37, 50);
B9(9, 15, 19, 31, 38, 51).

Replication 3

B1(1, 11, 22, 30, 44, 51); B2(2, 12, 23, 31, 45, 52); B3(3, 13, 24, 32, 37, 53); B4(4, 14, 25, 33, 38, 54);
B5(5, 15, 26, 34, 39, 46); B6(6, 16, 27, 35, 40, 47); B7(7, 17, 19, 36, 41, 48); B8(8, 18, 20, 28, 42, 49);
B9(9, 10, 21, 29, 43, 50).

Replication 4

B1(1, 14, 21, 34, 42, 47); B2(2, 15, 22, 35, 43, 48); B3(3, 16, 23, 36, 44, 49); B4(4, 17, 24, 28, 45, 50);
B5(5, 18, 25, 29, 37, 51); B6(6, 10, 26, 30, 38, 52); B7(7, 11, 27, 31, 39, 53); B8(8, 12, 19, 32, 40, 54);
B9(9, 13, 20, 33, 41, 46).

Replication 5

B1(1, 17, 26, 31, 43, 54); B2(2, 18, 27, 32, 44, 46); B3(3, 10, 19, 33, 45, 47); B4(4, 11, 20, 34, 37, 48);
B5(5, 12, 21, 35, 38, 49); B6(6, 13, 22, 36, 39, 50); B7(7, 14, 23, 28, 40, 51); B8(8, 15, 24, 29, 41, 52);
B9(9, 16, 25, 30, 42, 53).

201. $v = 60, b = 20, r = 2, k = 6, AE = 0.8707, DE = 0.9438$ $\alpha(0,1)$

Replication 1

B1(1, 11, 21, 31, 41, 51); B2(2, 12, 22, 32, 42, 52); B3(3, 13, 23, 33, 43, 53); B4(4, 14, 24, 34, 44, 54);
B5(5, 15, 25, 35, 45, 55); B6(6, 16, 26, 36, 46, 56); B7(7, 17, 27, 37, 47, 57); B8(8, 18, 28, 38, 48, 58);
B9(9, 19, 29, 39, 49, 59); B10(10, 20, 30, 40, 50, 60).

Replication 2

B1(1, 12, 28, 33, 46, 60); B2(2, 13, 29, 34, 47, 51); B3(3, 14, 30, 35, 48, 52); B4(4, 15, 21, 36, 49, 53);
B5(5, 16, 22, 37, 50, 54); B6(6, 17, 23, 38, 41, 55); B7(7, 18, 24, 39, 42, 56); B8(8, 19, 25, 40, 43, 57);
B9(9, 20, 26, 31, 44, 58); B10(10, 11, 27, 32, 45, 59).

202. $v = 60, b = 30, r = 3, k = 6, AE = 0.9414, DE = 0.9722$ $\alpha(0,1)$

Replication 1

B1(1, 11, 21, 31, 41, 51); B2(2, 12, 22, 32, 42, 52); B3(3, 13, 23, 33, 43, 53); B4(4, 14, 24, 34, 44, 54);
B5(5, 15, 25, 35, 45, 55); B6(6, 16, 26, 36, 46, 56); B7(7, 17, 27, 37, 47, 57); B8(8, 18, 28, 38, 48, 58);
B9(9, 19, 29, 39, 49, 59); B10(10, 20, 30, 40, 50, 60).

Replication 2

B1(1, 18, 25, 32, 44, 59); B2(2, 19, 26, 33, 45, 60); B3(3, 20, 27, 34, 46, 51); B4(4, 11, 28, 35, 47, 52);
B5(5, 12, 29, 36, 48, 53); B6(6, 13, 30, 37, 49, 54); B7(7, 14, 21, 38, 50, 55); B8(8, 15, 22, 39, 41, 56);
B9(9, 16, 23, 40, 42, 57); B10(10, 17, 24, 31, 43, 58).

Replication 3

B1(1, 15, 30, 33, 48, 57); B2(2, 16, 21, 34, 49, 58); B3(3, 17, 22, 35, 50, 59); B4(4, 18, 23, 36, 41, 60);
B5(5, 19, 24, 37, 42, 51); B6(6, 20, 25, 38, 43, 52); B7(7, 11, 26, 39, 44, 53); B8(8, 12, 27, 40, 45, 54);
B9(9, 13, 28, 31, 46, 55); B10(10, 14, 29, 32, 47, 56).

203. $v = 60, b = 40, r = 4, k = 6, AE = 0.9648, DE = 0.9828$ $\alpha(0,1)$

Replication 1

B1(1, 11, 21, 31, 41, 51); B2(2, 12, 22, 32, 42, 52); B3(3, 13, 23, 33, 43, 53); B4(4, 14, 24, 34, 44, 54);
B5(5, 15, 25, 35, 45, 55); B6(6, 16, 26, 36, 46, 56); B7(7, 17, 27, 37, 47, 57); B8(8, 18, 28, 38, 48, 58);
B9(9, 19, 29, 39, 49, 59); B10(10, 20, 30, 40, 50, 60).

Replication 2

B1(1, 15, 24, 32, 43, 58); B2(2, 16, 25, 33, 44, 59); B3(3, 17, 26, 34, 45, 60); B4(4, 18, 27, 35, 46, 51);
B5(5, 19, 28, 36, 47, 52); B6(6, 20, 29, 37, 48, 53); B7(7, 11, 30, 38, 49, 54); B8(8, 12, 21, 39, 50, 55);
B9(9, 13, 22, 40, 41, 56); B10(10, 14, 23, 31, 42, 57).

Replication 3

B1(1, 18, 23, 36, 49, 55); B2(2, 19, 24, 37, 50, 56); B3(3, 20, 25, 38, 41, 57); B4(4, 11, 26, 39, 42, 58);
B5(5, 12, 27, 40, 43, 59); B6(6, 13, 28, 31, 44, 60); B7(7, 14, 29, 32, 45, 51); B8(8, 15, 30, 33, 46, 52);
B9(9, 16, 21, 34, 47, 53); B10(10, 17, 22, 35, 48, 54).

Replication 4

B1(1, 17, 29, 40, 44, 52); B2(2, 18, 30, 31, 45, 53); B3(3, 19, 21, 32, 46, 54); B4(4, 20, 22, 33, 47, 55);
B5(5, 11, 23, 34, 48, 56); B6(6, 12, 24, 35, 49, 57); B7(7, 13, 25, 36, 50, 58); B8(8, 14, 26, 37, 41, 59);
B9(9, 15, 27, 38, 42, 60); B10(10, 16, 28, 39, 43, 51).

204. $v = 60, b = 50, r = 5, k = 6, AE = 0.9765, DE = 0.9884$ $\alpha(0,1)$

Replication 1

B1(1, 11, 21, 31, 41, 51); B2(2, 12, 22, 32, 42, 52); B3(3, 13, 23, 33, 43, 53); B4(4, 14, 24, 34, 44, 54);
B5(5, 15, 25, 35, 45, 55); B6(6, 16, 26, 36, 46, 56); B7(7, 17, 27, 37, 47, 57); B8(8, 18, 28, 38, 48, 58);
B9(9, 19, 29, 39, 49, 59); B10(10, 20, 30, 40, 50, 60).

Replication 2

B1(1, 15, 26, 34, 48, 52); B2(2, 16, 27, 35, 49, 53); B3(3, 17, 28, 36, 50, 54); B4(4, 18, 29, 37, 41, 55);
B5(5, 19, 30, 38, 42, 56); B6(6, 20, 21, 39, 43, 57); B7(7, 11, 22, 40, 44, 58); B8(8, 12, 23, 31, 45, 59);
B9(9, 13, 24, 32, 46, 60); B10(10, 14, 25, 33, 47, 51).

Replication 3

B1(1, 17, 22, 33, 46, 59); B2(2, 18, 23, 34, 47, 60); B3(3, 19, 24, 35, 48, 51); B4(4, 20, 25, 36, 49, 52);
B5(5, 11, 26, 37, 50, 53); B6(6, 12, 27, 38, 41, 54); B7(7, 13, 28, 39, 42, 55); B8(8, 14, 29, 40, 43, 56);
B9(9, 15, 30, 31, 44, 57); B10(10, 16, 21, 32, 45, 58).

Replication 4

B1(1, 12, 24, 40, 49, 55); B2(2, 13, 25, 31, 50, 56); B3(3, 14, 26, 32, 41, 57); B4(4, 15, 27, 33, 42, 58);
B5(5, 16, 28, 34, 43, 59); B6(6, 17, 29, 35, 44, 60); B7(7, 18, 30, 36, 45, 51); B8(8, 19, 21, 37, 46, 52);
B9(9, 20, 22, 38, 47, 53); B10(10, 11, 23, 39, 48, 54).

Replication 5

B1(1, 14, 27, 39, 45, 60); B2(2, 15, 28, 40, 46, 51); B3(3, 16, 29, 31, 47, 52); B4(4, 17, 30, 32, 48, 53);
B5(5, 18, 21, 33, 49, 54); B6(6, 19, 22, 34, 50, 55); B7(7, 20, 23, 35, 41, 56); B8(8, 11, 24, 36, 42, 57);
B9(9, 12, 25, 37, 43, 58); B10(10, 13, 26, 38, 44, 59).

205. $v = 66, b = 22, r = 2, k = 6, AE = 0.8667, DE = 0.9421$ $\alpha(0,1)$

Replication 1

B1(1, 12, 23, 34, 45, 56); B2(2, 13, 24, 35, 46, 57); B3(3, 14, 25, 36, 47, 58); B4(4, 15, 26, 37, 48, 59);
B5(5, 16, 27, 38, 49, 60); B6(6, 17, 28, 39, 50, 61); B7(7, 18, 29, 40, 51, 62); B8(8, 19, 30, 41, 52, 63);
B9(9, 20, 31, 42, 53, 64); B10(10, 21, 32, 43, 54, 65); B11(11, 22, 33, 44, 55, 66).

Replication 2

B1(1, 22, 29, 38, 54, 63); B2(2, 12, 30, 39, 55, 64); B3(3, 13, 31, 40, 45, 65); B4(4, 14, 32, 41, 46, 66);
B5(5, 15, 33, 42, 47, 56); B6(6, 16, 23, 43, 48, 57); B7(7, 17, 24, 44, 49, 58); B8(8, 18, 25, 34, 50, 59);
B9(9, 19, 26, 35, 51, 60); B10(10, 20, 27, 36, 52, 61); B11(11, 21, 28, 37, 53, 62).

206. $v = 66, b = 33, r = 3, k = 6, AE = 0.9387, DE = 0.9710$ $\alpha(0,1)$

Replication 1

B1(1, 12, 23, 34, 45, 56); B2(2, 13, 24, 35, 46, 57); B3(3, 14, 25, 36, 47, 58); B4(4, 15, 26, 37, 48, 59);
B5(5, 16, 27, 38, 49, 60); B6(6, 17, 28, 39, 50, 61); B7(7, 18, 29, 40, 51, 62); B8(8, 19, 30, 41, 52, 63);
B9(9, 20, 31, 42, 53, 64); B10(10, 21, 32, 43, 54, 65); B11(11, 22, 33, 44, 55, 66).

Replication 2

B1(1, 22, 26, 35, 53, 62); B2(2, 12, 27, 36, 54, 63); B3(3, 13, 28, 37, 55, 64); B4(4, 14, 29, 38, 45, 65);
B5(5, 15, 30, 39, 46, 66); B6(6, 16, 31, 40, 47, 56); B7(7, 17, 32, 41, 48, 57); B8(8, 18, 33, 42, 49, 58);
B9(9, 19, 23, 43, 50, 59); B10(10, 20, 24, 44, 51, 60); B11(11, 21, 25, 34, 52, 61).

Replication 3

B1(1, 20, 32, 37, 49, 61); B2(2, 21, 33, 38, 50, 62); B3(3, 22, 23, 39, 51, 63); B4(4, 12, 24, 40, 52, 64);
B5(5, 13, 25, 41, 53, 65); B6(6, 14, 26, 42, 54, 66); B7(7, 15, 27, 43, 55, 56); B8(8, 16, 28, 44, 45, 57);
B9(9, 17, 29, 34, 46, 58); B10(10, 18, 30, 35, 47, 59); B11(11, 19, 31, 36, 48, 60).

207. $v = 66, b = 44, r = 4, k = 6, AE = 0.9621, DE = 0.9816$ $\alpha(0,1)$

Replication 1

B 1(1, 12, 23, 34, 45, 56); B 2(2, 13, 24, 35, 46, 57); B 3(3, 14, 25, 36, 47, 58); B 4(4, 15, 26, 37, 48, 59);
B5(5, 16, 27, 38, 49, 60); B 6(6, 17, 28, 39, 50, 61); B 7(7, 18, 29, 40, 51, 62); B 8(8, 19, 30, 41, 52, 63);
B9(9, 20, 31, 42, 53, 64); B10(10, 21, 32, 43, 54, 65); B11(11, 22, 33, 44, 55, 66).

Replication 2

B 1(1, 21, 28, 41, 55, 64); B 2(2, 22, 29, 42, 45, 65); B 3(3, 12, 30, 43, 46, 66); B 4(4, 13, 31, 44, 47, 56);
B5(5, 14, 32, 34, 48, 57); B 6(6, 15, 33, 35, 49, 58); B 7(7, 16, 23, 36, 50, 59); B 8(8, 17, 24, 37, 51, 60);
B9(9, 18, 25, 38, 52, 61); B10(10, 19, 26, 39, 53, 62); B11(11, 20, 27, 40, 54, 63).

Replication 3

B 1(1, 15, 24, 38, 47, 62); B 2(2, 16, 25, 39, 48, 63); B 3(3, 17, 26, 40, 49, 64); B 4(4, 18, 27, 41, 50, 65);
B5(5, 19, 28, 42, 51, 66); B 6(6, 20, 29, 43, 52, 56); B 7(7, 21, 30, 44, 53, 57); B 8(8, 22, 31, 34, 54, 58);
B9(9, 12, 32, 35, 55, 59); B10(10, 13, 33, 36, 45, 60); B11(11, 14, 23, 37, 46, 61).

Replication 4

B 1(1, 13, 30, 42, 49, 61); B 2(2, 14, 31, 43, 50, 62); B 3(3, 15, 32, 44, 51, 63); B 4(4, 16, 33, 34, 52, 64);
B5(5, 17, 23, 35, 53, 65); B 6(6, 18, 24, 36, 54, 66); B 7(7, 19, 25, 37, 55, 56); B 8(8, 20, 26, 38, 45, 57);
B9(9, 21, 27, 39, 46, 58); B10(10, 22, 28, 40, 47, 59); B11(11, 12, 29, 41, 48, 60).

208. $v = 66, b = 55, r = 5, k = 6, AE = 0.9736, DE = 0.9871$ $\alpha(0,1)$

Replication 1

B 1(1, 12, 23, 34, 45, 56); B 2(2, 13, 24, 35, 46, 57); B 3(3, 14, 25, 36, 47, 58); B 4(4, 15, 26, 37, 48, 59);
B5(5, 16, 27, 38, 49, 60); B 6(6, 17, 28, 39, 50, 61); B 7(7, 18, 29, 40, 51, 62); B 8(8, 19, 30, 41, 52, 63);
B9(9, 20, 31, 42, 53, 64); B10(10, 21, 32, 43, 54, 65); B11(11, 22, 33, 44, 55, 66).

Replication 2

B 1(1, 18, 24, 36, 52, 64); B 2(2, 19, 25, 37, 53, 65); B 3(3, 20, 26, 38, 54, 66); B 4(4, 21, 27, 39, 55, 56);
B5(5, 22, 28, 40, 45, 57); B 6(6, 12, 29, 41, 46, 58); B 7(7, 13, 30, 42, 47, 59); B 8(8, 14, 31, 43, 48, 60);
B9(9, 15, 32, 44, 49, 61); B10(10, 16, 33, 34, 50, 62); B11(11, 17, 23, 35, 51, 63).

Replication 3

B 1(1, 21, 28, 38, 51, 59); B 2(2, 22, 29, 39, 52, 60); B 3(3, 12, 30, 40, 53, 61); B 4(4, 13, 31, 41, 54, 62);
B5(5, 14, 32, 42, 55, 63); B 6(6, 15, 33, 43, 45, 64); B 7(7, 16, 23, 44, 46, 65); B 8(8, 17, 24, 34, 47, 66);
B9(9, 18, 25, 35, 48, 56); B10(10, 19, 26, 36, 49, 57); B11(11, 20, 27, 37, 50, 58).

Replication 4

B 1(1, 20, 25, 39, 46, 63); B 2(2, 21, 26, 40, 47, 64); B 3(3, 22, 27, 41, 48, 65); B 4(4, 12, 28, 42, 49, 66);
B5(5, 13, 29, 43, 50, 56); B 6(6, 14, 30, 44, 51, 57); B 7(7, 15, 31, 34, 52, 58); B 8(8, 16, 32, 35, 53, 59);
B9(9, 17, 33, 36, 54, 60); B10(10, 18, 23, 37, 55, 61); B11(11, 19, 24, 38, 45, 62).

Replication 5

B 1(1, 17, 26, 43, 55, 58); B 2(2, 18, 27, 44, 45, 59); B 3(3, 19, 28, 34, 46, 60); B 4(4, 20, 29, 35, 47, 61);
B5(5, 21, 30, 36, 48, 62); B 6(6, 22, 31, 37, 49, 63); B 7(7, 12, 32, 38, 50, 64); B 8(8, 13, 33, 39, 51, 65);
B9(9, 14, 23, 40, 52, 66); B10(10, 15, 24, 41, 53, 56); B11(11, 16, 25, 42, 54, 57).

209. $v = 72, b = 24, r = 2, k = 6, AE = 0.8616, DE = 0.9405$ $\alpha(0,1)$

Replication 1

B1(1, 13, 25, 37, 49, 61); B2(2, 14, 26, 38, 50, 62); B3(3, 15, 27, 39, 51, 63); B4(4, 16, 28, 40, 52, 64);
B5(5, 17, 29, 41, 53, 65); B6(6, 18, 30, 42, 54, 66); B7(7, 19, 31, 43, 55, 67); B8(8, 20, 32, 44, 56, 68);
B9(9, 21, 33, 45, 57, 69); B10(10, 22, 34, 46, 58, 70); B11(11, 23, 35, 47, 59, 71);
B12(12, 24, 36, 48, 60, 72).

Replication 2

B1(1, 24, 29, 38, 58, 68); B2(2, 13, 30, 39, 59, 69); B3(3, 14, 31, 40, 60, 70); B4(4, 15, 32, 41, 49, 71);
B5(5, 16, 33, 42, 50, 72); B6(6, 17, 34, 43, 51, 61); B7(7, 18, 35, 44, 52, 62); B8(8, 19, 36, 45, 53, 63);
B9(9, 20, 25, 46, 54, 64); B10(10, 21, 26, 47, 55, 65); B11(11, 22, 27, 48, 56, 66);
B12(12, 23, 28, 37, 57, 67).

210. $v = 72, b = 36, r = 3, k = 6, AE = 0.9371, DE = 0.9702$ $\alpha(0,1)$

Replication 1

B1(1, 13, 25, 37, 49, 61); B2(2, 14, 26, 38, 50, 62); B3(3, 15, 27, 39, 51, 63); B4(4, 16, 28, 40, 52, 64);
B5(5, 17, 29, 41, 53, 65); B6(6, 18, 30, 42, 54, 66); B7(7, 19, 31, 43, 55, 67); B8(8, 20, 32, 44, 56, 68);
B9(9, 21, 33, 45, 57, 69); B10(10, 22, 34, 46, 58, 70); B11(11, 23, 35, 47, 59, 71);
B12(12, 24, 36, 48, 60, 72).

Replication 2

B1(1, 19, 26, 48, 57, 63); B2(2, 20, 27, 37, 58, 64); B3(3, 21, 28, 38, 59, 65); B4(4, 22, 29, 39, 60, 66);
B5(5, 23, 30, 40, 49, 67); B6(6, 24, 31, 41, 50, 68); B7(7, 13, 32, 42, 51, 69); B8(8, 14, 33, 43, 52, 70);
B9(9, 15, 34, 44, 53, 71); B10(10, 16, 35, 45, 54, 72); B11(11, 17, 36, 46, 55, 61);

B12(12, 18, 25, 47, 56, 62).

Replication 3

B1(1, 18, 27, 41, 52, 71); B2(2, 19, 28, 42, 53, 72); B3(3, 20, 29, 43, 54, 61); B4(4, 21, 30, 44, 55, 62);
B5(5, 22, 31, 45, 56, 63); B6(6, 23, 32, 46, 57, 64); B7(7, 24, 33, 47, 58, 65); B8(8, 13, 34, 48, 59, 66);
B9(9, 14, 35, 37, 60, 67); B10(10, 15, 36, 38, 49, 68); B11(11, 16, 25, 39, 50, 69);
B12(12, 17, 26, 40, 51, 70).

211. $v = 72, b = 48, r = 4, k = 6, AE = 0.9576, DE = 0.9796$ $\alpha(0,1,2)$

Replication 1

B 1(1, 13, 25, 37, 49, 61); B 2(2, 14, 26, 38, 50, 62); B 3(3, 15, 27, 39, 51, 63); B 4(4, 16, 28, 40, 52, 64);
B5(5, 17, 29, 41, 53, 65); B 6(6, 18, 30, 42, 54, 66); B 7(7, 19, 31, 43, 55, 67); B 8(8, 20, 32, 44, 56, 68);
B9(9, 21, 33, 45, 57, 69); B10(10, 22, 34, 46, 58, 70); B11(11, 23, 35, 47, 59, 71);
B12(12, 24, 36, 48, 60, 72).

Replication 2

B 1(1, 20, 36, 45, 58, 62); B 2(2, 21, 25, 46, 59, 63); B 3(3, 22, 26, 47, 60, 64); B 4(4, 23, 27, 48, 49, 65);
B5(5, 24, 28, 37, 50, 66); B 6(6, 13, 29, 38, 51, 67); B 7(7, 14, 30, 39, 52, 68); B 8(8, 15, 31, 40, 53, 69);
B9(9, 16, 32, 41, 54, 70); B10(10, 17, 33, 42, 55, 71); B11(11, 18, 34, 43, 56, 72);
B12(12, 19, 35, 44, 57, 61).

Replication 3

B 1(1, 15, 34, 40, 59, 66); B 2(2, 16, 35, 41, 60, 67); B 3(3, 17, 36, 42, 49, 68); B 4(4, 18, 25, 43, 50, 69);
B5(5, 19, 26, 44, 51, 70); B 6(6, 20, 27, 45, 52, 71); B 7(7, 21, 28, 46, 53, 72); B 8(8, 22, 29, 47, 54, 61);
B9(9, 23, 30, 48, 55, 62); B10(10, 24, 31, 37, 56, 63); B11(11, 13, 32, 38, 57, 64);
B12(12, 14, 33, 39, 58, 65).

Replication 4

B 1(1, 21, 26, 42, 52, 67); B 2(2, 22, 27, 43, 53, 68); B 3(3, 23, 28, 44, 54, 69); B 4(4, 24, 29, 45, 55, 70);
B5(5, 13, 30, 46, 56, 71); B 6(6, 14, 31, 47, 57, 72); B 7(7, 15, 32, 48, 58, 61); B 8(8, 16, 33, 37, 59, 62);
B9(9, 17, 34, 38, 60, 63); B10(10, 18, 35, 39, 49, 64); B11(11, 19, 36, 40, 50, 65);
B12(12, 20, 25, 41, 51, 66).

212. $v = 72, b = 60, r = 5, k = 6, AE = 0.9712, DE = 0.9859$ $\alpha(0,1,2)$

Replication 1

B 1(1, 13, 25, 37, 49, 61); B 2(2, 14, 26, 38, 50, 62); B 3(3, 15, 27, 39, 51, 63); B 4(4, 16, 28, 40, 52, 64);
B5(5, 17, 29, 41, 53, 65); B 6(6, 18, 30, 42, 54, 66); B 7(7, 19, 31, 43, 55, 67); B 8(8, 20, 32, 44, 56, 68);
B9(9, 21, 33, 45, 57, 69); B10(10, 22, 34, 46, 58, 70); B11(11, 23, 35, 47, 59, 71);
B12(12, 24, 36, 48, 60, 72).

Replication 2

B 1(1, 24, 28, 38, 51, 66); B 2(2, 13, 29, 39, 52, 67); B 3(3, 14, 30, 40, 53, 68); B 4(4, 15, 31, 41, 54, 69);
B5(5, 16, 32, 42, 55, 70); B 6(6, 17, 33, 43, 56, 71); B 7(7, 18, 34, 44, 57, 72); B 8(8, 19, 35, 45, 58, 61);
B9(9, 20, 36, 46, 59, 62); B10(10, 21, 25, 47, 60, 63); B11(11, 22, 26, 48, 49, 64);
B12(12, 23, 27, 37, 50, 65).

Replication 3

B 1(1, 22, 33, 39, 50, 72); B 2(2, 23, 34, 40, 51, 61); B 3(3, 24, 35, 41, 52, 62); B 4(4, 13, 36, 42, 53, 63);
B5(5, 14, 25, 43, 54, 64); B 6(6, 15, 26, 44, 55, 65); B 7(7, 16, 27, 45, 56, 66); B 8(8, 17, 28, 46, 57, 67);
B9(9, 18, 29, 47, 58, 68); B10(10, 19, 30, 48, 59, 69); B11(11, 20, 31, 37, 60, 70);
B12(12, 21, 32, 38, 49, 71).

Replication 4

B 1(1, 16, 34, 46, 53, 71); B 2(2, 17, 35, 47, 54, 72); B 3(3, 18, 36, 48, 55, 61); B 4(4, 19, 25, 37, 56, 62);
B5(5, 20, 26, 38, 57, 63); B 6(6, 21, 27, 39, 58, 64); B 7(7, 22, 28, 40, 59, 65); B 8(8, 23, 29, 41, 60, 66);
B9(9, 24, 30, 42, 49, 67); B10(10, 13, 31, 43, 50, 68); B11(11, 14, 32, 44, 51, 69);

B12(12, 15, 33, 45, 52, 70).

Replication 5

B 1(1, 18, 26, 41, 56, 70); B 2(2, 19, 27, 42, 57, 71); B 3(3, 20, 28, 43, 58, 72); B 4(4, 21, 29, 44, 59, 61);
B5(5, 22, 30, 45, 60, 62); B 6(6, 23, 31, 46, 49, 63); B 7(7, 24, 32, 47, 50, 64); B 8(8, 13, 33, 48, 51, 65);
B9(9, 14, 34, 37, 52, 66); B10(10, 15, 35, 38, 53, 67); B11(11, 16, 36, 39, 54, 68);
B12(12, 17, 25, 40, 55, 69).

213. $v = 78, b = 26, r = 2, k = 6, AE = 0.8577, DE = 0.9391$ $\alpha(0,1)$

Replication 1

B1(1, 14, 27, 40, 53, 66); B2(2, 15, 28, 41, 54, 67); B3(3, 16, 29, 42, 55, 68); B4(4, 17, 30, 43, 56, 69);
B5(5, 18, 31, 44, 57, 70); B6(6, 19, 32, 45, 58, 71); B7(7, 20, 33, 46, 59, 72); B8(8, 21, 34, 47, 60, 73);
B9(9, 22, 35, 48, 61, 74); B10(10, 23, 36, 49, 62, 75); B11(11, 24, 37, 50, 63, 76);
B12(12, 25, 38, 51, 64, 77); B13(13, 26, 39, 52, 65, 78).

Replication 2

B1(1, 25, 32, 46, 55, 67); B2(2, 26, 33, 47, 56, 68); B3(3, 14, 34, 48, 57, 69); B4(4, 15, 35, 49, 58, 70);
B5(5, 16, 36, 50, 59, 71); B6(6, 17, 37, 51, 60, 72); B7(7, 18, 38, 52, 61, 73); B8(8, 19, 39, 40, 62, 74);
B9(9, 20, 27, 41, 63, 75); B10(10, 21, 28, 42, 64, 76); B11(11, 22, 29, 43, 65, 77);
B12(12, 23, 30, 44, 53, 78); B13(13, 24, 31, 45, 54, 66).

214. $v = 78, b = 39, r = 3, k = 6, AE = 0.9349, DE = 0.9693$ $\alpha(0,1)$

Replication 1

B1(1, 14, 27, 40, 53, 66); B2(2, 15, 28, 41, 54, 67); B3(3, 16, 29, 42, 55, 68); B4(4, 17, 30, 43, 56, 69);
B5(5, 18, 31, 44, 57, 70); B6(6, 19, 32, 45, 58, 71); B7(7, 20, 33, 46, 59, 72); B8(8, 21, 34, 47, 60, 73);
B9(9, 22, 35, 48, 61, 74); B10(10, 23, 36, 49, 62, 75); B11(11, 24, 37, 50, 63, 76);
B12(12, 25, 38, 51, 64, 77); B13(13, 26, 39, 52, 65, 78).

Replication 2

B1(1, 15, 34, 45, 55, 76); B2(2, 16, 35, 46, 56, 77); B3(3, 17, 36, 47, 57, 78); B4(4, 18, 37, 48, 58, 66);
B5(5, 19, 38, 49, 59, 67); B6(6, 20, 39, 50, 60, 68); B7(7, 21, 27, 51, 61, 69); B8(8, 22, 28, 52, 62, 70);
B9(9, 23, 29, 40, 63, 71); B10(10, 24, 30, 41, 64, 72); B11(11, 25, 31, 42, 65, 73);
B12(12, 26, 32, 43, 53, 74); B13(13, 14, 33, 44, 54, 75).

Replication 3

B1(1, 20, 36, 52, 58, 77); B2(2, 21, 37, 40, 59, 78); B3(3, 22, 38, 41, 60, 66); B4(4, 23, 39, 42, 61, 67);
B5(5, 24, 27, 43, 62, 68); B6(6, 25, 28, 44, 63, 69); B7(7, 26, 29, 45, 64, 70); B8(8, 14, 30, 46, 65, 71);
B9(9, 15, 31, 47, 53, 72); B10(10, 16, 32, 48, 54, 73); B11(11, 17, 33, 49, 55, 74);
B12(12, 18, 34, 50, 56, 75); B13(13, 19, 35, 51, 57, 76).

215. $v = 78, b = 52, r = 4, k = 6, AE = 0.9585, DE = 0.9800$ $\alpha(0,1)$

Replication 1

B 1(1, 14, 27, 40, 53, 66); B 2(2, 15, 28, 41, 54, 67); B 3(3, 16, 29, 42, 55, 68); B 4(4, 17, 30, 43, 56, 69);
B5(5, 18, 31, 44, 57, 70); B 6(6, 19, 32, 45, 58, 71); B 7(7, 20, 33, 46, 59, 72); B 8(8, 21, 34, 47, 60, 73);
B9(9, 22, 35, 48, 61, 74); B10(10, 23, 36, 49, 62, 75); B11(11, 24, 37, 50, 63, 76);
B12(12, 25, 38, 51, 64, 77); B13(13, 26, 39, 52, 65, 78).

Replication 2

B 1(1, 15, 31, 49, 56, 72); B 2(2, 16, 32, 50, 57, 73); B 3(3, 17, 33, 51, 58, 74); B 4(4, 18, 34, 52, 59, 75);
B5(5, 19, 35, 40, 60, 76); B 6(6, 20, 36, 41, 61, 77); B 7(7, 21, 37, 42, 62, 78); B 8(8, 22, 38, 43, 63, 66);
B9(9, 23, 39, 44, 64, 67); B10(10, 24, 27, 45, 65, 68); B11(11, 25, 28, 46, 53, 69);
B12(12, 26, 29, 47, 54, 70); B13(13, 14, 30, 48, 55, 71).

Replication 3

B 1(1, 23, 38, 50, 60, 78); B 2(2, 24, 39, 51, 61, 66); B 3(3, 25, 27, 52, 62, 67); B 4(4, 26, 28, 40, 63, 68);
B5(5, 14, 29, 41, 64, 69); B 6(6, 15, 30, 42, 65, 70); B 7(7, 16, 31, 43, 53, 71); B 8(8, 17, 32, 44, 54, 72);
B9(9, 18, 33, 45, 55, 73); B10(10, 19, 34, 46, 56, 74); B11(11, 20, 35, 47, 57, 75);
B12(12, 21, 36, 48, 58, 76); B13(13, 22, 37, 49, 59, 77).

Replication 4

B 1(1, 17, 29, 45, 59, 76); B 2(2, 18, 30, 46, 60, 77); B 3(3, 19, 31, 47, 61, 78); B 4(4, 20, 32, 48, 62, 66);
B5(5, 21, 33, 49, 63, 67); B 6(6, 22, 34, 50, 64, 68); B 7(7, 23, 35, 51, 65, 69); B 8(8, 24, 36, 52, 53, 70);
B9(9, 25, 37, 40, 54, 71); B10(10, 26, 38, 41, 55, 72); B11(11, 14, 39, 42, 56, 73);
B12(12, 15, 27, 43, 57, 74); B13(13, 16, 28, 44, 58, 75).

216. $v = 78, b = 65, r = 5, k = 6, AE = 0.9698, DE = 0.9853$ $\alpha(0,1,2)$

Replication 1

B 1(1, 14, 27, 40, 53, 66); B 2(2, 15, 28, 41, 54, 67); B 3(3, 16, 29, 42, 55, 68); B 4(4, 17, 30, 43, 56, 69);
B5(5, 18, 31, 44, 57, 70); B 6(6, 19, 32, 45, 58, 71); B 7(7, 20, 33, 46, 59, 72); B 8(8, 21, 34, 47, 60, 73);
B9(9, 22, 35, 48, 61, 74); B10(10, 23, 36, 49, 62, 75); B11(11, 24, 37, 50, 63, 76);
B12(12, 25, 38, 51, 64, 77); B13(13, 26, 39, 52, 65, 78).

Replication 2

B 1(1, 21, 37, 51, 61, 68); B 2(2, 22, 38, 52, 62, 69); B 3(3, 23, 39, 40, 63, 70); B 4(4, 24, 27, 41, 64, 71);
B5(5, 25, 28, 42, 65, 72); B 6(6, 26, 29, 43, 53, 73); B 7(7, 14, 30, 44, 54, 74); B 8(8, 15, 31, 45, 55, 75);
B9(9, 16, 32, 46, 56, 76); B10(10, 17, 33, 47, 57, 77); B11(11, 18, 34, 48, 58, 78);
B12(12, 19, 35, 49, 59, 66); B13(13, 20, 36, 50, 60, 67).

Replication 3

B 1(1, 25, 29, 46, 54, 75); B 2(2, 26, 30, 47, 55, 76); B 3(3, 14, 31, 48, 56, 77); B 4(4, 15, 32, 49, 57, 78);
B5(5, 16, 33, 50, 58, 66); B 6(6, 17, 34, 51, 59, 67); B 7(7, 18, 35, 52, 60, 68); B 8(8, 19, 36, 40, 61, 69);
B9(9, 20, 37, 41, 62, 70); B10(10, 21, 38, 42, 63, 71); B11(11, 22, 39, 43, 64, 72);
B12(12, 23, 27, 44, 65, 73); B13(13, 24, 28, 45, 53, 74).

Replication 4

B 1(1, 26, 30, 48, 62, 71); B 2(2, 14, 31, 49, 63, 72); B 3(3, 15, 32, 50, 64, 73); B 4(4, 16, 33, 51, 65, 74);
B5(5, 17, 34, 52, 53, 75); B 6(6, 18, 35, 40, 54, 76); B 7(7, 19, 36, 41, 55, 77); B 8(8, 20, 37, 42, 56, 78);
B9(9, 21, 38, 43, 57, 66); B10(10, 22, 39, 44, 58, 67); B11(11, 23, 27, 45, 59, 68);
B12(12, 24, 28, 46, 60, 69); B13(13, 25, 29, 47, 61, 70).

Replication 5

B 1(1, 23, 35, 50, 57, 69); B 2(2, 24, 36, 51, 58, 70); B 3(3, 25, 37, 52, 59, 71); B 4(4, 26, 38, 40, 60, 72);
B5(5, 14, 39, 41, 61, 73); B 6(6, 15, 27, 42, 62, 74); B 7(7, 16, 28, 43, 63, 75); B 8(8, 17, 29, 44, 64, 76);
B9(9, 18, 30, 45, 65, 77); B10(10, 19, 31, 46, 53, 78); B11(11, 20, 32, 47, 54, 66);
B12(12, 21, 33, 48, 55, 67); B13(13, 22, 34, 49, 56, 68).

217. $v = 84, b = 28, r = 2, k = 6, AE = 0.8550, DE = 0.9380$ $\alpha(0,1)$

Replication 1

B1(1, 15, 29, 43, 57, 71); B2(2, 16, 30, 44, 58, 72); B3(3, 17, 31, 45, 59, 73); B4(4, 18, 32, 46, 60, 74);
B5(5, 19, 33, 47, 61, 75); B6(6, 20, 34, 48, 62, 76); B7(7, 21, 35, 49, 63, 77); B8(8, 22, 36, 50, 64, 78);
B9(9, 23, 37, 51, 65, 79); B10(10, 24, 38, 52, 66, 80); B11(11, 25, 39, 53, 67, 81);
B12(12, 26, 40, 54, 68, 82); B13(13, 27, 41, 55, 69, 83); B14(14, 28, 42, 56, 70, 84).

Replication 2

B1(1, 24, 34, 49, 60, 78); B2(2, 25, 35, 50, 61, 79); B3(3, 26, 36, 51, 62, 80); B4(4, 27, 37, 52, 63, 81);
B5(5, 28, 38, 53, 64, 82); B6(6, 15, 39, 54, 65, 83); B7(7, 16, 40, 55, 66, 84); B8(8, 17, 41, 56, 67, 71);
B9(9, 18, 42, 43, 68, 72); B10(10, 19, 29, 44, 69, 73); B11(11, 20, 30, 45, 70, 74);
B12(12, 21, 31, 46, 57, 75); B13(13, 22, 32, 47, 58, 76); B14(14, 23, 33, 48, 59, 77).

218. $v = 84, b = 42, r = 3, k = 6, AE = 0.9321, DE = 0.9682$ $\alpha(0,1)$

Replication 1

B1(1, 15, 29, 43, 57, 71); B2(2, 16, 30, 44, 58, 72); B3(3, 17, 31, 45, 59, 73); B4(4, 18, 32, 46, 60, 74);
B5(5, 19, 33, 47, 61, 75); B6(6, 20, 34, 48, 62, 76); B7(7, 21, 35, 49, 63, 77); B8(8, 22, 36, 50, 64, 78);
B9(9, 23, 37, 51, 65, 79); B10(10, 24, 38, 52, 66, 80); B11(11, 25, 39, 53, 67, 81);
B12(12, 26, 40, 54, 68, 82); B13(13, 27, 41, 55, 69, 83); B14(14, 28, 42, 56, 70, 84).

Replication 2

B1 (1, 19, 41, 49, 66, 81); B2 (2, 20, 42, 50, 67, 82); B3 (3, 21, 29, 51, 68, 83); B4 (4, 22, 30, 52, 69, 84);
B5 (5, 23, 31, 53, 70, 71); B6 (6, 24, 32, 54, 57, 72); B7 (7, 25, 33, 55, 58, 73); B8 (8, 26, 34, 56, 59, 74);
B9 (9, 27, 35, 43, 60, 75); B10(10, 28, 36, 44, 61, 76); B11(11, 15, 37, 45, 62, 77);
B12(12, 16, 38, 46, 63, 78); B13(13, 17, 39, 47, 64, 79); B14(14, 18, 40, 48, 65, 80).

Replication 3

B1 (1, 22, 40, 44, 59, 79); B2 (2, 23, 41, 45, 60, 80); B3 (3, 24, 42, 46, 61, 81); B4 (4, 25, 29, 47, 62, 82);
B5 (5, 26, 30, 48, 63, 83); B6 (6, 27, 31, 49, 64, 84); B7 (7, 28, 32, 50, 65, 71); B8 (8, 15, 33, 51, 66, 72);
B9 (9, 16, 34, 52, 67, 73); B10(10, 17, 35, 53, 68, 74); B11(11, 18, 36, 54, 69, 75);
B12(12, 19, 37, 55, 70, 76); B13(13, 20, 38, 56, 57, 77); B14(14, 21, 39, 43, 58, 78).

219. $v = 84, b = 56, r = 4, k = 6, AE = 0.9575, DE = 0.9795$ $\alpha(0,1)$

Replication 1

B 1(1, 15, 29, 43, 57, 71); B 2(2, 16, 30, 44, 58, 72); B 3(3, 17, 31, 45, 59, 73); B 4(4, 18, 32, 46, 60, 74);
B5(5, 19, 33, 47, 61, 75); B 6(6, 20, 34, 48, 62, 76); B 7(7, 21, 35, 49, 63, 77); B 8(8, 22, 36, 50, 64, 78);
B9(9, 23, 37, 51, 65, 79); B10(10, 24, 38, 52, 66, 80); B11(11, 25, 39, 53, 67, 81);
B12(12, 26, 40, 54, 68, 82); B13(13, 27, 41, 55, 69, 83); B14(14, 28, 42, 56, 70, 84).

Replication 2

B 1(1, 20, 37, 44, 70, 75); B 2(2, 21, 38, 45, 57, 76); B 3(3, 22, 39, 46, 58, 77); B 4(4, 23, 40, 47, 59, 78);
B5(5, 24, 41, 48, 60, 79); B 6(6, 25, 42, 49, 61, 80); B 7(7, 26, 29, 50, 62, 81); B 8(8, 27, 30, 51, 63, 82);
B9(9, 28, 31, 52, 64, 83); B10(10, 15, 32, 53, 65, 84); B11(11, 16, 33, 54, 66, 71);
B12(12, 17, 34, 55, 67, 72); B13(13, 18, 35, 56, 68, 73); B14(14, 19, 36, 43, 69, 74).

Replication 3

B 1(1, 25, 41, 50, 59, 74); B 2(2, 26, 42, 51, 60, 75); B 3(3, 27, 29, 52, 61, 76); B 4(4, 28, 30, 53, 62, 77);
B5(5, 15, 31, 54, 63, 78); B 6(6, 16, 32, 55, 64, 79); B 7(7, 17, 33, 56, 65, 80); B 8(8, 18, 34, 43, 66, 81);
B9(9, 19, 35, 44, 67, 82); B10(10, 20, 36, 45, 68, 83); B11(11, 21, 37, 46, 69, 84);
B12(12, 22, 38, 47, 70, 71); B13(13, 23, 39, 48, 57, 72); B14(14, 24, 40, 49, 58, 73).

Replication 4

B 1(1, 16, 31, 46, 68, 80); B 2(2, 17, 32, 47, 69, 81); B 3(3, 18, 33, 48, 70, 82); B 4(4, 19, 34, 49, 57, 83);
B5(5, 20, 35, 50, 58, 84); B 6(6, 21, 36, 51, 59, 71); B 7(7, 22, 37, 52, 60, 72); B 8(8, 23, 38, 53, 61, 73);
B9(9, 24, 39, 54, 62, 74); B10(10, 25, 40, 55, 63, 75); B11(11, 26, 41, 56, 64, 76);
B12(12, 27, 42, 43, 65, 77); B13(13, 28, 29, 44, 66, 78); B14(14, 15, 30, 45, 67, 79).

220. $v = 84, b = 70, r = 5, k = 6, AE = 0.9705, DE = 0.9855$ $\alpha(0,1)$

Replication 1

B 1(1, 15, 29, 43, 57, 71); B 2(2, 16, 30, 44, 58, 72); B 3(3, 17, 31, 45, 59, 73); B 4(4, 18, 32, 46, 60, 74);
B5(5, 19, 33, 47, 61, 75); B 6(6, 20, 34, 48, 62, 76); B 7(7, 21, 35, 49, 63, 77); B 8(8, 22, 36, 50, 64, 78);
B9(9, 23, 37, 51, 65, 79); B10(10, 24, 38, 52, 66, 80); B11(11, 25, 39, 53, 67, 81);

B12(12, 26, 40, 54, 68, 82); B13(13, 27, 41, 55, 69, 83); B14(14, 28, 42, 56, 70, 84).

Replication 2

B 1(1, 27, 34, 46, 59, 77); B 2(2, 28, 35, 47, 60, 78); B 3(3, 15, 36, 48, 61, 79); B 4(4, 16, 37, 49, 62, 80);
B5(5, 17, 38, 50, 63, 81); B 6(6, 18, 39, 51, 64, 82); B 7(7, 19, 40, 52, 65, 83); B 8(8, 20, 41, 53, 66, 84);
B9(9, 21, 42, 54, 67, 71); B10(10, 22, 29, 55, 68, 72); B11(11, 23, 30, 56, 69, 73);
B12(12, 24, 31, 43, 70, 74); B13(13, 25, 32, 44, 57, 75); B14(14, 26, 33, 45, 58, 76).

Replication 3

B 1(1, 23, 33, 49, 60, 82); B 2(2, 24, 34, 50, 61, 83); B 3(3, 25, 35, 51, 62, 84); B 4(4, 26, 36, 52, 63, 71);
B5(5, 27, 37, 53, 64, 72); B 6(6, 28, 38, 54, 65, 73); B 7(7, 15, 39, 55, 66, 74); B 8(8, 16, 40, 56, 67, 75);
B9(9, 17, 41, 43, 68, 76); B10(10, 18, 42, 44, 69, 77); B11(11, 19, 29, 45, 70, 78);
B12(12, 20, 30, 46, 57, 79); B13(13, 21, 31, 47, 58, 80); B14(14, 22, 32, 48, 59, 81).

Replication 4

B 1(1, 18, 40, 47, 66, 81); B 2(2, 19, 41, 48, 67, 82); B 3(3, 20, 42, 49, 68, 83); B 4(4, 21, 29, 50, 69, 84);
B5(5, 22, 30, 51, 70, 71); B 6(6, 23, 31, 52, 57, 72); B 7(7, 24, 32, 53, 58, 73); B 8(8, 25, 33, 54, 59, 74);
B9(9, 26, 34, 55, 60, 75); B10(10, 27, 35, 56, 61, 76); B11(11, 28, 36, 43, 62, 77);
B12(12, 15, 37, 44, 63, 78); B13(13, 16, 38, 45, 64, 79); B14(14, 17, 39, 46, 65, 80).

Replication 5

B 1(1, 19, 38, 44, 68, 84); B 2(2, 20, 39, 45, 69, 71); B 3(3, 21, 40, 46, 70, 72); B 4(4, 22, 41, 47, 57, 73);
B5(5, 23, 42, 48, 58, 74); B 6(6, 24, 29, 49, 59, 75); B 7(7, 25, 30, 50, 60, 76); B 8(8, 26, 31, 51, 61, 77);
B9(9, 27, 32, 52, 62, 78); B10(10, 28, 33, 53, 63, 79); B11(11, 15, 34, 54, 64, 80);
B12(12, 16, 35, 55, 65, 81); B13(13, 17, 36, 56, 66, 82); B14(14, 18, 37, 43, 67, 83).

221. $v = 90, b = 30, r = 2, k = 6, AE = 0.8529, DE = 0.9372$ $\alpha(0,1)^{***}$

Replication 1

B1(1, 16, 31, 46, 61, 76); B2(2, 17, 32, 47, 62, 77); B3(3, 18, 33, 48, 63, 78); B4(4, 19, 34, 49, 64, 79);
B5(5, 20, 35, 50, 65, 80); B6(6, 21, 36, 51, 66, 81); B7(7, 22, 37, 52, 67, 82); B8(8, 23, 38, 53, 68, 83);
B9(9, 24, 39, 54, 69, 84); B10(10, 25, 40, 55, 70, 85); B11(11, 26, 41, 56, 71, 86);
B12(12, 27, 42, 57, 72, 87); B13(13, 28, 43, 58, 73, 88); B14(14, 29, 44, 59, 74, 89);
B15(15, 30, 45, 60, 75, 90).

Replication 2

B1(1, 17, 41, 48, 73, 80); B2(2, 18, 42, 49, 74, 81); B3(3, 19, 43, 50, 75, 82); B4(4, 20, 44, 51, 61, 83);
B5(5, 21, 45, 52, 62, 84); B6(6, 22, 31, 53, 63, 85); B7(7, 23, 32, 54, 64, 86); B8(8, 24, 33, 55, 65, 87);
B9(9, 25, 34, 56, 66, 88); B10(10, 26, 35, 57, 67, 89); B11(11, 27, 36, 58, 68, 90);
B12(12, 28, 37, 59, 69, 76); B13(13, 29, 38, 60, 70, 77); B14(14, 30, 39, 46, 71, 78);
B15(15, 16, 40, 47, 72, 79).

222. $v = 90, b = 45, r = 3, k = 6, AE = 0.9312, DE = 0.9678$ $\alpha(0,1)^{***}$

Replication 1

B1(1, 16, 31, 46, 61, 76); B2(2, 17, 32, 47, 62, 77); B3(3, 18, 33, 48, 63, 78); B4(4, 19, 34, 49, 64, 79);
B5(5, 20, 35, 50, 65, 80); B6(6, 21, 36, 51, 66, 81); B7(7, 22, 37, 52, 67, 82); B8(8, 23, 38, 53, 68, 83);
B9(9, 24, 39, 54, 69, 84); B10(10, 25, 40, 55, 70, 85); B11(11, 26, 41, 56, 71, 86);
B12(12, 27, 42, 57, 72, 87); B13(13, 28, 43, 58, 73, 88); B14(14, 29, 44, 59, 74, 89);
B15(15, 30, 45, 60, 75, 90).

Replication 2

B1(1, 28, 34, 48, 65, 81); B2(2, 29, 35, 49, 66, 82); B3(3, 30, 36, 50, 67, 83); B4(4, 16, 37, 51, 68, 84);
B5(5, 17, 38, 52, 69, 85); B6(6, 18, 39, 53, 70, 86); B7(7, 19, 40, 54, 71, 87); B8(8, 20, 41, 55, 72, 88);
B9(9, 21, 42, 56, 73, 89); B10(10, 22, 43, 57, 74, 90); B11(11, 23, 44, 58, 75, 76);
B12(12, 24, 45, 59, 61, 77); B13(13, 25, 31, 60, 62, 78); B14(14, 26, 32, 46, 63, 79);
B15(15, 27, 33, 47, 64, 80).

Replication 3

B1(1, 22, 39, 47, 72, 83); B2(2, 23, 40, 48, 73, 84); B3(3, 24, 41, 49, 74, 85); B4(4, 25, 42, 50, 75, 86);
B5(5, 26, 43, 51, 61, 87); B6(6, 27, 44, 52, 62, 88); B7(7, 28, 45, 53, 63, 89); B8(8, 29, 31, 54, 64, 90);
B9(9, 30, 32, 55, 65, 76); B10(10, 16, 33, 56, 66, 77); B11(11, 17, 34, 57, 67, 78);
B12(12, 18, 35, 58, 68, 79); B13(13, 19, 36, 59, 69, 80); B14(14, 20, 37, 60, 70, 81);
B15(15, 21, 38, 46, 71, 82).

223. $v = 90, b = 60, r = 4, k = 6, AE = 0.9564, DE = 0.9790$ $\alpha(0,1)**;$

Replication 1

B 1(1, 16, 31, 46, 61, 76); B 2(2, 17, 32, 47, 62, 77); B 3(3, 18, 33, 48, 63, 78); B 4(4, 19, 34, 49, 64, 79);
B 5(5, 20, 35, 50, 65, 80); B 6(6, 21, 36, 51, 66, 81); B 7(7, 22, 37, 52, 67, 82); B 8(8, 23, 38, 53, 68, 83);
B 9(9, 24, 39, 54, 69, 84); B10(10, 25, 40, 55, 70, 85); B11(11, 26, 41, 56, 71, 86); B12(12, 27, 42, 57, 72, 87);
B13(13, 28, 43, 58, 73, 88); B14(14, 29, 44, 59, 74, 89); B15(15, 30, 45, 60, 75, 90).

Replication 2

B 1(1, 17, 34, 53, 71, 90); B 2(2, 18, 35, 54, 72, 76); B 3(3, 19, 36, 55, 73, 77); B 4(4, 20, 37, 56, 74, 78);
B 5(5, 21, 38, 57, 75, 79); B 6(6, 22, 39, 58, 61, 80); B 7(7, 23, 40, 59, 62, 81); B 8(8, 24, 41, 60, 63, 82);
B 9(9, 25, 42, 46, 64, 83); B10(10, 26, 43, 47, 65, 84); B11(11, 27, 44, 48, 66, 85); B12(12, 28, 45, 49, 67, 86);
B13(13, 29, 31, 50, 68, 87); B14(14, 30, 32, 51, 69, 88); B15(15, 16, 33, 52, 70, 89).

Replication 3

B 1(1, 24, 43, 48, 74, 79); B 2(2, 25, 44, 49, 75, 80); B 3(3, 26, 45, 50, 61, 81); B 4(4, 27, 31, 51, 62, 82);
B 5(5, 28, 32, 52, 63, 83); B 6(6, 29, 33, 53, 64, 84); B 7(7, 30, 34, 54, 65, 85); B 8(8, 16, 35, 55, 66, 86);
B 9(9, 17, 36, 56, 67, 87); B10(10, 18, 37, 57, 68, 88); B11(11, 19, 38, 58, 69, 89); B12(12, 20, 39, 59, 70, 90);
B13(13, 21, 40, 60, 71, 76); B14(14, 22, 41, 46, 72, 77); B15(15, 23, 42, 47, 73, 78).

Replication 4

B 1(1, 23, 45, 51, 72, 84); B 2(2, 24, 31, 52, 73, 85); B 3(3, 25, 32, 53, 74, 86); B 4(4, 26, 33, 54, 75, 87);
B 5(5, 27, 34, 55, 61, 88); B 6(6, 28, 35, 56, 62, 89); B 7(7, 29, 36, 57, 63, 90); B 8(8, 30, 37, 58, 64, 76);
B 9(9, 16, 38, 59, 65, 77); B10(10, 17, 39, 60, 66, 78); B11(11, 18, 40, 46, 67, 79); B12(12, 19, 41, 47, 68, 80);
B13(13, 20, 42, 48, 69, 81); B14(14, 21, 43, 49, 70, 82); B15(15, 22, 44, 50, 71, 83).

224. $v = 90, b = 75, r = 5, k = 6, AE = 0.9694, DE = 0.9850$ $\alpha(0,1)$

Replication 1

B 1(1, 16, 31, 46, 61, 76); B 2(2, 17, 32, 47, 62, 77); B 3(3, 18, 33, 48, 63, 78); B 4(4, 19, 34, 49, 64, 79);
B 5(5, 20, 35, 50, 65, 80); B 6(6, 21, 36, 51, 66, 81); B 7(7, 22, 37, 52, 67, 82); B 8(8, 23, 38, 53, 68, 83);
B 9(9, 24, 39, 54, 69, 84); B10(10, 25, 40, 55, 70, 85); B11(11, 26, 41, 56, 71, 86); B12(12, 27, 42, 57, 72, 87);
B13(13, 28, 43, 58, 73, 88); B14(14, 29, 44, 59, 74, 89); B15(15, 30, 45, 60, 75, 90).

Replication 2

B 1(1, 17, 41, 53, 65, 87); B 2(2, 18, 42, 54, 66, 88); B 3(3, 19, 43, 55, 67, 89); B 4(4, 20, 44, 56, 68, 90);
B 5(5, 21, 45, 57, 69, 76); B 6(6, 22, 31, 58, 70, 77); B 7(7, 23, 32, 59, 71, 78); B 8(8, 24, 33, 60, 72, 79);
B 9(9, 25, 34, 46, 73, 80); B10(10, 26, 35, 47, 74, 81); B11(11, 27, 36, 48, 75, 82);
B12(12, 28, 37, 49, 61, 83); B13(13, 29, 38, 50, 62, 84); B14(14, 30, 39, 51, 63, 85); B15(15, 16, 40, 52, 64, 86).

Replication 3

B 1(1, 23, 39, 58, 74, 82); B 2(2, 24, 40, 59, 75, 83); B 3(3, 25, 41, 60, 61, 84); B 4(4, 26, 42, 46, 62, 85);
B 5(5, 27, 43, 47, 63, 86); B 6(6, 28, 44, 48, 64, 87); B 7(7, 29, 45, 49, 65, 88); B 8(8, 30, 31, 50, 66, 89);
B 9(9, 16, 32, 51, 67, 90); B10(10, 17, 33, 52, 68, 76); B11(11, 18, 34, 53, 69, 77); B12(12, 19, 35, 54, 70,
78); B13(13, 20, 36, 55, 71, 79); B14(14, 21, 37, 56, 72, 80); B15(15, 22, 38, 57, 73, 81).

Replication 4

B 1(1, 18, 40, 56, 67, 79); B 2(2, 19, 41, 57, 68, 80); B 3(3, 20, 42, 58, 69, 81); B 4(4, 21, 43, 59, 70, 82);
B 5(5, 22, 44, 60, 71, 83); B 6(6, 23, 45, 46, 72, 84); B 7(7, 24, 31, 47, 73, 85); B 8(8, 25, 32, 48, 74, 86);
B 9(9, 26, 33, 49, 75, 87); B10(10, 27, 34, 50, 61, 88); B11(11, 28, 35, 51, 62, 89); B12(12, 29, 36, 52, 63, 90);
B13(13, 30, 37, 53, 64, 76); B14(14, 16, 38, 54, 65, 77); B15(15, 17, 39, 55, 66, 78).

Replication 5

B 1(1, 21, 35, 48, 73, 90); B 2(2, 22, 36, 49, 74, 76); B 3(3, 23, 37, 50, 75, 77); B 4(4, 24, 38, 51, 61, 78);
B 5(5, 25, 39, 52, 62, 79); B 6(6, 26, 40, 53, 63, 80); B 7(7, 27, 41, 54, 64, 81); B 8(8, 28, 42, 55, 65, 82);
B 9(9, 29, 43, 56, 66, 83); B10(10, 30, 44, 57, 67, 84); B11(11, 16, 45, 58, 68, 85); B12(12, 17, 31, 59, 69, 86);
B13(13, 18, 32, 60, 70, 87); B14(14, 19, 33, 46, 71, 88); B15(15, 20, 34, 47, 72, 89).

BLOCK SIZE 7

225. $v = 14, b = 4, r = 2, k = 7, AE = 0.9337, DE = 0.9722$ $\alpha(0,1,2)$

Replication 1

B1(1, 3, 5, 7, 9, 11, 13); B2(2, 4, 6, 8, 10, 12, 14).

Replication 2

B1(1, 3, 6, 7, 10, 12, 14); B2(2, 4, 5, 8, 9, 11, 13).

226. $v = 14, b = 6, r = 3, k = 7, AE = 0.9684, DE = 0.9855$ $\alpha(0,1,2,3)$

Replication 1

B1(1, 3, 5, 7, 9, 11, 13); B2(2, 4, 6, 8, 10, 12, 14).

Replication 2

B1(1, 4, 5, 7, 10, 12, 14); B2(2, 3, 6, 8, 9, 11, 13).

Replication 3

B1(1, 4, 6, 8, 10, 11, 13); B2(2, 3, 5, 7, 9, 12, 14).

227. $v = 14, b = 8, r = 4, k = 7, AE = 0.9803, DE = 0.9906$ $\alpha(0,2,4)$

Replication 1

B1(1, 3, 5, 7, 9, 11, 13); B2(2, 4, 6, 8, 10, 12, 14).

Replication 2

B1(1, 4, 6, 7, 10, 12, 13); B2(2, 3, 5, 8, 9, 11, 14).

Replication 3

B1(1, 3, 6, 8, 9, 12, 14); B2(2, 4, 5, 7, 10, 11, 13).

Replication 4

B1(1, 4, 5, 8, 10, 11, 14); B2(2, 3, 6, 7, 9, 12, 13).

228. $v = 14, b = 10, r = 5, k = 7, AE = 0.9863, DE = 0.9933$ $\alpha(0,1,2,3,4)$

Replication 1

B1(1, 3, 5, 7, 9, 11, 13); B2(2, 4, 6, 8, 10, 12, 14).

Replication 2

B1(1, 3, 6, 8, 10, 11, 13); B2(2, 4, 5, 7, 9, 12, 14).

Replication 3

B1(1, 4, 6, 8, 9, 12, 13); B2(2, 3, 5, 7, 10, 11, 14).

Replication 4

B1(1, 4, 5, 8, 10, 11, 14); B2(2, 3, 6, 7, 9, 12, 13).

Replication 5
B1(1, 3, 6, 7, 10, 12, 14); B2(2, 4, 5, 8, 9, 11, 13).

229. $v = 21, b = 6, r = 2, k = 7, AE = 0.8993, DE = 0.9591$ $\alpha(0,1,2)$
Replication 1
B1(1, 4, 7, 10, 13, 16, 19); B2(2, 5, 8, 11, 14, 17, 20); B3(3, 6, 9, 12, 15, 18, 21).

Replication 2
B1(1, 6, 9, 11, 15, 17, 20); B2(2, 4, 7, 12, 13, 18, 21); B3(3, 5, 8, 10, 14, 16, 19).

230. $v = 21, b = 9, r = 3, k = 7, AE = 0.9589, DE = 0.9809$ $\alpha(0,1,2,3)$
Replication 1
B1(1, 4, 7, 10, 13, 16, 19); B2(2, 5, 8, 11, 14, 17, 20); B3(3, 6, 9, 12, 15, 18, 21).

Replication 2
B1(1, 5, 8, 12, 13, 17, 21); B2(2, 6, 9, 10, 14, 18, 19); B3(3, 4, 7, 11, 15, 16, 20).

Replication 3
B1(1, 5, 9, 11, 15, 18, 20); B2(2, 6, 7, 12, 13, 16, 21); B3(3, 4, 8, 10, 14, 17, 19).

231. $v = 21, b = 12, r = 4, k = 7, AE = 0.9758, DE = 0.9883$ $\alpha(0,1,2,3)$
Replication 1
B1(1, 4, 7, 10, 13, 16, 19); B2(2, 5, 8, 11, 14, 17, 20); B3(3, 6, 9, 12, 15, 18, 21).

Replication 2
B1(1, 6, 7, 12, 14, 16, 20); B2(2, 4, 8, 10, 15, 17, 21); B3(3, 5, 9, 11, 13, 18, 19).

Replication 3
B1(1, 6, 9, 11, 15, 17, 19); B2(2, 4, 7, 12, 13, 18, 20); B3(3, 5, 8, 10, 14, 16, 21).

Replication 4
B1(1, 5, 8, 12, 13, 18, 21); B2(2, 6, 9, 10, 14, 16, 19); B3(3, 4, 7, 11, 15, 17, 20).

232. $v = 21, b = 15, r = 5, k = 7, AE = 0.9845, DE = 0.9924$ $\alpha(0,1,2,3,4)$
Replication 1
B1(1, 4, 7, 10, 13, 16, 19); B2(2, 5, 8, 11, 14, 17, 20); B3(3, 6, 9, 12, 15, 18, 21).

Replication 2
B1(1, 5, 9, 12, 14, 18, 19); B2(2, 6, 7, 10, 15, 16, 20); B3(3, 4, 8, 11, 13, 17, 21).

Replication 3
B1(1, 6, 9, 11, 13, 16, 20); B2(2, 4, 7, 12, 14, 17, 21); B3(3, 5, 8, 10, 15, 18, 19).

Replication 4
B1(1, 4, 8, 12, 15, 17, 20); B2(2, 5, 9, 10, 13, 18, 21); B3(3, 6, 7, 11, 14, 16, 19).

Replication 5
B1(1, 5, 7, 11, 15, 18, 21); B2(2, 6, 8, 12, 13, 16, 19); B3(3, 4, 9, 10, 14, 17, 20).

233. $v = 28, b = 8, r = 2, k = 7, AE = 0.9135, DE = 0.9622$ $\alpha(0,1,2)\$$
Replication 1
B1(1, 5, 9, 13, 17, 21, 25); B2(2, 6, 10, 14, 18, 22, 26); B3(3, 7, 11, 15, 19, 23, 27);
B4(4, 8, 12, 16, 20, 24, 28).

Replication 2

B1(1, 8, 11, 14, 19, 24, 26); B2(2, 5, 12, 15, 20, 21, 27); B3(3, 6, 9, 16, 17, 22, 28);
 B4(4, 7, 10, 13, 18, 23, 25).

234. $v = 28, b = 12, r = 3, k = 7, AE = 0.9603, DE = 0.9812$ $\alpha(0,1,2)$

Replication 1
 B1(1, 5, 9, 13, 17, 21, 25); B2(2, 6, 10, 14, 18, 22, 26); B3(3, 7, 11, 15, 19, 23, 27);
 B4(4, 8, 12, 16, 20, 24, 28).

Replication 2
 B1(1, 6, 11, 16, 19, 22, 28); B2(2, 7, 12, 13, 20, 23, 25); B3(3, 8, 9, 14, 17, 24, 26);
 B4(4, 5, 10, 15, 18, 21, 27).

Replication 3
 B1(1, 8, 12, 14, 18, 23, 27); B2(2, 5, 9, 15, 19, 24, 28); B3(3, 6, 10, 16, 20, 21, 25);
 B4(4, 7, 11, 13, 17, 22, 26).

235. $v = 28, b = 16, r = 4, k = 7, AE = 0.9731, DE = 0.9871$ $\alpha(0,1,2,3)\$$

Replication 1
 B1(1, 5, 9, 13, 17, 21, 25); B2(2, 6, 10, 14, 18, 22, 26); B3(3, 7, 11, 15, 19, 23, 27);
 B4(4, 8, 12, 16, 20, 24, 28).

Replication 2
 B1(1, 7, 9, 16, 20, 23, 26); B2(2, 8, 10, 13, 17, 24, 27); B3(3, 5, 11, 14, 18, 21, 28);
 B4(4, 6, 12, 15, 19, 22, 25).

Replication 3
 B1(1, 6, 10, 14, 19, 24, 28); B2(2, 7, 11, 15, 20, 21, 25); B3(3, 8, 12, 16, 17, 22, 26);
 B4(4, 5, 9, 13, 18, 23, 27).

Replication 4
 B1(1, 8, 11, 15, 18, 22, 27); B2(2, 5, 12, 16, 19, 23, 28); B3(3, 6, 9, 13, 20, 24, 25);
 B4(4, 7, 10, 14, 17, 21, 26).

236. $v = 28, b = 20, r = 5, k = 7, AE = 0.9823, DE = 0.9913$ $\alpha(0,1,2,3)$

Replication 1
 B1(1, 5, 9, 13, 17, 21, 25); B2(2, 6, 10, 14, 18, 22, 26); B3(3, 7, 11, 15, 19, 23, 27);
 B4(4, 8, 12, 16, 20, 24, 28).

Replication 2
 B1(1, 6, 9, 14, 19, 23, 28); B2(2, 7, 10, 15, 20, 24, 25); B3(3, 8, 11, 16, 17, 21, 26);
 B4(4, 5, 12, 13, 18, 22, 27).

Replication 3
 B1(1, 7, 12, 15, 17, 22, 26); B2(2, 8, 9, 16, 18, 23, 27); B3(3, 5, 10, 13, 19, 24, 28);
 B4(4, 6, 11, 14, 20, 21, 25).

Replication 4
 B1(1, 6, 10, 16, 20, 21, 27); B2(2, 7, 11, 13, 17, 22, 28); B3(3, 8, 12, 14, 18, 23, 25);
 B4(4, 5, 9, 15, 19, 24, 26).

Replication 5
 B1(1, 8, 11, 15, 18, 24, 25); B2(2, 5, 12, 16, 19, 21, 26); B3(3, 6, 9, 13, 20, 22, 27);
 B4(4, 7, 10, 14, 17, 23, 28).

237. $v = 35, b = 10, r = 2, k = 7, AE = 0.9064, DE = 0.9592$ $\alpha(0,1,2)$

Replication 1
 B1(1, 6, 11, 16, 21, 26, 31); B2(2, 7, 12, 17, 22, 27, 32); B3(3, 8, 13, 18, 23, 28, 33);
 B4(4, 9, 14, 19, 24, 29, 34); B5(5, 10, 15, 20, 25, 30, 35).

Replication 2
 B1(1, 10, 12, 18, 23, 29, 34); B2(2, 6, 13, 19, 24, 30, 35); B3(3, 7, 14, 20, 25, 26, 31);
 B4(4, 8, 15, 16, 21, 27, 32); B5(5, 9, 11, 17, 22, 28, 33).

238. $v = 35, b = 15, r = 3, k = 7, AE = 0.9564, DE = 0.9795$ $\alpha(0,1,2)$

Replication 1
 B1(1, 6, 11, 16, 21, 26, 31); B2(2, 7, 12, 17, 22, 27, 32); B3(3, 8, 13, 18, 23, 28, 33);
 B4(4, 9, 14, 19, 24, 29, 34); B5(5, 10, 15, 20, 25, 30, 35).

Replication 2
 B1(1, 7, 12, 20, 24, 28, 33); B2(2, 8, 13, 16, 25, 29, 34); B3(3, 9, 14, 17, 21, 30, 35);
 B4(4, 10, 15, 18, 22, 26, 31); B5(5, 6, 11, 19, 23, 27, 32).

Replication 3
 B1(1, 9, 15, 17, 23, 29, 32); B2(2, 10, 11, 18, 24, 30, 33); B3(3, 6, 12, 19, 25, 26, 34);
 B4(4, 7, 13, 20, 21, 27, 35); B5(5, 8, 14, 16, 22, 28, 31).

239. $v = 35, b = 20, r = 4, k = 7, AE = 0.9740, DE = 0.9874$ $\alpha(0,1,2,3)$

Replication 1
 B1(1, 6, 11, 16, 21, 26, 31); B2(2, 7, 12, 17, 22, 27, 32); B3(3, 8, 13, 18, 23, 28, 33);
 B4(4, 9, 14, 19, 24, 29, 34); B5(5, 10, 15, 20, 25, 30, 35).

Replication 2
 B1(1, 7, 12, 19, 25, 28, 35); B2(2, 8, 13, 20, 21, 29, 31); B3(3, 9, 14, 16, 22, 30, 32);
 B4(4, 10, 15, 17, 23, 26, 33); B5(5, 6, 11, 18, 24, 27, 34).

Replication 3
 B1(1, 9, 15, 20, 23, 27, 32); B2(2, 10, 11, 16, 24, 28, 33); B3(3, 6, 12, 17, 25, 29, 34);
 B4(4, 7, 13, 18, 21, 30, 35); B5(5, 8, 14, 19, 22, 26, 31).

Replication 4
 B1(1, 10, 14, 18, 22, 29, 33); B2(2, 6, 15, 19, 23, 30, 34); B3(3, 7, 11, 20, 24, 26, 35);
 B4(4, 8, 12, 16, 25, 27, 31); B5(5, 9, 13, 17, 21, 28, 32).

240. $v = 35, b = 25, r = 5, k = 7, AE = 0.9830, DE = 0.9916$ $\alpha(0,1,2,3)$

Replication 1
 B1(1, 6, 11, 16, 21, 26, 31); B2(2, 7, 12, 17, 22, 27, 32); B3(3, 8, 13, 18, 23, 28, 33);
 B4(4, 9, 14, 19, 24, 29, 34); B5(5, 10, 15, 20, 25, 30, 35).

Replication 2
 B1(1, 8, 12, 18, 22, 30, 34); B2(2, 9, 13, 19, 23, 26, 35); B3(3, 10, 14, 20, 24, 27, 31);
 B4(4, 6, 15, 16, 25, 28, 32); B5(5, 7, 11, 17, 21, 29, 33).

Replication 3
 B1(1, 10, 13, 19, 25, 29, 32); B2(2, 6, 14, 20, 21, 30, 33); B3(3, 7, 15, 16, 22, 26, 34);
 B4(4, 8, 11, 17, 23, 27, 35); B5(5, 9, 12, 18, 24, 28, 31).

Replication 4
 B1(1, 9, 15, 17, 24, 27, 33); B2(2, 10, 11, 18, 25, 28, 34); B3(3, 6, 12, 19, 21, 29, 35);

B4(4, 7, 13, 20, 22, 30, 31); B5(5, 8, 14, 16, 23, 26, 32).

Replication 5

B1(1, 7, 14, 20, 23, 28, 35); B2(2, 8, 15, 16, 24, 29, 31); B3(3, 9, 11, 17, 25, 30, 32);
B4(4, 10, 12, 18, 21, 26, 33); B5(5, 6, 13, 19, 22, 27, 34).

241. $v = 42, b = 12, r = 2, k = 7, AE = 0.9082, DE = 0.9593$ $\alpha(0,1,2)$

Replication 1

B1(1, 7, 13, 19, 25, 31, 37); B2(2, 8, 14, 20, 26, 32, 38); B3(3, 9, 15, 21, 27, 33, 39);
B4(4, 10, 16, 22, 28, 34, 40); B5(5, 11, 17, 23, 29, 35, 41); B6(6, 12, 18, 24, 30, 36, 42).

Replication 2

B1(1, 9, 17, 22, 26, 36, 42); B2(2, 10, 18, 23, 27, 31, 37); B3(3, 11, 13, 24, 28, 32, 38);
B4(4, 12, 14, 19, 29, 33, 39); B5(5, 7, 15, 20, 30, 34, 40); B6(6, 8, 16, 21, 25, 35, 41).

242. $v = 42, b = 18, r = 3, k = 7, AE = 0.9582, DE = 0.9801$ $\alpha(0,1,2)$

Replication 1

B1(1, 7, 13, 19, 25, 31, 37); B2(2, 8, 14, 20, 26, 32, 38); B3(3, 9, 15, 21, 27, 33, 39);
B4(4, 10, 16, 22, 28, 34, 40); B5(5, 11, 17, 23, 29, 35, 41); B6(6, 12, 18, 24, 30, 36, 42).

Replication 2

B1(1, 9, 16, 20, 26, 35, 42); B2(2, 10, 17, 21, 27, 36, 37); B3(3, 11, 18, 22, 28, 31, 38);
B4(4, 12, 13, 23, 29, 32, 39); B5(5, 7, 14, 24, 30, 33, 40); B6(6, 8, 15, 19, 25, 34, 41).

Replication 3

B1(1, 10, 18, 24, 27, 32, 41); B2(2, 11, 13, 19, 28, 33, 42); B3(3, 12, 14, 20, 29, 34, 37);
B4(4, 7, 15, 21, 30, 35, 38); B5(5, 8, 16, 22, 25, 36, 39); B6(6, 9, 17, 23, 26, 31, 40).

243. $v = 42, b = 24, r = 4, k = 7, AE = 0.9742, DE = 0.9874$ $\alpha(0,1,2,3)$

Replication 1

B1(1, 7, 13, 19, 25, 31, 37); B2(2, 8, 14, 20, 26, 32, 38); B3(3, 9, 15, 21, 27, 33, 39);
B4(4, 10, 16, 22, 28, 34, 40); B5(5, 11, 17, 23, 29, 35, 41); B6(6, 12, 18, 24, 30, 36, 42).

Replication 2

B1(1, 10, 15, 24, 26, 35, 42); B2(2, 11, 16, 19, 27, 36, 37); B3(3, 12, 17, 20, 28, 31, 38);
B4(4, 7, 18, 21, 29, 32, 39); B5(5, 8, 13, 22, 30, 33, 40); B6(6, 9, 14, 23, 25, 34, 41).

Replication 3

B1(1, 11, 14, 20, 30, 34, 39); B2(2, 12, 15, 21, 25, 35, 40); B3(3, 7, 16, 22, 26, 36, 41);
B4(4, 8, 17, 23, 27, 31, 42); B5(5, 9, 18, 24, 28, 32, 37); B6(6, 10, 13, 19, 29, 33, 38).

Replication 4

B1(1, 12, 18, 22, 27, 32, 41); B2(2, 7, 13, 23, 28, 33, 42); B3(3, 8, 14, 24, 29, 34, 37);
B4(4, 9, 15, 19, 30, 35, 38); B5(5, 10, 16, 20, 25, 36, 39); B6(6, 11, 17, 21, 26, 31, 40).

244. $v = 42, b = 30, r = 5, k = 7, AE = 0.9816, DE = 0.9909$ $\alpha(0,1,2)$

Replication 1

B1(1, 7, 13, 19, 25, 31, 37); B2(2, 8, 14, 20, 26, 32, 38); B3(3, 9, 15, 21, 27, 33, 39);
B4(4, 10, 16, 22, 28, 34, 40); B5(5, 11, 17, 23, 29, 35, 41); B6(6, 12, 18, 24, 30, 36, 42).

Replication 2

B1(1, 11, 15, 22, 30, 34, 38); B2(2, 12, 16, 23, 25, 35, 39); B3(3, 7, 17, 24, 26, 36, 40);
B4(4, 8, 18, 19, 27, 31, 41); B5(5, 9, 13, 20, 28, 32, 42); B6(6, 10, 14, 21, 29, 33, 37).

Replication 3

B1(1, 10, 18, 23, 29, 32, 40); B4(4, 7, 15, 20, 26, 35, 37);	B2(2, 11, 13, 24, 30, 33, 41); B5(5, 8, 16, 21, 27, 36, 38);	B3(3, 12, 14, 19, 25, 34, 42); B6(6, 9, 17, 22, 28, 31, 39).
Replication 4		
B1(1, 9, 16, 24, 26, 35, 42); B4(4, 12, 13, 21, 29, 32, 39);	B2(2, 10, 17, 19, 27, 36, 37); B5(5, 7, 14, 22, 30, 33, 40);	B3(3, 11, 18, 20, 28, 31, 38); B6(6, 8, 15, 23, 25, 34, 41).
Replication 5		
B1(1, 12, 17, 20, 27, 33, 41); B4(4, 9, 14, 23, 30, 36, 38);	B2(2, 7, 18, 21, 28, 34, 42); B5(5, 10, 15, 24, 25, 31, 39);	B3(3, 8, 13, 22, 29, 35, 37); B6(6, 11, 16, 19, 26, 32, 40).
245. $v = 49, b = 14, r = 2, k = 7, AE = 0.9143, DE = 0.9610$	$\alpha(0,1)$;, LS84, Square-Lattice	
Replication 1		
B1(1, 8, 15, 22, 29, 36, 43); B4(4, 11, 18, 25, 32, 39, 46); B7(7, 14, 21, 28, 35, 42, 49).	B2(2, 9, 16, 23, 30, 37, 44); B5(5, 12, 19, 26, 33, 40, 47);	B3(3, 10, 17, 24, 31, 38, 45); B6(6, 13, 20, 27, 34, 41, 48);
Replication 2		
B1(1, 13, 16, 25, 33, 42, 45); B4(4, 9, 19, 28, 29, 38, 48); B7(7, 12, 15, 24, 32, 41, 44).	B2(2, 14, 17, 26, 34, 36, 46); B5(5, 10, 20, 22, 30, 39, 49);	B3(3, 8, 18, 27, 35, 37, 47); B6(6, 11, 21, 23, 31, 40, 43);
246. $v = 49, b = 21, r = 3, k = 7, AE = 0.9624, DE = 0.9817$	$\alpha(0,1)$;, LS85, Square-Lattice	
Replication 1		
B1(1, 8, 15, 22, 29, 36, 43); B4(4, 11, 18, 25, 32, 39, 46); B7(7, 14, 21, 28, 35, 42, 49).	B2(2, 9, 16, 23, 30, 37, 44); B5(5, 12, 19, 26, 33, 40, 47);	B3(3, 10, 17, 24, 31, 38, 45); B6(6, 13, 20, 27, 34, 41, 48);
Replication 2		
B1(1, 11, 20, 24, 35, 40, 44); B4(4, 14, 16, 27, 31, 36, 47); B7(7, 10, 19, 23, 34, 39, 43).	B2(2, 12, 21, 25, 29, 41, 45); B5(5, 8, 17, 28, 32, 37, 48);	B3(3, 13, 15, 26, 30, 42, 46); B6(6, 9, 18, 22, 33, 38, 49);
Replication 3		
B1(1, 14, 19, 25, 30, 38, 48); B4(4, 10, 15, 28, 33, 41, 44); B7(7, 13, 18, 24, 29, 37, 47).	B2(2, 8, 20, 26, 31, 39, 49); B5(5, 11, 16, 22, 34, 42, 45);	B3(3, 9, 21, 27, 32, 40, 43); B6(6, 12, 17, 23, 35, 36, 46);
247. $v = 49, b = 28, r = 4, k = 7, AE = 0.9796, DE = 0.9897$	$\alpha(0,1)$;, Square Lattice, LS86	
Replication 1		
B1(1, 8, 15, 22, 29, 36, 43); B4(4, 11, 18, 25, 32, 39, 46); B7(7, 14, 21, 28, 35, 42, 49).	B2(2, 9, 16, 23, 30, 37, 44); B5(5, 12, 19, 26, 33, 40, 47);	B3(3, 10, 17, 24, 31, 38, 45); B6(6, 13, 20, 27, 34, 41, 48);
Replication 2		
B1(1, 9, 17, 25, 33, 41, 49); B4(29, 37, 45, 4, 12, 20, 28); B7(8, 16, 24, 32, 40, 48, 7,).	B2(43, 2, 10, 18, 26, 34, 42); B5(22, 30, 38, 46, 5, 13, 21);	B3(36, 44, 3, 11, 19, 27, 35); B6(15, 23, 31, 39, 47, 6, 14);
Replication 3		
B1(1, 37, 24, 11, 47, 34, 21); B4(43, 30, 17, 4, 40, 27, 14); B7(36, 23, 10, 46, 33, 20, 7).	B2(15, 2, 38, 25, 12, 48, 35); B5(8, 44, 31, 18, 5, 41, 28);	B3(29, 16, 3, 39, 26, 13, 49); B6(22, 9, 45, 32, 19, 6, 42);

Replication 4

B1(1, 30, 10, 39, 19, 48, 28); B2(22, 2, 31, 11, 40, 20, 49);
 B3(43, 23, 3, 32, 12, 41, 21);
 B4(15, 44, 24, 4, 33, 13, 42);
 B5(36, 16, 45, 25, 5, 34, 14); B6(8, 37, 17, 46, 26, 6, 35);
 B7(29, 9, 38, 18, 47, 27, 7).

248. $v = 49, b = 35, r = 5, k = 7, AE = 0.9884, DE = 0.9941$

$\alpha(0,1)$, Square-Lattice, LS87

Replication 1

B1(1, 8, 15, 22, 29, 36, 43); B2(2, 9, 16, 23, 30, 37, 44); B3(3, 10, 17, 24, 31, 38, 45);
 B4(4, 11, 18, 25, 32, 39, 46); B5(5, 12, 19, 26, 33, 40, 47); B6(6, 13, 20, 27, 34, 41, 48);
 B7(7, 14, 21, 28, 35, 42, 49).

Replication 2

B1(1, 9, 17, 25, 33, 41, 49); B2(43, 2, 10, 18, 26, 34, 42); B3(36, 44, 3, 11, 19, 27, 35);
 B4(29, 37, 45, 4, 12, 20, 28); B5(22, 30, 38, 46, 5, 13, 21); B6(15, 23, 31, 39, 47, 6, 14);
 B7(8, 16, 24, 32, 40, 48, 7).

Replication 3

B1(1, 37, 24, 11, 47, 34, 21); B2(15, 2, 38, 25, 12, 48, 35); B3(29, 16, 3, 39, 26, 13, 49);
 B4(43, 30, 17, 4, 40, 27, 14); B5(8, 44, 31, 18, 5, 41, 28); B6(22, 9, 45, 32, 19, 6, 42);
 B7(36, 23, 10, 46, 33, 20, 7).

Replication 4

B1(1, 30, 10, 39, 19, 48, 28); B2(22, 2, 31, 11, 40, 20, 49); B3(43, 23, 3, 32, 12, 41, 21);
 B4(15, 44, 24, 4, 33, 13, 42); B5(36, 16, 45, 25, 5, 34, 14); B6(8, 37, 17, 46, 26, 6, 35);
 B7(29, 9, 38, 18, 47, 27, 7).

Replication 5

B1(1, 13, 18, 23, 35, 40, 45); B2(2, 14, 19, 24, 29, 41, 46); B3(3, 8, 20, 25, 30, 42, 47);
 B4(4, 9, 21, 26, 31, 36, 48); B5(5, 10, 15, 27, 32, 37, 49); B6(6, 11, 16, 28, 33, 38, 43);
 B7(7, 12, 17, 22, 34, 39, 44).

249. $v = 56, b = 16, r = 2, k = 7, AE = 0.9057, DE = 0.9580$

$\alpha(0,1)$, Rect.-Lattice

Replication 1

B1(1, 9, 17, 25, 33, 41, 49); B2(2, 10, 18, 26, 34, 42, 50); B3(3, 11, 19, 27, 35, 43, 51);
 B4(4, 12, 20, 28, 36, 44, 52); B5(5, 13, 21, 29, 37, 45, 53); B6(6, 14, 22, 30, 38, 46, 54);
 B7(7, 15, 23, 31, 39, 47, 55); B8(8, 16, 24, 32, 40, 48, 56).

Replication 2

B1(1, 15, 21, 30, 34, 44, 56); B2(2, 16, 22, 31, 35, 45, 49); B3(3, 9, 23, 32, 36, 46, 50);
 B4(4, 10, 24, 25, 37, 47, 51); B5(5, 11, 17, 26, 38, 48, 52); B6(6, 12, 18, 27, 39, 41, 53);
 B7(7, 13, 19, 28, 40, 42, 54); B8(8, 14, 20, 29, 33, 43, 55).

250. $v = 56, b = 24, r = 3, k = 7, AE = 0.9573, DE = 0.9796$

$\alpha(0,1)$

Replication 1

B1(1, 9, 17, 25, 33, 41, 49); B2(2, 10, 18, 26, 34, 42, 50); B3(3, 11, 19, 27, 35, 43, 51);
 B4(4, 12, 20, 28, 36, 44, 52); B5(5, 13, 21, 29, 37, 45, 53); B6(6, 14, 22, 30, 38, 46, 54);
 B7(7, 15, 23, 31, 39, 47, 55); B8(8, 16, 24, 32, 40, 48, 56).

Replication 2

B1(1, 12, 21, 31, 34, 48, 54); B2(2, 13, 22, 32, 35, 41, 55); B3(3, 14, 23, 25, 36, 42, 56);
 B4(4, 15, 24, 26, 37, 43, 49); B5(5, 16, 17, 27, 38, 44, 50); B6(6, 9, 18, 28, 39, 45, 51);
 B7(7, 10, 19, 29, 40, 46, 52); B8(8, 11, 20, 30, 33, 47, 53).

Replication 3

B1(1, 16, 23, 28, 35, 46, 53);	B2(2, 9, 24, 29, 36, 47, 54);	B3(3, 10, 17, 30, 37, 48, 55);
B4(4, 11, 18, 31, 38, 41, 56);	B5(5, 12, 19, 32, 39, 42, 49);	B6(6, 13, 20, 25, 40, 43, 50);
B7(7, 14, 21, 26, 33, 44, 51);	B8(8, 15, 22, 27, 34, 45, 52).	

251. $v = 56, b = 32, r = 4, k = 7, AE = 0.9743, DE = 0.9874$

$\alpha(0,1,2)$

Replication 1

B1(1, 9, 17, 25, 33, 41, 49);	B2(2, 10, 18, 26, 34, 42, 50);	B3(3, 11, 19, 27, 35, 43, 51);
B4(4, 12, 20, 28, 36, 44, 52);	B5(5, 13, 21, 29, 37, 45, 53);	B6(6, 14, 22, 30, 38, 46, 54);
B7(7, 15, 23, 31, 39, 47, 55);	B8(8, 16, 24, 32, 40, 48, 56).	

Replication 2

B1(1, 10, 19, 30, 36, 47, 53);	B2(2, 11, 20, 31, 37, 48, 54);	B3(3, 12, 21, 32, 38, 41, 55);
B4(4, 13, 22, 25, 39, 42, 56);	B5(5, 14, 23, 26, 40, 43, 49);	B6(6, 15, 24, 27, 33, 44, 50);
B7(7, 16, 17, 28, 34, 45, 51);	B8(8, 9, 18, 29, 35, 46, 52).	

Replication 3

B1(1, 12, 22, 31, 35, 45, 50);	B2(2, 13, 23, 32, 36, 46, 51);	B3(3, 14, 24, 25, 37, 47, 52);
B4(4, 15, 17, 26, 38, 48, 53);	B5(5, 16, 18, 27, 39, 41, 54);	B6(6, 9, 19, 28, 40, 42, 55);
B7(7, 10, 20, 29, 33, 43, 56);	B8(8, 11, 21, 30, 34, 44, 49).	

Replication 4

B1(1, 11, 24, 29, 38, 42, 51);	B2(2, 12, 17, 30, 39, 43, 52);	B3(3, 13, 18, 31, 40, 44, 53);
B4(4, 14, 19, 32, 33, 45, 54);	B5(5, 15, 20, 25, 34, 46, 55);	B6(6, 16, 21, 26, 35, 47, 56);
B7(7, 9, 22, 27, 36, 48, 49);	B8(8, 10, 23, 28, 37, 41, 50).	

252. $v = 56, b = 40, r = 5, k = 7, AE = 0.9819, DE = 0.9910$

$\alpha(0,1,2)$

Replication 1

B1(1, 9, 17, 25, 33, 41, 49);	B2(2, 10, 18, 26, 34, 42, 50);	B3(3, 11, 19, 27, 35, 43, 51);
B4(4, 12, 20, 28, 36, 44, 52);	B5(5, 13, 21, 29, 37, 45, 53);	B6(6, 14, 22, 30, 38, 46, 54);
B7(7, 15, 23, 31, 39, 47, 55);	B8(8, 16, 24, 32, 40, 48, 56).	

Replication 2

B1(1, 14, 20, 26, 38, 47, 56);	B2(2, 15, 21, 27, 39, 48, 49);	B3(3, 16, 22, 28, 40, 41, 50);
B4(4, 9, 23, 29, 33, 42, 51);	B5(5, 10, 24, 30, 34, 43, 52);	B6(6, 11, 17, 31, 35, 44, 53);
B7(7, 12, 18, 32, 36, 45, 54);	B8(8, 13, 19, 25, 37, 46, 55).	

Replication 3

B1(1, 10, 22, 31, 37, 48, 51);	B2(2, 11, 23, 32, 38, 41, 52);	B3(3, 12, 24, 25, 39, 42, 53);
B4(4, 13, 17, 26, 40, 43, 54);	B5(5, 14, 18, 27, 33, 44, 55);	B6(6, 15, 19, 28, 34, 45, 56);
B7(7, 16, 20, 29, 35, 46, 49);	B8(8, 9, 21, 30, 36, 47, 50).	

Replication 4

B1(1, 11, 21, 28, 36, 42, 55);	B2(2, 12, 22, 29, 37, 43, 56);	B3(3, 13, 23, 30, 38, 44, 49);
B4(4, 14, 24, 31, 39, 45, 50);	B5(5, 15, 17, 32, 40, 46, 51);	B6(6, 16, 18, 25, 33, 47, 52);
B7(7, 9, 19, 26, 34, 48, 53);	B8(8, 10, 20, 27, 35, 41, 54).	

Replication 5

B1(1, 12, 23, 27, 34, 46, 50);	B2(2, 13, 24, 28, 35, 47, 51);	B3(3, 14, 17, 29, 36, 48, 52);
B4(4, 15, 18, 30, 37, 41, 53);	B5(5, 16, 19, 31, 38, 42, 54);	B6(6, 9, 20, 32, 39, 43, 55);
B7(7, 10, 21, 25, 40, 44, 56);	B8(8, 11, 22, 26, 33, 45, 49).	

253. $v = 63, b = 18, r = 2, k = 7, AE = 0.8987, DE = 0.9556$ $\alpha(0,1)$
 Replication 1
 B1(1, 10, 19, 28, 37, 46, 55); B2(2, 11, 20, 29, 38, 47, 56); B3(3, 12, 21, 30, 39, 48, 57);
 B4(4, 13, 22, 31, 40, 49, 58); B5(5, 14, 23, 32, 41, 50, 59); B6(6, 15, 24, 33, 42, 51, 60);
 B7(7, 16, 25, 34, 43, 52, 61); B8(8, 17, 26, 35, 44, 53, 62); B9(9, 18, 27, 36, 45, 54, 63).

Replication 2
 B1(1, 16, 22, 32, 39, 53, 63); B2(2, 17, 23, 33, 40, 54, 55); B3(3, 18, 24, 34, 41, 46, 56);
 B4(4, 10, 25, 35, 42, 47, 57); B5(5, 11, 26, 36, 43, 48, 58); B6(6, 12, 27, 28, 44, 49, 59);
 B7(7, 13, 19, 29, 45, 50, 60); B8(8, 14, 20, 30, 37, 51, 61); B9(9, 15, 21, 31, 38, 52, 62).

254. $v = 63, b = 27, r = 3, k = 7, AE = 0.9539, DE = 0.9781$ $\alpha(0,1)$
 Replication 1
 B1(1, 10, 19, 28, 37, 46, 55); B2(2, 11, 20, 29, 38, 47, 56); B3(3, 12, 21, 30, 39, 48, 57);
 B4(4, 13, 22, 31, 40, 49, 58); B5(5, 14, 23, 32, 41, 50, 59); B6(6, 15, 24, 33, 42, 51, 60);
 B7(7, 16, 25, 34, 43, 52, 61); B8(8, 17, 26, 35, 44, 53, 62); B9(9, 18, 27, 36, 45, 54, 63).

Replication 2
 B1(1, 11, 24, 35, 39, 50, 63); B2(2, 12, 25, 36, 40, 51, 55); B3(3, 13, 26, 28, 41, 52, 56);
 B4(4, 14, 27, 29, 42, 53, 57); B5(5, 15, 19, 30, 43, 54, 58); B6(6, 16, 20, 31, 44, 46, 59);
 B7(7, 17, 21, 32, 45, 47, 60); B8(8, 18, 22, 33, 37, 48, 61); B9(9, 10, 23, 34, 38, 49, 62).

Replication 3
 B1(1, 15, 26, 29, 45, 49, 61); B2(2, 16, 27, 30, 37, 50, 62); B3(3, 17, 19, 31, 38, 51, 63);
 B4(4, 18, 20, 32, 39, 52, 55); B5(5, 10, 21, 33, 40, 53, 56); B6(6, 11, 22, 34, 41, 54, 57);
 B7(7, 12, 23, 35, 42, 46, 58); B8(8, 13, 24, 36, 43, 47, 59); B9(9, 14, 25, 28, 44, 48, 60).

255. $v = 63, b = 36, r = 4, k = 7, AE = 0.9715, DE = 0.9861$ $\alpha(0,1,2)$
 Replication 1
 B1(1, 10, 19, 28, 37, 46, 55); B2(2, 11, 20, 29, 38, 47, 56); B3(3, 12, 21, 30, 39, 48, 57);
 B4(4, 13, 22, 31, 40, 49, 58); B5(5, 14, 23, 32, 41, 50, 59); B6(6, 15, 24, 33, 42, 51, 60);
 B7(7, 16, 25, 34, 43, 52, 61); B8(8, 17, 26, 35, 44, 53, 62); B9(9, 18, 27, 36, 45, 54, 63).

Replication 2
 B1(1, 11, 24, 36, 38, 49, 59); B2(2, 12, 25, 28, 39, 50, 60); B3(3, 13, 26, 29, 40, 51, 61);
 B4(4, 14, 27, 30, 41, 52, 62); B5(5, 15, 19, 31, 42, 53, 63); B6(6, 16, 20, 32, 43, 54, 55);
 B7(7, 17, 21, 33, 44, 46, 56); B8(8, 18, 22, 34, 45, 47, 57); B9(9, 10, 23, 35, 37, 48, 58).

Replication 3
 B1(1, 17, 20, 31, 45, 50, 61); B2(2, 18, 21, 32, 37, 51, 62); B3(3, 10, 22, 33, 38, 52, 63);
 B4(4, 11, 23, 34, 39, 53, 55); B5(5, 12, 24, 35, 40, 54, 56); B6(6, 13, 25, 36, 41, 46, 57);
 B7(7, 14, 26, 28, 42, 47, 58); B8(8, 15, 27, 29, 43, 48, 59); B9(9, 16, 19, 30, 44, 49, 60).

Replication 4
 B1(1, 15, 21, 34, 41, 54, 58); B2(2, 16, 22, 35, 42, 46, 59); B3(3, 17, 23, 36, 43, 47, 60);
 B4(4, 18, 24, 28, 44, 48, 61); B5(5, 10, 25, 29, 45, 49, 62); B6(6, 11, 26, 30, 37, 50, 63);
 B7(7, 12, 27, 31, 38, 51, 55); B8(8, 13, 19, 32, 39, 52, 56); B9(9, 14, 20, 33, 40, 53, 57).

256. $v = 63, b = 45, r = 5, k = 7, AE = 0.9801, DE = 0.9902$ $\alpha(0,1,2)$
 Replication 1
 B1(1, 10, 19, 28, 37, 46, 55); B2(2, 11, 20, 29, 38, 47, 56); B3(3, 12, 21, 30, 39, 48, 57);
 B4(4, 13, 22, 31, 40, 49, 58); B5(5, 14, 23, 32, 41, 50, 59); B6(6, 15, 24, 33, 42, 51, 60);
 B7(7, 16, 25, 34, 43, 52, 61); B8(8, 17, 26, 35, 44, 53, 62); B9(9, 18, 27, 36, 45, 54, 63).

Replication 2

B1(1, 16, 23, 30, 45, 47, 60);	B2(2, 17, 24, 31, 37, 48, 61);	B3(3, 18, 25, 32, 38, 49, 62);
B4(4, 10, 26, 33, 39, 50, 63);	B5(5, 11, 27, 34, 40, 51, 55);	B6(6, 12, 19, 35, 41, 52, 56);
B7(7, 13, 20, 36, 42, 53, 57);	B8(8, 14, 21, 28, 43, 54, 58);	B9(9, 15, 22, 29, 44, 46, 59).

Replication 3

B1(1, 13, 27, 35, 42, 48, 59);	B2(2, 14, 19, 36, 43, 49, 60);	B3(3, 15, 20, 28, 44, 50, 61);
B4(4, 16, 21, 29, 45, 51, 62);	B5(5, 17, 22, 30, 37, 52, 63);	B6(6, 18, 23, 31, 38, 53, 55);
B7(7, 10, 24, 32, 39, 54, 56);	B8(8, 11, 25, 33, 40, 46, 57);	B9(9, 12, 26, 34, 41, 47, 58).

Replication 4

B1(1, 11, 24, 36, 44, 52, 62);	B2(2, 12, 25, 28, 45, 53, 63);	B3(3, 13, 26, 29, 37, 54, 55);
B4(4, 14, 27, 30, 38, 46, 56);	B5(5, 15, 19, 31, 39, 47, 57);	B6(6, 16, 20, 32, 40, 48, 58);
B7(7, 17, 21, 33, 41, 49, 59);	B8(8, 18, 22, 34, 42, 50, 60);	B9(9, 10, 23, 35, 43, 51, 61).

Replication 5

B1(1, 17, 25, 29, 39, 50, 58);	B2(2, 18, 26, 30, 40, 51, 59);	B3(3, 10, 27, 31, 41, 52, 60);
B4(4, 11, 19, 32, 42, 53, 61);	B5(5, 12, 20, 33, 43, 54, 62);	B6(6, 13, 21, 34, 44, 46, 63);
B7(7, 14, 22, 35, 45, 47, 55);	B8(8, 15, 23, 36, 37, 48, 56);	B9(9, 16, 24, 28, 38, 49, 57).

257. $v = 70, b = 20, r = 2, k = 7, AE = 0.8928, DE = 0.9536$

$\alpha(0,1)$

Replication 1

B1(1, 11, 21, 31, 41, 51, 61);	B2(2, 12, 22, 32, 42, 52, 62);	B3(3, 13, 23, 33, 43, 53, 63);
B4(4, 14, 24, 34, 44, 54, 64);	B5(5, 15, 25, 35, 45, 55, 65);	B6(6, 16, 26, 36, 46, 56, 66);
B7(7, 17, 27, 37, 47, 57, 67);	B8(8, 18, 28, 38, 48, 58, 68);	B9(9, 19, 29, 39, 49, 59, 69);
B10(10, 20, 30, 40, 50, 60, 70).		

Replication 2

B1(1, 17, 23, 32, 48, 55, 70);	B2(2, 18, 24, 33, 49, 56, 61);	B3(3, 19, 25, 34, 50, 57, 62);
B4(4, 20, 26, 35, 41, 58, 63);	B5(5, 11, 27, 36, 42, 59, 64);	B6(6, 12, 28, 37, 43, 60, 65);
B7(7, 13, 29, 38, 44, 51, 66);	B8(8, 14, 30, 39, 45, 52, 67);	B9(9, 15, 21, 40, 46, 53, 68);
B10(10, 16, 22, 31, 47, 54, 69).		

258. $v = 70, b = 30, r = 3, k = 7, AE = 0.9508, DE = 0.9768$

$\alpha(0,1)$

Replication 1

B1(1, 11, 21, 31, 41, 51, 61);	B2(2, 12, 22, 32, 42, 52, 62);	B3(3, 13, 23, 33, 43, 53, 63);
B4(4, 14, 24, 34, 44, 54, 64);	B5(5, 15, 25, 35, 45, 55, 65);	B6(6, 16, 26, 36, 46, 56, 66);
B7(7, 17, 27, 37, 47, 57, 67);	B8(8, 18, 28, 38, 48, 58, 68);	B9(9, 19, 29, 39, 49, 59, 69);
B10(10, 20, 30, 40, 50, 60, 70).		

Replication 2

B1(1, 16, 22, 38, 47, 53, 69);	B2(2, 17, 23, 39, 48, 54, 70);	B3(3, 18, 24, 40, 49, 55, 61);
B4(4, 19, 25, 31, 50, 56, 62);	B5(5, 20, 26, 32, 41, 57, 63);	B6(6, 11, 27, 33, 42, 58, 64);
B7(7, 12, 28, 34, 43, 59, 65);	B8(8, 13, 29, 35, 44, 60, 66);	B9(9, 14, 30, 36, 45, 51, 67);
B10(10, 15, 21, 37, 46, 52, 68).		

Replication 3

B1(1, 13, 27, 36, 50, 54, 65);	B2(2, 14, 28, 37, 41, 55, 66);	B3(3, 15, 29, 38, 42, 56, 67);
B4(4, 16, 30, 39, 43, 57, 68);	B5(5, 17, 21, 40, 44, 58, 69);	B6(6, 18, 22, 31, 45, 59, 70);
B7(7, 19, 23, 32, 46, 60, 61);	B8(8, 20, 24, 33, 47, 51, 62);	B9(9, 11, 25, 34, 48, 52, 63);
B10(10, 12, 26, 35, 49, 53, 64).		

259. $v = 70, b = 40, r = 4, k = 7, AE = 0.9703, DE = 0.9856$		$\alpha(0,1)$
Replication 1		
B1(1, 11, 21, 31, 41, 51, 61);	B2(2, 12, 22, 32, 42, 52, 62);	B3(3, 13, 23, 33, 43, 53, 63);
B4(4, 14, 24, 34, 44, 54, 64);	B5(5, 15, 25, 35, 45, 55, 65);	B6(6, 16, 26, 36, 46, 56, 66);
B7(7, 17, 27, 37, 47, 57, 67);	B8(8, 18, 28, 38, 48, 58, 68);	B9(9, 19, 29, 39, 49, 59, 69);
B10(10, 20, 30, 40, 50, 60, 70).		
Replication 2		
B1(1, 18, 30, 39, 46, 52, 67);	B2(2, 19, 21, 40, 47, 53, 68);	B3(3, 20, 22, 31, 48, 54, 69);
B4(4, 11, 23, 32, 49, 55, 70);	B5(5, 12, 24, 33, 50, 56, 61);	B6(6, 13, 25, 34, 41, 57, 62);
B7(7, 14, 26, 35, 42, 58, 63);	B8(8, 15, 27, 36, 43, 59, 64);	B9(9, 16, 28, 37, 44, 60, 65);
B10(10, 17, 29, 38, 45, 51, 66).		
Replication 3		
B1(1, 13, 28, 40, 49, 56, 64);	B2(2, 14, 29, 31, 50, 57, 65);	B3(3, 15, 30, 32, 41, 58, 66);
B4(4, 16, 21, 33, 42, 59, 67);	B5(5, 17, 22, 34, 43, 60, 68);	B6(6, 18, 23, 35, 44, 51, 69);
B7(7, 19, 24, 36, 45, 52, 70);	B8(8, 20, 25, 37, 46, 53, 61);	B9(9, 11, 26, 38, 47, 54, 62);
B10(10, 12, 27, 39, 48, 55, 63).		
Replication 4		
B1(1, 16, 27, 34, 45, 53, 69);	B2(2, 17, 28, 35, 46, 54, 70);	B3(3, 18, 29, 36, 47, 55, 61);
B4(4, 19, 30, 37, 48, 56, 62);	B5(5, 20, 21, 38, 49, 57, 63);	B6(6, 11, 22, 39, 50, 58, 64);
B7(7, 12, 23, 40, 41, 59, 65);	B8(8, 13, 24, 31, 42, 60, 66);	B9(9, 14, 25, 32, 43, 51, 67);
B10(10, 15, 26, 33, 44, 52, 68).		
260. $v = 70, b = 50, r = 5, k = 7, AE = 0.9793, DE = 0.9898$		$\alpha(0,1,2)$
Replication 1		
B1(1, 11, 21, 31, 41, 51, 61);	B2(2, 12, 22, 32, 42, 52, 62);	B3(3, 13, 23, 33, 43, 53, 63);
B4(4, 14, 24, 34, 44, 54, 64);	B5(5, 15, 25, 35, 45, 55, 65);	B6(6, 16, 26, 36, 46, 56, 66);
B7(7, 17, 27, 37, 47, 57, 67);	B8(8, 18, 28, 38, 48, 58, 68);	B9(9, 19, 29, 39, 49, 59, 69);
B10(10, 20, 30, 40, 50, 60, 70).		
Replication 2		
B1(1, 15, 27, 37, 48, 59, 62);	B2(2, 16, 28, 38, 49, 60, 63);	B3(3, 17, 29, 39, 50, 51, 64);
B4(4, 18, 30, 40, 41, 52, 65);	B5(5, 19, 21, 31, 42, 53, 66);	B6(6, 20, 22, 32, 43, 54, 67);
B7(7, 11, 23, 33, 44, 55, 68);	B8(8, 12, 24, 34, 45, 56, 69);	B9(9, 13, 25, 35, 46, 57, 70);
B10(10, 14, 26, 36, 47, 58, 61).		
Replication 3		
B1(1, 12, 23, 40, 46, 58, 64);	B2(2, 13, 24, 31, 47, 59, 65);	B3(3, 14, 25, 32, 48, 60, 66);
B4(4, 15, 26, 33, 49, 51, 67);	B5(5, 16, 27, 34, 50, 52, 68);	B6(6, 17, 28, 35, 41, 53, 69);
B7(7, 18, 29, 36, 42, 54, 70);	B8(8, 19, 30, 37, 43, 55, 61);	B9(9, 20, 21, 38, 44, 56, 62);
B10(10, 11, 22, 39, 45, 57, 63).		
Replication 4		
B1(1, 16, 29, 32, 44, 53, 65);	B2(2, 17, 30, 33, 45, 54, 66);	B3(3, 18, 21, 34, 46, 55, 67);
B4(4, 19, 22, 35, 47, 56, 68);	B5(5, 20, 23, 36, 48, 57, 69);	B6(6, 11, 24, 37, 49, 58, 70);
B7(7, 12, 25, 38, 50, 59, 61);	B8(8, 13, 26, 39, 41, 60, 62);	B9(9, 14, 27, 40, 42, 51, 63);
B10(10, 15, 28, 31, 43, 52, 64).		
Replication 5		
B1(1, 19, 26, 35, 50, 54, 63);	B2(2, 20, 27, 36, 41, 55, 64);	B3(3, 11, 28, 37, 42, 56, 65);
B4(4, 12, 29, 38, 43, 57, 66);	B5(5, 13, 30, 39, 44, 58, 67);	B6(6, 14, 21, 40, 45, 59, 68);
B7(7, 15, 22, 31, 46, 60, 69);	B8(8, 16, 23, 32, 47, 51, 70);	B9(9, 17, 24, 33, 48, 52, 61);
B10(10, 18, 25, 34, 49, 53, 62).		

261. $v = 77, b = 22, r = 2, k = 7, AE = 0.8880, DE = 0.9519$		$\alpha(0,1)$
Replication 1		
B1(1, 12, 23, 34, 45, 56, 67);	B2(2, 13, 24, 35, 46, 57, 68);	B3(3, 14, 25, 36, 47, 58, 69);
B4(4, 15, 26, 37, 48, 59, 70);	B5(5, 16, 27, 38, 49, 60, 71);	B6(6, 17, 28, 39, 50, 61, 72);
B7(7, 18, 29, 40, 51, 62, 73);	B8(8, 19, 30, 41, 52, 63, 74);	B9(9, 20, 31, 42, 53, 64, 75);
B10(10, 21, 32, 43, 54, 65, 76);	B11(11, 22, 33, 44, 55, 66, 77).	
Replication 2		
B1(1, 19, 32, 38, 51, 57, 77);	B2(2, 20, 33, 39, 52, 58, 67);	B3(3, 21, 23, 40, 53, 59, 68);
B4(4, 22, 24, 41, 54, 60, 69);	B5(5, 12, 25, 42, 55, 61, 70);	B6(6, 13, 26, 43, 45, 62, 71);
B7(7, 14, 27, 44, 46, 63, 72);	B8(8, 15, 28, 34, 47, 64, 73);	B9(9, 16, 29, 35, 48, 65, 74);
B10(10, 17, 30, 36, 49, 66, 75);	B11(11, 18, 31, 37, 50, 56, 76).	
262. $v = 77, b = 33, r = 3, k = 7, AE = 0.9485, DE = 0.9758$		$\alpha(0,1)$
Replication 1		
B1(1, 12, 23, 34, 45, 56, 67);	B2(2, 13, 24, 35, 46, 57, 68);	B3(3, 14, 25, 36, 47, 58, 69);
B4(4, 15, 26, 37, 48, 59, 70);	B5(5, 16, 27, 38, 49, 60, 71);	B6(6, 17, 28, 39, 50, 61, 72);
B7(7, 18, 29, 40, 51, 62, 73);	B8(8, 19, 30, 41, 52, 63, 74);	B9(9, 20, 31, 42, 53, 64, 75);
B10(10, 21, 32, 43, 54, 65, 76);	B11(11, 22, 33, 44, 55, 66, 77).	
Replication 2		
B1(1, 19, 33, 37, 54, 64, 69);	B2(2, 20, 23, 38, 55, 65, 70);	B3(3, 21, 24, 39, 45, 66, 71);
B4(4, 22, 25, 40, 46, 56, 72);	B5(5, 12, 26, 41, 47, 57, 73);	B6(6, 13, 27, 42, 48, 58, 74);
B7(7, 14, 28, 43, 49, 59, 75);	B8(8, 15, 29, 44, 50, 60, 76);	B9(9, 16, 30, 34, 51, 61, 77);
B10(10, 17, 31, 35, 52, 62, 67);	B11(11, 18, 32, 36, 53, 63, 68).	
Replication 3		
B1(1, 14, 27, 44, 51, 65, 68);	B2(2, 15, 28, 34, 52, 66, 69);	B3(3, 16, 29, 35, 53, 56, 70);
B4(4, 17, 30, 36, 54, 57, 71);	B5(5, 18, 31, 37, 55, 58, 72);	B6(6, 19, 32, 38, 45, 59, 73);
B7(7, 20, 33, 39, 46, 60, 74);	B8(8, 21, 23, 40, 47, 61, 75);	B9(9, 22, 24, 41, 48, 62, 76);
B10(10, 12, 25, 42, 49, 63, 77);	B11(11, 13, 26, 43, 50, 64, 67).	
263. $v = 77, b = 44, r = 4, k = 7, AE = 0.9688, DE = 0.9848$		$\alpha(0,1)$
Replication 1		
B1(1, 12, 23, 34, 45, 56, 67);	B2(2, 13, 24, 35, 46, 57, 68);	B3(3, 14, 25, 36, 47, 58, 69);
B4(4, 15, 26, 37, 48, 59, 70);	B5(5, 16, 27, 38, 49, 60, 71);	B6(6, 17, 28, 39, 50, 61, 72);
B7(7, 18, 29, 40, 51, 62, 73);	B8(8, 19, 30, 41, 52, 63, 74);	B9(9, 20, 31, 42, 53, 64, 75);
B10(10, 21, 32, 43, 54, 65, 76);	B11(11, 22, 33, 44, 55, 66, 77).	
Replication 2		
B1(1, 20, 27, 44, 50, 62, 70);	B2(2, 21, 28, 34, 51, 63, 71);	B3(3, 22, 29, 35, 52, 64, 72);
B4(4, 12, 30, 36, 53, 65, 73);	B5(5, 13, 31, 37, 54, 66, 74);	B6(6, 14, 32, 38, 55, 56, 75);
B7(7, 15, 33, 39, 45, 57, 76);	B8(8, 16, 23, 40, 46, 58, 77);	B9(9, 17, 24, 41, 47, 59, 67);
B10(10, 18, 25, 42, 48, 60, 68);	B11(11, 19, 26, 43, 49, 61, 69).	
Replication 3		
B1(1, 15, 25, 35, 54, 63, 77);	B2(2, 16, 26, 36, 55, 64, 67);	B3(3, 17, 27, 37, 45, 65, 68);
B4(4, 18, 28, 38, 46, 66, 69);	B5(5, 19, 29, 39, 47, 56, 70);	B6(6, 20, 30, 40, 48, 57, 71);
B7(7, 21, 31, 41, 49, 58, 72);	B8(8, 22, 32, 42, 50, 59, 73);	B9(9, 12, 33, 43, 51, 60, 74);
B10(10, 13, 23, 44, 52, 61, 75);	B11(11, 14, 24, 34, 53, 62, 76).	
Replication 4		
B1(1, 18, 30, 43, 55, 59, 72);	B2(2, 19, 31, 44, 45, 60, 73);	B3(3, 20, 32, 34, 46, 61, 74);
B4(4, 21, 33, 35, 47, 62, 75);	B5(5, 22, 23, 36, 48, 63, 76);	B6(6, 12, 24, 37, 49, 64, 77);
B7(7, 13, 25, 38, 50, 65, 67);	B8(8, 14, 26, 39, 51, 66, 68);	B9(9, 15, 27, 40, 52, 56, 69);
B10(10, 16, 28, 41, 53, 57, 70);	B11(11, 17, 29, 42, 54, 58, 71).	

264. $v = 77, b = 55, r = 5, k = 7, AE = 0.9788, DE = 0.9896$

$\alpha(0,1)$

Replication 1

B1(1, 12, 23, 34, 45, 56, 67);	B2(2, 13, 24, 35, 46, 57, 68);	B3(3, 14, 25, 36, 47, 58, 69);
B4(4, 15, 26, 37, 48, 59, 70);	B5(5, 16, 27, 38, 49, 60, 71);	B6(6, 17, 28, 39, 50, 61, 72);
B7(7, 18, 29, 40, 51, 62, 73);	B8(8, 19, 30, 41, 52, 63, 74);	B9(9, 20, 31, 42, 53, 64, 75);
B10(10, 21, 32, 43, 54, 65, 76);	B11(11, 22, 33, 44, 55, 66, 77).	

Replication 2

B1(1, 17, 32, 37, 49, 64, 77);	B2(2, 18, 33, 38, 50, 65, 67);	B3(3, 19, 23, 39, 51, 66, 68);
B4(4, 20, 24, 40, 52, 56, 69);	B5(5, 21, 25, 41, 53, 57, 70);	B6(6, 22, 26, 42, 54, 58, 71);
B7(7, 12, 27, 43, 55, 59, 72);	B8(8, 13, 28, 44, 45, 60, 73);	B9(9, 14, 29, 34, 46, 61, 74);
B10(10, 15, 30, 35, 47, 62, 75);	B11(11, 16, 31, 36, 48, 63, 76).	

Replication 3

B1(1, 14, 31, 43, 52, 57, 73);	B2(2, 15, 32, 44, 53, 58, 74);	B3(3, 16, 33, 34, 54, 59, 75);
B4(4, 17, 23, 35, 55, 60, 76);	B5(5, 18, 24, 36, 45, 61, 77);	B6(6, 19, 25, 37, 46, 62, 67);
B7(7, 20, 26, 38, 47, 63, 68);	B8(8, 21, 27, 39, 48, 64, 69);	B9(9, 22, 28, 40, 49, 65, 70);
B10(10, 12, 29, 41, 50, 66, 71);	B11(11, 13, 30, 42, 51, 56, 72).	

Replication 4

B1(1, 20, 30, 44, 48, 61, 71);	B2(2, 21, 31, 34, 49, 62, 72);	B3(3, 22, 32, 35, 50, 63, 73);
B4(4, 12, 33, 36, 51, 64, 74);	B5(5, 13, 23, 37, 52, 65, 75);	B6(6, 14, 24, 38, 53, 66, 76);
B7(7, 15, 25, 39, 54, 56, 77);	B8(8, 16, 26, 40, 55, 57, 67);	B9(9, 17, 27, 41, 45, 58, 68);
B10(10, 18, 28, 42, 46, 59, 69);	B11(11, 19, 29, 43, 47, 60, 70).	

Replication 5

B1(1, 13, 25, 40, 50, 59, 76);	B2(2, 14, 26, 41, 51, 60, 77);	B3(3, 15, 27, 42, 52, 61, 67);
B4(4, 16, 28, 43, 53, 62, 68);	B5(5, 17, 29, 44, 54, 63, 69);	B6(6, 18, 30, 34, 55, 64, 70);
B7(7, 19, 31, 35, 45, 65, 71);	B8(8, 20, 32, 36, 46, 66, 72);	B9(9, 21, 33, 37, 47, 56, 73);
B10(10, 22, 23, 38, 48, 57, 74);	B11(11, 12, 24, 39, 49, 58, 75).	

265. $v = 84, b = 24, r = 2, k = 7, AE = 0.8852, DE = 0.9508$

$\alpha(0,1)$

Replication 1

B1(1, 13, 25, 37, 49, 61, 73);	B2(2, 14, 26, 38, 50, 62, 74);	B3(3, 15, 27, 39, 51, 63, 75);
B4(4, 16, 28, 40, 52, 64, 76);	B5(5, 17, 29, 41, 53, 65, 77);	B6(6, 18, 30, 42, 54, 66, 78);
B7(7, 19, 31, 43, 55, 67, 79);	B8(8, 20, 32, 44, 56, 68, 80);	B9(9, 21, 33, 45, 57, 69, 81);
B10(10, 22, 34, 46, 58, 70, 82);	B11(11, 23, 35, 47, 59, 71, 83);	B12(12, 24, 36, 48, 60, 72, 84).

Replication 2

B1(1, 17, 32, 38, 60, 63, 78);	B2(2, 18, 33, 39, 49, 64, 79);	B3(3, 19, 34, 40, 50, 65, 80);
B4(4, 20, 35, 41, 51, 66, 81);	B5(5, 21, 36, 42, 52, 67, 82);	B6(6, 22, 25, 43, 53, 68, 83);
B7(7, 23, 26, 44, 54, 69, 84);	B8(8, 24, 27, 45, 55, 70, 73);	B9(9, 13, 28, 46, 56, 71, 74);
B10(10, 14, 29, 47, 57, 72, 75);	B11(11, 15, 30, 48, 58, 61, 76);	B12(12, 16, 31, 37, 59, 62, 77).

266. $v = 84, b = 36, r = 3, k = 7, AE = 0.9468, DE = 0.9750$

$\alpha(0,1)$

Replication 1

B1(1, 13, 25, 37, 49, 61, 73);	B2(2, 14, 26, 38, 50, 62, 74);	B3(3, 15, 27, 39, 51, 63, 75);
B4(4, 16, 28, 40, 52, 64, 76);	B5(5, 17, 29, 41, 53, 65, 77);	B6(6, 18, 30, 42, 54, 66, 78);
B7(7, 19, 31, 43, 55, 67, 79);	B8(8, 20, 32, 44, 56, 68, 80);	B9(9, 21, 33, 45, 57, 69, 81);
B10(10, 22, 34, 46, 58, 70, 82);	B11(11, 23, 35, 47, 59, 71, 83);	B12(12, 24, 36, 48, 60, 72, 84).

Replication 2

B1(1, 22, 29, 39, 60, 67, 74);	B2(2, 23, 30, 40, 49, 68, 75);	B3(3, 24, 31, 41, 50, 69, 76);
B4(4, 13, 32, 42, 51, 70, 77);	B5(5, 14, 33, 43, 52, 71, 78);	B6(6, 15, 34, 44, 53, 72, 79);
B7(7, 16, 35, 45, 54, 61, 80);	B8(8, 17, 36, 46, 55, 62, 81);	B9(9, 18, 25, 47, 56, 63, 82);
B10(10, 19, 26, 48, 57, 64, 83);	B11(11, 20, 27, 37, 58, 65, 84);	B12(12, 21, 28, 38, 59, 66, 73).

Replication 3

B1(1, 24, 34, 40, 54, 71, 81);	B2(2, 13, 35, 41, 55, 72, 82);	B3(3, 14, 36, 42, 56, 61, 83);
B4(4, 15, 25, 43, 57, 62, 84);	B5(5, 16, 26, 44, 58, 63, 73);	B6(6, 17, 27, 45, 59, 64, 74);
B7(7, 18, 28, 46, 60, 65, 75);	B8(8, 19, 29, 47, 49, 66, 76);	B9(9, 20, 30, 48, 50, 67, 77);
B10(10, 21, 31, 37, 51, 68, 78);	B11(11, 22, 32, 38, 52, 69, 79);	B12(12, 23, 33, 39, 53, 70, 80).

267. $v = 84, b = 48, r = 4, k = 7, AE = 0.9670, DE = 0.9841$

$\alpha(0,1)$

Replication 1

B1(1, 13, 25, 37, 49, 61, 73);	B2(2, 14, 26, 38, 50, 62, 74);	B3(3, 15, 27, 39, 51, 63, 75);
B4(4, 16, 28, 40, 52, 64, 76);	B5(5, 17, 29, 41, 53, 65, 77);	B6(6, 18, 30, 42, 54, 66, 78);
B7(7, 19, 31, 43, 55, 67, 79);	B8(8, 20, 32, 44, 56, 68, 80);	B9(9, 21, 33, 45, 57, 69, 81);
B10(10, 22, 34, 46, 58, 70, 82);	B11(11, 23, 35, 47, 59, 71, 83);	B12(12, 24, 36, 48, 60, 72, 84).

Replication 2

B1(1, 16, 35, 46, 60, 65, 81);	B2(2, 17, 36, 47, 49, 66, 82);	B3(3, 18, 25, 48, 50, 67, 83);
B4(4, 19, 26, 37, 51, 68, 84);	B5(5, 20, 27, 38, 52, 69, 73);	B6(6, 21, 28, 39, 53, 70, 74);
B7(7, 22, 29, 40, 54, 71, 75);	B8(8, 23, 30, 41, 55, 72, 76);	B9(9, 24, 31, 42, 56, 61, 77);
B10(10, 13, 32, 43, 57, 62, 78);	B11(11, 14, 33, 44, 58, 63, 79);	B12(12, 15, 34, 45, 59, 64, 80).

Replication 3

B1(1, 24, 28, 44, 54, 67, 82);	B2(2, 13, 29, 45, 55, 68, 83);	B3(3, 14, 30, 46, 56, 69, 84);
B4(4, 15, 31, 47, 57, 70, 73);	B5(5, 16, 32, 48, 58, 71, 74);	B6(6, 17, 33, 37, 59, 72, 75);
B7(7, 18, 34, 38, 60, 61, 76);	B8(8, 19, 35, 39, 49, 62, 77);	B9(9, 20, 36, 40, 50, 63, 78);
B10(10, 21, 25, 41, 51, 64, 79);	B11(11, 22, 26, 42, 52, 65, 80);	B12(12, 23, 27, 43, 53, 66, 81).

Replication 4

B1(1, 14, 27, 40, 55, 70, 80);	B2(2, 15, 28, 41, 56, 71, 81);	B3(3, 16, 29, 42, 57, 72, 82);
B4(4, 17, 30, 43, 58, 61, 83);	B5(5, 18, 31, 44, 59, 62, 84);	B6(6, 19, 32, 45, 60, 63, 73);
B7(7, 20, 33, 46, 49, 64, 74);	B8(8, 21, 34, 47, 50, 65, 75);	B9(9, 22, 35, 48, 51, 66, 76);
B10(10, 23, 36, 37, 52, 67, 77);	B11(11, 24, 25, 38, 53, 68, 78);	B12(12, 13, 26, 39, 54, 69, 79).

268. $v = 84, b = 60, r = 5, k = 7, AE = 0.9773, DE = 0.9889$

$\alpha(0,1)$

Replication 1

B1(1, 13, 25, 37, 49, 61, 73);	B2(2, 14, 26, 38, 50, 62, 74);	B3(3, 15, 27, 39, 51, 63, 75);
B4(4, 16, 28, 40, 52, 64, 76);	B5(5, 17, 29, 41, 53, 65, 77);	B6(6, 18, 30, 42, 54, 66, 78);
B7(7, 19, 31, 43, 55, 67, 79);	B8(8, 20, 32, 44, 56, 68, 80);	B9(9, 21, 33, 45, 57, 69, 81);
B10(10, 22, 34, 46, 58, 70, 82);	B11(11, 23, 35, 47, 59, 71, 83);	B12(12, 24, 36, 48, 60, 72, 84).

Replication 2

B1(1, 22, 30, 45, 56, 63, 84);	B2(2, 23, 31, 46, 57, 64, 73);	B3(3, 24, 32, 47, 58, 65, 74);
B4(4, 13, 33, 48, 59, 66, 75);	B5(5, 14, 34, 37, 60, 67, 76);	B6(6, 15, 35, 38, 49, 68, 77);
B7(7, 16, 36, 39, 50, 69, 78);	B8(8, 17, 25, 40, 51, 70, 79);	B9(9, 18, 26, 41, 52, 71, 80);
B10(10, 19, 27, 42, 53, 72, 81);	B11(11, 20, 28, 43, 54, 61, 82);	B12(12, 21, 29, 44, 55, 62, 83).

Replication 3

B1(1, 16, 32, 43, 57, 72, 75);	B2(2, 17, 33, 44, 58, 61, 76);	B3(3, 18, 34, 45, 59, 62, 77);
B4(4, 19, 35, 46, 60, 63, 78);	B5(5, 20, 36, 47, 49, 64, 79);	B6(6, 21, 25, 48, 50, 65, 80);
B7(7, 22, 26, 37, 51, 66, 81);	B8(8, 23, 27, 38, 52, 67, 82);	B9(9, 24, 28, 39, 53, 68, 83);
B10(10, 13, 29, 40, 54, 69, 84);	B11(11, 14, 30, 41, 55, 70, 73);	B12(12, 15, 31, 42, 56, 71, 74).

Replication 4

B1(1, 18, 27, 46, 55, 68, 76);	B2(2, 19, 28, 47, 56, 69, 77);	B3(3, 20, 29, 48, 57, 70, 78);
B4(4, 21, 30, 37, 58, 71, 79);	B5(5, 22, 31, 38, 59, 72, 80);	B6(6, 23, 32, 39, 60, 61, 81);
B7(7, 24, 33, 40, 49, 62, 82);	B8(8, 13, 34, 41, 50, 63, 83);	B9(9, 14, 35, 42, 51, 64, 84);
B10(10, 15, 36, 43, 52, 65, 73);	B11(11, 16, 25, 44, 53, 66, 74);	B12(12, 17, 26, 45, 54, 67, 75).

Replication 5

B1(1, 17, 31, 48, 52, 69, 83);	B2(2, 18, 32, 37, 53, 70, 84);	B3(3, 19, 33, 38, 54, 71, 73);
B4(4, 20, 34, 39, 55, 72, 74);	B5(5, 21, 35, 40, 56, 61, 75);	B6(6, 22, 36, 41, 57, 62, 76);
B7(7, 23, 25, 42, 58, 63, 77);	B8(8, 24, 26, 43, 59, 64, 78);	B9(9, 13, 27, 44, 60, 65, 79);
B10(10, 14, 28, 45, 49, 66, 80);	B11(11, 15, 29, 46, 50, 67, 81);	B12(12, 16, 30, 47, 51, 68, 82).

269. $v = 91, b = 26, r = 2, k = 7, AE = 0.8817, DE = 0.9496$ $\alpha(0,1)$;

Replication 1

B1(1, 14, 27, 40, 53, 66, 79);	B2(2, 15, 28, 41, 54, 67, 80);	B3(3, 16, 29, 42, 55, 68, 81);
B4(4, 17, 30, 43, 56, 69, 82);	B5(5, 18, 31, 44, 57, 70, 83);	B6(6, 19, 32, 45, 58, 71, 84);
B7(7, 20, 33, 46, 59, 72, 85);	B8(8, 21, 34, 47, 60, 73, 86);	B9(9, 22, 35, 48, 61, 74, 87);
B10(10, 23, 36, 49, 62, 75, 88);	B11(11, 24, 37, 50, 63, 76, 89);	B12(12, 25, 38, 51, 64, 77, 90);
B13(13, 26, 39, 52, 65, 78, 91).		

Replication 2

B1(1, 21, 30, 51, 59, 68, 80);	B2(2, 22, 31, 52, 60, 69, 81);	B3(3, 23, 32, 40, 61, 70, 82);
B4(4, 24, 33, 41, 62, 71, 83);	B5(5, 25, 34, 42, 63, 72, 84);	B6(6, 26, 35, 43, 64, 73, 85);
B7(7, 14, 36, 44, 65, 74, 86);	B8(8, 15, 37, 45, 53, 75, 87);	B9(9, 16, 38, 46, 54, 76, 88);
B10(10, 17, 39, 47, 55, 77, 89);	B11(11, 18, 27, 48, 56, 78, 90);	B12(12, 19, 28, 49, 57, 66, 91);
B13(13, 20, 29, 50, 58, 67, 79).		

270. $v = 91, b = 39, r = 3, k = 7, AE = 0.9453, DE = 0.9744$ $\alpha(0,1)^{***}$

Replication 1

B1(1, 14, 27, 40, 53, 66, 79);	B2(2, 15, 28, 41, 54, 67, 80);	B3(3, 16, 29, 42, 55, 68, 81);
B4(4, 17, 30, 43, 56, 69, 82);	B5(5, 18, 31, 44, 57, 70, 83);	B6(6, 19, 32, 45, 58, 71, 84);
B7(7, 20, 33, 46, 59, 72, 85);	B8(8, 21, 34, 47, 60, 73, 86);	B9(9, 22, 35, 48, 61, 74, 87);
B10(10, 23, 36, 49, 62, 75, 88);	B11(11, 24, 37, 50, 63, 76, 89);	B12(12, 25, 38, 51, 64, 77, 90);
B13(13, 26, 39, 52, 65, 78, 91).		

Replication 2

B1(1, 15, 32, 49, 57, 73, 89);	B2(2, 16, 33, 50, 58, 74, 90);	B3(3, 17, 34, 51, 59, 75, 91);
B4(4, 18, 35, 52, 60, 76, 79);	B5(5, 19, 36, 40, 61, 77, 80);	B6(6, 20, 37, 41, 62, 78, 81);
B7(7, 21, 38, 42, 63, 66, 82);	B8(8, 22, 39, 43, 64, 67, 83);	B9(9, 23, 27, 44, 65, 68, 84);
B10(10, 24, 28, 45, 53, 69, 85);	B11(11, 25, 29, 46, 54, 70, 86);	B12(12, 26, 30, 47, 55, 71, 87);
B13(13, 14, 31, 48, 56, 72, 88).		

Replication 3

B1(1, 25, 39, 45, 56, 74, 81);	B2(2, 26, 27, 46, 57, 75, 82);	B3(3, 14, 28, 47, 58, 76, 83);
B4(4, 15, 29, 48, 59, 77, 84);	B5(5, 16, 30, 49, 60, 78, 85);	B6(6, 17, 31, 50, 61, 66, 86);
B7(7, 18, 32, 51, 62, 67, 87);	B8(8, 19, 33, 52, 63, 68, 88);	B9(9, 20, 34, 40, 64, 69, 89);
B10(10, 21, 35, 41, 65, 70, 90);	B11(11, 22, 36, 42, 53, 71, 91);	B12(12, 23, 37, 43, 54, 72, 79);
B13(13, 24, 38, 44, 55, 73, 80).		

271. $v = 91, b = 52, r = 4, k = 7, AE = 0.9657, DE = 0.9835$ $\alpha(0,1)^{***}$

Replication 1

B1(1, 14, 27, 40, 53, 66, 79);	B2(2, 15, 28, 41, 54, 67, 80);	B3(3, 16, 29, 42, 55, 68, 81);
B4(4, 17, 30, 43, 56, 69, 82);	B5(5, 18, 31, 44, 57, 70, 83);	B6(6, 19, 32, 45, 58, 71, 84);
B7(7, 20, 33, 46, 59, 72, 85);	B8(8, 21, 34, 47, 60, 73, 86);	B9(9, 22, 35, 48, 61, 74, 87);
B10(10, 23, 36, 49, 62, 75, 88);	B11(11, 24, 37, 50, 63, 76, 89);	B12(12, 25, 38, 51, 64, 77, 90);

B13(13, 26, 39, 52, 65, 78, 91).

Replication 2

B1(1, 24, 38, 52, 62, 72, 86);	B2(2, 25, 39, 40, 63, 73, 87);	B3(3, 26, 27, 41, 64, 74, 88);
B4(4, 14, 28, 42, 65, 75, 89);	B5(5, 15, 29, 43, 53, 76, 90);	B6(6, 16, 30, 44, 54, 77, 91);
B7(7, 17, 31, 45, 55, 78, 79);	B8(8, 18, 32, 46, 56, 66, 80);	B9(9, 19, 33, 47, 57, 67, 81);
B10(10, 20, 34, 48, 58, 68, 82);	B11(11, 21, 35, 49, 59, 69, 83);	B12(12, 22, 36, 50, 60, 70, 84);
B13(13, 23, 37, 51, 61, 71, 85).		

Replication 3

B1(1, 15, 30, 49, 60, 78, 81);	B2(2, 16, 31, 50, 61, 66, 82);	B3(3, 17, 32, 51, 62, 67, 83);
B4(4, 18, 33, 52, 63, 68, 84);	B5(5, 19, 34, 40, 64, 69, 85);	B6(6, 20, 35, 41, 65, 70, 86);
B7(7, 21, 36, 42, 53, 71, 87);	B8(8, 22, 37, 43, 54, 72, 88);	B9(9, 23, 38, 44, 55, 73, 89);
B10(10, 24, 39, 45, 56, 74, 90);	B11(11, 25, 27, 46, 57, 75, 91);	B12(12, 26, 28, 47, 58, 76, 79);
B13(13, 14, 29, 48, 59, 77, 80).		

Replication 4

B1(1, 17, 39, 48, 54, 70, 85);	B2(2, 18, 27, 49, 55, 71, 86);	B3(3, 19, 28, 50, 56, 72, 87);
B4(4, 20, 29, 51, 57, 73, 88);	B5(5, 21, 30, 52, 58, 74, 89);	B6(6, 22, 31, 40, 59, 75, 90);
B7(7, 23, 32, 41, 60, 76, 91);	B8(8, 24, 33, 42, 61, 77, 79);	B9(9, 25, 34, 43, 62, 78, 80);
B10(10, 26, 35, 44, 63, 66, 81);	B11(11, 14, 36, 45, 64, 67, 82);	B12(12, 15, 37, 46, 65, 68, 83);
B13(13, 16, 38, 47, 53, 69, 84).		

272. $v = 91, b = 65, r = 5, k = 7, AE = 0.9763, DE = 0.9884$

$\alpha(0,1)$

Replication 1

B1(1, 14, 27, 40, 53, 66, 79);	B2(2, 15, 28, 41, 54, 67, 80);	B3(3, 16, 29, 42, 55, 68, 81);
B4(4, 17, 30, 43, 56, 69, 82);	B5(5, 18, 31, 44, 57, 70, 83);	B6(6, 19, 32, 45, 58, 71, 84);
B7(7, 20, 33, 46, 59, 72, 85);	B8(8, 21, 34, 47, 60, 73, 86);	B9(9, 22, 35, 48, 61, 74, 87);
B10(10, 23, 36, 49, 62, 75, 88);	B11(11, 24, 37, 50, 63, 76, 89);	B12(12, 25, 38, 51, 64, 77, 90);
B13(13, 26, 39, 52, 65, 78, 91).		

Replication 2

B1(1, 17, 34, 52, 55, 76, 90);	B2(2, 18, 35, 40, 56, 77, 91);	B3(3, 19, 36, 41, 57, 78, 79);
B4(4, 20, 37, 42, 58, 66, 80);	B5(5, 21, 38, 43, 59, 67, 81);	B6(6, 22, 39, 44, 60, 68, 82);
B7(7, 23, 27, 45, 61, 69, 83);	B8(8, 24, 28, 46, 62, 70, 84);	B9(9, 25, 29, 47, 63, 71, 85);
B10(10, 26, 30, 48, 64, 72, 86);	B11(11, 14, 31, 49, 65, 73, 87);	B12(12, 15, 32, 50, 53, 74, 88);
B13(13, 16, 33, 51, 54, 75, 89).		

Replication 3

B1(1, 20, 39, 41, 63, 77, 83);	B2(2, 21, 27, 42, 64, 78, 84);	B3(3, 22, 28, 43, 65, 66, 85);
B4(4, 23, 29, 44, 53, 67, 86);	B5(5, 24, 30, 45, 54, 68, 87);	B6(6, 25, 31, 46, 55, 69, 88);
B7(7, 26, 32, 47, 56, 70, 89);	B8(8, 14, 33, 48, 57, 71, 90);	B9(9, 15, 34, 49, 58, 72, 91);
B10(10, 16, 35, 50, 59, 73, 79);	B11(11, 17, 36, 51, 60, 74, 80);	B12(12, 18, 37, 52, 61, 75, 81);
B13(13, 19, 38, 40, 62, 76, 82).		

Replication 4

B1(1, 22, 33, 45, 64, 70, 88);	B2(2, 23, 34, 46, 65, 71, 89);	B3(3, 24, 35, 47, 53, 72, 90);
B4(4, 25, 36, 48, 54, 73, 91);	B5(5, 26, 37, 49, 55, 74, 79);	B6(6, 14, 38, 50, 56, 75, 80);
B7(7, 15, 39, 51, 57, 76, 81);	B8(8, 16, 27, 52, 58, 77, 82);	B9(9, 17, 28, 40, 59, 78, 83);
B10(10, 18, 29, 41, 60, 66, 84);	B11(11, 19, 30, 42, 61, 67, 85);	B12(12, 20, 31, 43, 62, 68, 86);
B13(13, 21, 32, 44, 63, 69, 87).		

Replication 5

B1(1, 16, 31, 48, 56, 67, 84);	B2(2, 17, 32, 49, 57, 68, 85);	B3(3, 18, 33, 50, 58, 69, 86);
B4(4, 19, 34, 51, 59, 70, 87);	B5(5, 20, 35, 52, 60, 71, 88);	B6(6, 21, 36, 40, 61, 72, 89);
B7(7, 22, 37, 41, 62, 73, 90);	B8(8, 23, 38, 42, 63, 74, 91);	B9(9, 24, 39, 43, 64, 75, 79);
B10(10, 25, 27, 44, 65, 76, 80);	B11(11, 26, 28, 45, 53, 77, 81);	B12(12, 14, 29, 46, 54, 78, 82);
B13(13, 15, 30, 47, 55, 66, 83).		

273. $v = 98, b = 28, r = 2, k = 7, AE = 0.8788, DE = 0.9486$

$\alpha(0,1)$;

Replication 1

B1(1, 15, 29, 43, 57, 71, 85);	B2(2, 16, 30, 44, 58, 72, 86);	B3(3, 17, 31, 45, 59, 73, 87);
B4(4, 18, 32, 46, 60, 74, 88);	B5(5, 19, 33, 47, 61, 75, 89);	B6(6, 20, 34, 48, 62, 76, 90);
B7(7, 21, 35, 49, 63, 77, 91);	B8(8, 22, 36, 50, 64, 78, 92);	B9(9, 23, 37, 51, 65, 79, 93);
B10(10, 24, 38, 52, 66, 80, 94);	B11(11, 25, 39, 53, 67, 81, 95);	B12(12, 26, 40, 54, 68, 82, 96);
B13(13, 27, 41, 55, 69, 83, 97);	B14(14, 28, 42, 56, 70, 84, 98).	

Replication 2

B1(1, 21, 36, 48, 67, 82, 93);	B2(2, 22, 37, 49, 68, 83, 94);	B3(3, 23, 38, 50, 69, 84, 95);
B4(4, 24, 39, 51, 70, 71, 96);	B5(5, 25, 40, 52, 57, 72, 97);	B6(6, 26, 41, 53, 58, 73, 98);
B7(7, 27, 42, 54, 59, 74, 85);	B8(8, 28, 29, 55, 60, 75, 86);	B9(9, 15, 30, 56, 61, 76, 87);
B10(10, 16, 31, 43, 62, 77, 88);	B11(11, 17, 32, 44, 63, 78, 89);	B12(12, 18, 33, 45, 64, 79, 90);
B13(13, 19, 34, 46, 65, 80, 91);	B14(14, 20, 35, 47, 66, 81, 92).	

274. $v = 98, b = 42, r = 3, k = 7, AE = 0.9438, DE = 0.9737$

$\alpha(0,1)**$

Replication 1

B 1(1, 15, 29, 43, 57, 71, 85);	B 2(2, 16, 30, 44, 58, 72, 86);	B 3(3, 17, 31, 45, 59, 73, 87);
B 4(4, 18, 32, 46, 60, 74, 88);	B 5(5, 19, 33, 47, 61, 75, 89);	B 6(6, 20, 34, 48, 62, 76, 90);
B 7(7, 21, 35, 49, 63, 77, 91);	B 8(8, 22, 36, 50, 64, 78, 92);	B 9(9, 23, 37, 51, 65, 79, 93);
B10(10, 24, 38, 52, 66, 80, 94);	B11(11, 25, 39, 53, 67, 81, 95);	B12(12, 26, 40, 54, 68, 82, 96);
B13(13, 27, 41, 55, 69, 83, 97);	B14(14, 28, 42, 56, 70, 84, 98).	

Replication 2

B 1(1, 16, 38, 54, 59, 76, 88);	B 2(2, 17, 39, 55, 60, 77, 89);	B 3(3, 18, 40, 56, 61, 78, 90);
B 4(4, 19, 41, 43, 62, 79, 91);	B 5(5, 20, 42, 44, 63, 80, 92);	B 6(6, 21, 29, 45, 64, 81, 93);
B 7(7, 22, 30, 46, 65, 82, 94);	B 8(8, 23, 31, 47, 66, 83, 95);	B 9(9, 24, 32, 48, 67, 84, 96);
B10(10, 25, 33, 49, 68, 71, 97);	B11(11, 26, 34, 50, 69, 72, 98);	B12(12, 27, 35, 51, 70, 73, 85);
B13(13, 28, 36, 52, 57, 74, 86);	B14(14, 15, 37, 53, 58, 75, 87).	

Replication 3

B 1(1, 23, 39, 56, 63, 82, 86);	B 2(2, 24, 40, 43, 64, 83, 87);	B 3(3, 25, 41, 44, 65, 84, 88);
B 4(4, 26, 42, 45, 66, 71, 89);	B 5(5, 27, 29, 46, 67, 72, 90);	B 6(6, 28, 30, 47, 68, 73, 91);
B 7(7, 15, 31, 48, 69, 74, 92);	B 8(8, 16, 32, 49, 70, 75, 93);	B 9(9, 17, 33, 50, 57, 76, 94);
B10(10, 18, 34, 51, 58, 77, 95);	B11(11, 19, 35, 52, 59, 78, 96);	B12(12, 20, 36, 53, 60, 79, 97);
B13(13, 21, 37, 54, 61, 80, 98);	B14(14, 22, 38, 55, 62, 81, 85).	

275. $v = 98, b = 56, r = 4, k = 7, AE = 0.9649, DE = 0.9831$

$\alpha(0,1)***$

Replication 1

B1(1, 15, 29, 43, 57, 71, 85);	B2(2, 16, 30, 44, 58, 72, 86);	B3(3, 17, 31, 45, 59, 73, 87);
B4(4, 18, 32, 46, 60, 74, 88);	B5(5, 19, 33, 47, 61, 75, 89);	B6(6, 20, 34, 48, 62, 76, 90);
B7(7, 21, 35, 49, 63, 77, 91);	B8(8, 22, 36, 50, 64, 78, 92);	B9(9, 23, 37, 51, 65, 79, 93);
B10(10, 24, 38, 52, 66, 80, 94);	B11(11, 25, 39, 53, 67, 81, 95);	B12(12, 26, 40, 54, 68, 82, 96);
B13(13, 27, 41, 55, 69, 83, 97);	B14(14, 28, 42, 56, 70, 84, 98).	

Replication 2

B1(1, 16, 35, 51, 69, 73, 95);	B2(2, 17, 36, 52, 70, 74, 96);	B3(3, 18, 37, 53, 57, 75, 97);
B4(4, 19, 38, 54, 58, 76, 98);	B5(5, 20, 39, 55, 59, 77, 85);	B6(6, 21, 40, 56, 60, 78, 86);
B7(7, 22, 41, 43, 61, 79, 87);	B8(8, 23, 42, 44, 62, 80, 88);	B9(9, 24, 29, 45, 63, 81, 89);
B10(10, 25, 30, 46, 64, 82, 90);	B11(11, 26, 31, 47, 65, 83, 91);	B12(12, 27, 32, 48, 66, 84, 92);
B13(13, 28, 33, 49, 67, 71, 93);	B14(14, 15, 34, 50, 68, 72, 94).	

Replication 3

B1(1, 22, 32, 56, 62, 83, 89);	B2(2, 23, 33, 43, 63, 84, 90);	B3(3, 24, 34, 44, 64, 71, 91);
B4(4, 25, 35, 45, 65, 72, 92);	B5(5, 26, 36, 46, 66, 73, 93);	B6(6, 27, 37, 47, 67, 74, 94);
B7(7, 28, 38, 48, 68, 75, 95);	B8(8, 15, 39, 49, 69, 76, 96);	B9(9, 16, 40, 50, 70, 77, 97);
B10(10, 17, 41, 51, 57, 78, 98);	B11(11, 18, 42, 52, 58, 79, 85);	B12(12, 19, 29, 53, 59, 80, 86);
B13(13, 20, 30, 54, 60, 81, 87);	B14(14, 21, 31, 55, 61, 82, 88).	

Replication 4

B1(1, 25, 34, 47, 70, 80, 87);	B2(2, 26, 35, 48, 57, 81, 88);	B3(3, 27, 36, 49, 58, 82, 89);
B4(4, 28, 37, 50, 59, 83, 90);	B5(5, 15, 38, 51, 60, 84, 91);	B6(6, 16, 39, 52, 61, 71, 92);
B7(7, 17, 40, 53, 62, 72, 93);	B8(8, 18, 41, 54, 63, 73, 94);	B9(9, 19, 42, 55, 64, 74, 95);
B10(10, 20, 29, 56, 65, 75, 96);	B11(11, 21, 30, 43, 66, 76, 97);	B12(12, 22, 31, 44, 67, 77, 98);
B13(13, 23, 32, 45, 68, 78, 85);	B14(14, 24, 33, 46, 69, 79, 86).	

276. $v = 98, b = 70, r = 5, k = 7, AE = 0.9752, DE = 0.9879$

$\alpha(0,1)$

Replication 1

B1(1, 15, 29, 43, 57, 71, 85);	B2(2, 16, 30, 44, 58, 72, 86);	B3(3, 17, 31, 45, 59, 73, 87);
B4(4, 18, 32, 46, 60, 74, 88);	B5(5, 19, 33, 47, 61, 75, 89);	B6(6, 20, 34, 48, 62, 76, 90);
B7(7, 21, 35, 49, 63, 77, 91);	B8(8, 22, 36, 50, 64, 78, 92);	B9(9, 23, 37, 51, 65, 79, 93);
B10(10, 24, 38, 52, 66, 80, 94);	B11(11, 25, 39, 53, 67, 81, 95);	B12(12, 26, 40, 54, 68, 82, 96);
B13(13, 27, 41, 55, 69, 83, 97);	B14(14, 28, 42, 56, 70, 84, 98).	

Replication 2

B1(1, 16, 36, 47, 67, 83, 91);	B2(2, 17, 37, 48, 68, 84, 92);	B3(3, 18, 38, 49, 69, 71, 93);
B4(4, 19, 39, 50, 70, 72, 94);	B5(5, 20, 40, 51, 57, 73, 95);	B6(6, 21, 41, 52, 58, 74, 96);
B7(7, 22, 42, 53, 59, 75, 97);	B8(8, 23, 29, 54, 60, 76, 98);	B9(9, 24, 30, 55, 61, 77, 85);
B10(10, 25, 31, 56, 62, 78, 86);	B11(11, 26, 32, 43, 63, 79, 87);	B12(12, 27, 33, 44, 64, 80, 88);
B13(13, 28, 34, 45, 65, 81, 89);	B14(14, 15, 35, 46, 66, 82, 90).	

Replication 3

B1(1, 25, 33, 50, 60, 73, 90);	B2(2, 26, 34, 51, 61, 74, 91);	B3(3, 27, 35, 52, 62, 75, 92);
B4(4, 28, 36, 53, 63, 76, 93);	B5(5, 15, 37, 54, 64, 77, 94);	B6(6, 16, 38, 55, 65, 78, 95);
B7(7, 17, 39, 56, 66, 79, 96);	B8(8, 18, 40, 43, 67, 80, 97);	B9(9, 19, 41, 44, 68, 81, 98);
B10(10, 20, 42, 45, 69, 82, 85);	B11(11, 21, 29, 46, 70, 83, 86);	B12(12, 22, 30, 47, 57, 84, 87);
B13(13, 23, 31, 48, 58, 71, 88);	B14(14, 24, 32, 49, 59, 72, 89).	

Replication 4

B1(1, 24, 37, 46, 69, 75, 98);	B2(2, 25, 38, 47, 70, 76, 85);	B3(3, 26, 39, 48, 57, 77, 86);
B4(4, 27, 40, 49, 58, 78, 87);	B5(5, 28, 41, 50, 59, 79, 88);	B6(6, 15, 42, 51, 60, 80, 89);
B7(7, 16, 29, 52, 61, 81, 90);	B8(8, 17, 30, 53, 62, 82, 91);	B9(9, 18, 31, 54, 63, 83, 92);
B10(10, 19, 32, 55, 64, 84, 93);	B11(11, 20, 33, 56, 65, 71, 94);	B12(12, 21, 34, 43, 66, 72, 95);
B13(13, 22, 35, 44, 67, 73, 96);	B14(14, 23, 36, 45, 68, 74, 97).	

Replication 5

B1(1, 28, 39, 55, 58, 82, 92);	B2(2, 15, 40, 56, 59, 83, 93);	B3(3, 16, 41, 43, 60, 84, 94);
B4(4, 17, 42, 44, 61, 71, 95);	B5(5, 18, 29, 45, 62, 72, 96);	B6(6, 19, 30, 46, 63, 73, 97);
B7(7, 20, 31, 47, 64, 74, 98);	B8(8, 21, 32, 48, 65, 75, 85);	B9(9, 22, 33, 49, 66, 76, 86);
B10(10, 23, 34, 50, 67, 77, 87);	B11(11, 24, 35, 51, 68, 78, 88);	B12(12, 25, 36, 52, 69, 79, 89);
B13(13, 26, 37, 53, 70, 80, 90);	B14(14, 27, 38, 54, 57, 81, 91).	

277. $v = 105, b = 30, r = 2, k = 7, AE = 0.8765, DE = 0.9478$ $\alpha(0,1)$

Replication 1

B1(1, 16, 31, 46, 61, 76, 91);	B2(2, 17, 32, 47, 62, 77, 92);	B3(3, 18, 33, 48, 63, 78, 93);
B4(4, 19, 34, 49, 64, 79, 94);	B5(5, 20, 35, 50, 65, 80, 95);	B6(6, 21, 36, 51, 66, 81, 96);
B7(7, 22, 37, 52, 67, 82, 97);	B8(8, 23, 38, 53, 68, 83, 98);	B9(9, 24, 39, 54, 69, 84, 99);
B10(10, 25, 40, 55, 70, 85, 100);	B11(11, 26, 41, 56, 71, 86, 101);	B12(12, 27, 42, 57, 72, 87, 102);
B13(13, 28, 43, 58, 73, 88, 103);	B14(14, 29, 44, 59, 74, 89, 104);	B15(15, 30, 45, 60, 75, 90, 105).

Replication 2

B1(1, 24, 45, 50, 74, 78, 96);	B2(2, 25, 31, 51, 75, 79, 97);	B3(3, 26, 32, 52, 61, 80, 98);
B4(4, 27, 33, 53, 62, 81, 99);	B5(5, 28, 34, 54, 63, 82, 100);	B6(6, 29, 35, 55, 64, 83, 101);
B7(7, 30, 36, 56, 65, 84, 102);	B8(8, 16, 37, 57, 66, 85, 103);	B9(9, 17, 38, 58, 67, 86, 104);
B10(10, 18, 39, 59, 68, 87, 105);	B11(11, 19, 40, 60, 69, 88, 91);	B12(12, 20, 41, 46, 70, 89, 92);
B13(13, 21, 42, 47, 71, 90, 93);	B14(14, 22, 43, 48, 72, 76, 94);	B15(15, 23, 44, 49, 73, 77, 95).

278. $v = 105, b = 45, r = 3, k = 7, AE = 0.9419, DE = 0.9730$ $\alpha(0,1)$

Replication 1

B1(1, 16, 31, 46, 61, 76, 91);	B2(2, 17, 32, 47, 62, 77, 92);	B3(3, 18, 33, 48, 63, 78, 93);
B4(4, 19, 34, 49, 64, 79, 94);	B5(5, 20, 35, 50, 65, 80, 95);	B6(6, 21, 36, 51, 66, 81, 96);
B7(7, 22, 37, 52, 67, 82, 97);	B8(8, 23, 38, 53, 68, 83, 98);	B9(9, 24, 39, 54, 69, 84, 99);
B10(10, 25, 40, 55, 70, 85, 100);	B11(11, 26, 41, 56, 71, 86, 101);	B12(12, 27, 42, 57, 72, 87, 102);
B13(13, 28, 43, 58, 73, 88, 103);	B14(14, 29, 44, 59, 74, 89, 104);	B15(15, 30, 45, 60, 75, 90, 105).

Replication 2

B1(1, 29, 33, 52, 70, 80, 92);	B2(2, 30, 34, 53, 71, 81, 93);	B3(3, 16, 35, 54, 72, 82, 94);
B4(4, 17, 36, 55, 73, 83, 95);	B5(5, 18, 37, 56, 74, 84, 96);	B6(6, 19, 38, 57, 75, 85, 97);
B7(7, 20, 39, 58, 61, 86, 98);	B8(8, 21, 40, 59, 62, 87, 99);	B9(9, 22, 41, 60, 63, 88, 100);
B10(10, 23, 42, 46, 64, 89, 101);	B11(11, 24, 43, 47, 65, 90, 102);	B12(12, 25, 44, 48, 66, 76, 103);
B13(13, 26, 45, 49, 67, 77, 104);	B14(14, 27, 31, 50, 68, 78, 105);	B15(15, 28, 32, 51, 69, 79, 91).

Replication 3

B1(1, 19, 43, 60, 71, 87, 96);	B2(2, 20, 44, 46, 72, 88, 97);	B3(3, 21, 45, 47, 73, 89, 98);
B4(4, 22, 31, 48, 74, 90, 99);	B5(5, 23, 32, 49, 75, 76, 100);	B6(6, 24, 33, 50, 61, 77, 101);
B7(7, 25, 34, 51, 62, 78, 102);	B8(8, 26, 35, 52, 63, 79, 103);	B9(9, 27, 36, 53, 64, 80, 104);
B10(10, 28, 37, 54, 65, 81, 105);	B11(11, 29, 38, 55, 66, 82, 91);	B12(12, 30, 39, 56, 67, 83, 92);
B13(13, 16, 40, 57, 68, 84, 93);	B14(14, 17, 41, 58, 69, 85, 94);	B15(15, 18, 42, 59, 70, 86, 95).

279. $v = 105, b = 60, r = 4, k = 7, AE = 0.9636, DE = 0.9825$ $\alpha(0,1)$

Replication 1

B1(1, 16, 31, 46, 61, 76, 91);	B2(2, 17, 32, 47, 62, 77, 92);	B3(3, 18, 33, 48, 63, 78, 93);
B4(4, 19, 34, 49, 64, 79, 94);	B5(5, 20, 35, 50, 65, 80, 95);	B6(6, 21, 36, 51, 66, 81, 96);
B7(7, 22, 37, 52, 67, 82, 97);	B8(8, 23, 38, 53, 68, 83, 98);	B9(9, 24, 39, 54, 69, 84, 99);
B10(10, 25, 40, 55, 70, 85, 100);	B11(11, 26, 41, 56, 71, 86, 101);	B12(12, 27, 42, 57, 72, 87, 102);
B13(13, 28, 43, 58, 73, 88, 103);	B14(14, 29, 44, 59, 74, 89, 104);	B15(15, 30, 45, 60, 75, 90, 105).

Replication 2

B1(1, 21, 44, 47, 63, 79, 95);	B2(2, 22, 45, 48, 64, 80, 96);	B3(3, 23, 31, 49, 65, 81, 97);
B4(4, 24, 32, 50, 66, 82, 98);	B5(5, 25, 33, 51, 67, 83, 99);	B6(6, 26, 34, 52, 68, 84, 100);
B7(7, 27, 35, 53, 69, 85, 101);	B8(8, 28, 36, 54, 70, 86, 102);	B9(9, 29, 37, 55, 71, 87, 103);
B10(10, 30, 38, 56, 72, 88, 104);	B11(11, 16, 39, 57, 73, 89, 105);	B12(12, 17, 40, 58, 74, 90, 91);
B13(13, 18, 41, 59, 75, 76, 92);	B14(14, 19, 42, 60, 61, 77, 93);	B15(15, 20, 43, 46, 62, 78, 94).

Replication 3

B1(1, 30, 32, 53, 64, 87, 100);	B2(2, 16, 33, 54, 65, 88, 101);	B3(3, 17, 34, 55, 66, 89, 102);
B4(4, 18, 35, 56, 67, 90, 103);	B5(5, 19, 36, 57, 68, 76, 104);	B6(6, 20, 37, 58, 69, 77, 105);
B7(7, 21, 38, 59, 70, 78, 91);	B8(8, 22, 39, 60, 71, 79, 92);	B9(9, 23, 40, 46, 72, 80, 93);
B10(10, 24, 41, 47, 73, 81, 94);	B11(11, 25, 42, 48, 74, 82, 95);	B12(12, 26, 43, 49, 75, 83, 96);
B13(13, 27, 44, 50, 61, 84, 97);	B14(14, 28, 45, 51, 62, 85, 98);	B15(15, 29, 31, 52, 63, 86, 99).

Replication 4

B1(1, 28, 37, 56, 66, 83, 93);	B2(2, 29, 38, 57, 67, 84, 94);	B3(3, 30, 39, 58, 68, 85, 95);
B4(4, 16, 40, 59, 69, 86, 96);	B5(5, 17, 41, 60, 70, 87, 97);	B6(6, 18, 42, 46, 71, 88, 98);
B7(7, 19, 43, 47, 72, 89, 99);	B8(8, 20, 44, 48, 73, 90, 100);	B9(9, 21, 45, 49, 74, 76, 101);
B10(10, 22, 31, 50, 75, 77, 102);	B11(11, 23, 32, 51, 61, 78, 103);	B12(12, 24, 33, 52, 62, 79, 104);
B13(13, 25, 34, 53, 63, 80, 105);	B14(14, 26, 35, 54, 64, 81, 91);	B15(15, 27, 36, 55, 65, 82, 92).

280. $v = 105, b = 75, r = 5, k = 7, AE = 0.9744, DE = 0.9875$

$\alpha(0,1)$

Replication 1

B1(1, 16, 31, 46, 61, 76, 91);	B2(2, 17, 32, 47, 62, 77, 92);	B3(3, 18, 33, 48, 63, 78, 93);
B4(4, 19, 34, 49, 64, 79, 94);	B5(5, 20, 35, 50, 65, 80, 95);	B6(6, 21, 36, 51, 66, 81, 96);
B7(7, 22, 37, 52, 67, 82, 97);	B8(8, 23, 38, 53, 68, 83, 98);	B9(9, 24, 39, 54, 69, 84, 99);
B10(10, 25, 40, 55, 70, 85, 100);	B11(11, 26, 41, 56, 71, 86, 101);	B12(12, 27, 42, 57, 72, 87, 102);
B13(13, 28, 43, 58, 73, 88, 103);	B14(14, 29, 44, 59, 74, 89, 104);	B15(15, 30, 45, 60, 75, 90, 105).

Replication 2

B1(1, 26, 45, 53, 72, 81, 92);	B2(2, 27, 31, 54, 73, 82, 93);	B3(3, 28, 32, 55, 74, 83, 94);
B4(4, 29, 33, 56, 75, 84, 95);	B5(5, 30, 34, 57, 61, 85, 96);	B6(6, 16, 35, 58, 62, 86, 97);
B7(7, 17, 36, 59, 63, 87, 98);	B8(8, 18, 37, 60, 64, 88, 99);	B9(9, 19, 38, 46, 65, 89, 100);
B10(10, 20, 39, 47, 66, 90, 101);	B11(11, 21, 40, 48, 67, 76, 102);	B12(12, 22, 41, 49, 68, 77, 103);
B13(13, 23, 42, 50, 69, 78, 104);	B14(14, 24, 43, 51, 70, 79, 105);	B15(15, 25, 44, 52, 71, 80, 91).

Replication 3

B1(1, 18, 38, 59, 66, 80, 102);	B2(2, 19, 39, 60, 67, 81, 103);	B3(3, 20, 40, 46, 68, 82, 104);
B4(4, 21, 41, 47, 69, 83, 105);	B5(5, 22, 42, 48, 70, 84, 91);	B6(6, 23, 43, 49, 71, 85, 92);
B7(7, 24, 44, 50, 72, 86, 93);	B8(8, 25, 45, 51, 73, 87, 94);	B9(9, 26, 31, 52, 74, 88, 95);
B10(10, 27, 32, 53, 75, 89, 96);	B11(11, 28, 33, 54, 61, 90, 97);	B12(12, 29, 34, 55, 62, 76, 98);
B13(13, 30, 35, 56, 63, 77, 99);	B14(14, 16, 36, 57, 64, 78, 100);	B15(15, 17, 37, 58, 65, 79, 101).

Replication 4

B1(1, 27, 37, 56, 68, 85, 105);	B2(2, 28, 38, 57, 69, 86, 91);	B3(3, 29, 39, 58, 70, 87, 92);
B4(4, 30, 40, 59, 71, 88, 93);	B5(5, 16, 41, 60, 72, 89, 94);	B6(6, 17, 42, 46, 73, 90, 95);
B7(7, 18, 43, 47, 74, 76, 96);	B8(8, 19, 44, 48, 75, 77, 97);	B9(9, 20, 45, 49, 61, 78, 98);
B10(10, 21, 31, 50, 62, 79, 99);	B11(11, 22, 32, 51, 63, 80, 100);	B12(12, 23, 33, 52, 64, 81, 101);
B13(13, 24, 34, 53, 65, 82, 102);	B14(14, 25, 35, 54, 66, 83, 103);	B15(15, 26, 36, 55, 67, 84, 104).

Replication 5

B1(1, 30, 39, 55, 73, 78, 97);	B2(2, 16, 40, 56, 74, 79, 98);	B3(3, 17, 41, 57, 75, 80, 99);
B4(4, 18, 42, 58, 61, 81, 100);	B5(5, 19, 43, 59, 62, 82, 101);	B6(6, 20, 44, 60, 63, 83, 102);
B7(7, 21, 45, 46, 64, 84, 103);	B8(8, 22, 31, 47, 65, 85, 104);	B9(9, 23, 32, 48, 66, 86, 105);
B10(10, 24, 33, 49, 67, 87, 91);	B11(11, 25, 34, 50, 68, 88, 92);	B12(12, 26, 35, 51, 69, 89, 93);
B13(13, 27, 36, 52, 70, 90, 94);	B14(14, 28, 37, 53, 71, 76, 95);	B15(15, 29, 38, 54, 72, 77, 96).

BLOCK SIZE 8

281. $v = 16, b = 4, r = 2, k = 8, AE = 0.9454, DE = 0.9768$ $\alpha(0,1,2)$
Replication 1
B1(1, 3, 5, 7, 9, 11, 13, 15); B2(2, 4, 6, 8, 10, 12, 14, 16).
Replication 2
B1(1, 4, 6, 7, 10, 11, 14, 15); B2(2, 3, 5, 8, 9, 12, 13, 16).
282. $v = 16, b = 6, r = 3, k = 8, AE = 0.9683, DE = 0.9859$ $\alpha(0,1,2,3)$
Replication 1
B1(1, 3, 5, 7, 9, 11, 13, 15); B2(2, 4, 6, 8, 10, 12, 14, 16).
Replication 2
B1(1, 4, 5, 8, 10, 12, 13, 16); B2(2, 3, 6, 7, 9, 11, 14, 15).
Replication 3
B1(1, 4, 6, 8, 9, 11, 14, 15); B2(2, 3, 5, 7, 10, 12, 13, 16).
283. $v = 16, b = 8, r = 4, k = 8, AE = 0.9794, DE = 0.9904$ $\alpha(0,2,4)$
Replication 1
B1(1, 3, 5, 7, 9, 11, 13, 15); B2(2, 4, 6, 8, 10, 12, 14, 16).
Replication 2
B1(1, 3, 5, 8, 10, 12, 14, 15); B2(2, 4, 6, 7, 9, 11, 13, 16).
Replication 3
B1(1, 4, 6, 7, 9, 12, 14, 16); B2(2, 3, 5, 8, 10, 11, 13, 15).
Replication 4
B1(1, 4, 6, 8, 10, 11, 13, 16); B2(2, 3, 5, 7, 9, 12, 14, 15).
284. $v = 16, b = 10, r = 5, k = 8, AE = 0.9866, DE = 0.9936$ $\alpha(0,1,2,3,4)$
Replication 1
B1(1, 3, 5, 7, 9, 11, 13, 15); B2(2, 4, 6, 8, 10, 12, 14, 16).
Replication 2
B1(1, 4, 6, 7, 9, 12, 13, 16); B2(2, 3, 5, 8, 10, 11, 14, 15).
Replication 3
B1(1, 4, 5, 8, 10, 12, 13, 15); B2(2, 3, 6, 7, 9, 11, 14, 16).
Replication 4
B1(1, 3, 6, 8, 10, 11, 14, 16); B2(2, 4, 5, 7, 9, 12, 13, 15).
Replication 5
B1(1, 4, 6, 8, 9, 11, 14, 15); B2(2, 3, 5, 7, 10, 12, 13, 16).
285. $v = 24, b = 6, r = 2, k = 8, AE = 0.9286, DE = 0.9695$ $\alpha(0,1,2)$
Replication 1
B1(1, 4, 7, 10, 13, 16, 19, 22); B2(2, 5, 8, 11, 14, 17, 20, 23); B3(3, 6, 9, 12, 15, 18, 21, 24).
Replication 2
B1(1, 4, 8, 12, 15, 18, 20, 23); B2(2, 5, 9, 10, 13, 16, 21, 24); B3(3, 6, 7, 11, 14, 17, 19, 22).
286. $v = 24, b = 9, r = 3, k = 8, AE = 0.9664, DE = 0.9843$ $\alpha(0,1,2,3)$

Replication 1
B1(1, 4, 7, 10, 13, 16, 19, 22); B2(2, 5, 8, 11, 14, 17, 20, 23); B3(3, 6, 9, 12, 15, 18, 21, 24).

Replication 2
B1(1, 4, 8, 12, 15, 18, 20, 23); B2(2, 5, 9, 10, 13, 16, 21, 24); B3(3, 6, 7, 11, 14, 17, 19, 22).

Replication 3
B1(1, 5, 9, 11, 15, 17, 21, 22); B2(2, 6, 7, 12, 13, 18, 19, 23); B3(3, 4, 8, 10, 14, 16, 20, 24).

287. $v = 24, b = 12, r = 4, k = 8, AE = 0.9772, DE = 0.9892$ $\alpha(0,1,2,3)$

Replication 1
B1(1, 4, 7, 10, 13, 16, 19, 22); B2(2, 5, 8, 11, 14, 17, 20, 23); B3(3, 6, 9, 12, 15, 18, 21, 24).

Replication 2
B1(1, 4, 8, 11, 15, 18, 21, 23); B2(2, 5, 9, 12, 13, 16, 19, 24); B3(3, 6, 7, 10, 14, 17, 20, 22).

Replication 3
B1(1, 6, 9, 10, 14, 18, 19, 24); B2(2, 4, 7, 11, 15, 16, 20, 22); B3(3, 5, 8, 12, 13, 17, 21, 23).

Replication 4
B1(1, 5, 9, 12, 15, 17, 20, 22); B2(2, 6, 7, 10, 13, 18, 21, 23); B3(3, 4, 8, 11, 14, 16, 19, 24).

288. $v = 24, b = 15, r = 5, k = 8, AE = 0.9847, DE = 0.9926$ $\alpha(0,1,2,3,4)$

Replication 1
B1(1, 4, 7, 10, 13, 16, 19, 22); B2(2, 5, 8, 11, 14, 17, 20, 23); B3(3, 6, 9, 12, 15, 18, 21, 24).

Replication 2
B1(1, 5, 7, 12, 15, 18, 19, 23); B2(2, 6, 8, 10, 13, 16, 20, 24); B3(3, 4, 9, 11, 14, 17, 21, 22).

Replication 3
B1(1, 4, 8, 11, 13, 18, 21, 24); B2(2, 5, 9, 12, 14, 16, 19, 22); B3(3, 6, 7, 10, 15, 17, 20, 23).

Replication 4
B1(1, 6, 9, 11, 15, 16, 20, 23); B2(2, 4, 7, 12, 13, 17, 21, 24); B3(3, 5, 8, 10, 14, 18, 19, 22).

Replication 5
B1(1, 6, 8, 12, 14, 17, 21, 22); B2(2, 4, 9, 10, 15, 18, 19, 23); B3(3, 5, 7, 11, 13, 16, 20, 24).

289. $v = 32, b = 8, r = 2, k = 8, AE = 0.9144, DE = 0.9641$ $\alpha(0,1,2)$

Replication 1
B1(1, 5, 9, 13, 17, 21, 25, 29); B2(2, 6, 10, 14, 18, 22, 26, 30); B3(3, 7, 11, 15, 19, 23, 27, 31);
B4(4, 8, 12, 16, 20, 24, 28, 32).

Replication 2
B1(1, 8, 12, 15, 19, 22, 27, 30); B2(2, 5, 9, 16, 20, 23, 28, 31); B3(3, 6, 10, 13, 17, 24, 25, 32);
B4(4, 7, 11, 14, 18, 21, 26, 29).

290. $v = 32, b = 12, r = 3, k = 8, AE = 0.9590, DE = 0.9812$ $\alpha(0,1,2,3)$

Replication 1
B1(1, 5, 9, 13, 17, 21, 25, 29); B2(2, 6, 10, 14, 18, 22, 26, 30); B3(3, 7, 11, 15, 19, 23, 27, 31);
B4(4, 8, 12, 16, 20, 24, 28, 32).

Replication 2
B1(1, 8, 11, 15, 18, 22, 26, 32); B2(2, 5, 12, 16, 19, 23, 27, 29); B3(3, 6, 9, 13, 20, 24, 28, 30);
B4(4, 7, 10, 14, 17, 21, 25, 31).

Replication 3

B1(1, 6, 12, 14, 20, 23, 27, 31); B2(2, 7, 9, 15, 17, 24, 28, 32); B3(3, 8, 10, 16, 18, 21, 25, 29);
B4(4, 5, 11, 13, 19, 22, 26, 30).

291. $v = 32, b = 16, r = 4, k = 8, AE = 0.9753, DE = 0.9882$ $\alpha(0,1,2,3)$

Replication 1

B1(1, 5, 9, 13, 17, 21, 25, 29); B2(2, 6, 10, 14, 18, 22, 26, 30); B3(3, 7, 11, 15, 19, 23, 27, 31);
B4(4, 8, 12, 16, 20, 24, 28, 32).

Replication 2

B1(1, 6, 10, 15, 20, 21, 27, 32); B2(2, 7, 11, 16, 17, 22, 28, 29); B3(3, 8, 12, 13, 18, 23, 25, 30);
B4(4, 5, 9, 14, 19, 24, 26, 31).

Replication 3

B1(1, 7, 12, 16, 19, 24, 26, 30); B2(2, 8, 9, 13, 20, 21, 27, 31); B3(3, 5, 10, 14, 17, 22, 28, 32);
B4(4, 6, 11, 15, 18, 23, 25, 29).

Replication 4

B1(1, 8, 11, 14, 18, 22, 28, 31); B2(2, 5, 12, 15, 19, 23, 25, 32); B3(3, 6, 9, 16, 20, 24, 26, 29);
B4(4, 7, 10, 13, 17, 21, 27, 30).

292. $v = 32, b = 20, r = 5, k = 8, AE = 0.9843, DE = 0.9923$ $\alpha(0,1,2,3)$

Replication 1

B1(1, 5, 9, 13, 17, 21, 25, 29); B2(2, 6, 10, 14, 18, 22, 26, 30); B3(3, 7, 11, 15, 19, 23, 27, 31);
B4(4, 8, 12, 16, 20, 24, 28, 32).

Replication 2

B1(1, 7, 9, 16, 19, 22, 26, 32); B2(2, 8, 10, 13, 20, 23, 27, 29); B3(3, 5, 11, 14, 17, 24, 28, 30);
B4(4, 6, 12, 15, 18, 21, 25, 31).

Replication 3

B1(1, 5, 12, 14, 20, 24, 26, 31); B2(2, 6, 9, 15, 17, 21, 27, 32); B3(3, 7, 10, 16, 18, 22, 28, 29);
B4(4, 8, 11, 13, 19, 23, 25, 30).

Replication 4

B1(1, 8, 11, 15, 18, 24, 27, 29); B2(2, 5, 12, 16, 19, 21, 28, 30); B3(3, 6, 9, 13, 20, 22, 25, 31);
B4(4, 7, 10, 14, 17, 23, 26, 32).

Replication 5

B1(1, 6, 10, 15, 20, 23, 28, 30); B2(2, 7, 11, 16, 17, 24, 25, 31); B3(3, 8, 12, 13, 18, 21, 26, 32);
B4(4, 5, 9, 14, 19, 22, 27, 29).

293. $v = 40, b = 10, r = 2, k = 8, AE = 0.9170, DE = 0.9642$ $\alpha(0,1,2)$

Replication 1

B1(1, 6, 11, 16, 21, 26, 31, 36); B2(2, 7, 12, 17, 22, 27, 32, 37); B3(3, 8, 13, 18, 23, 28, 33, 38);
B4(4, 9, 14, 19, 24, 29, 34, 39); B5(5, 10, 15, 20, 25, 30, 35, 40).

Replication 2

B1(1, 7, 15, 19, 23, 28, 34, 40); B2(2, 8, 11, 20, 24, 29, 35, 36); B3(3, 9, 12, 16, 25, 30, 31, 37);
B4(4, 10, 13, 17, 21, 26, 32, 38); B5(5, 6, 14, 18, 22, 27, 33, 39).

294. $v = 40, b = 15, r = 3, k = 8, AE = 0.9612, DE = 0.9818$ $\alpha(0,1,2)$

Replication 1

B1(1, 6, 11, 16, 21, 26, 31, 36); B2(2, 7, 12, 17, 22, 27, 32, 37); B3(3, 8, 13, 18, 23, 28, 33, 38);

B4(4, 9, 14, 19, 24, 29, 34, 39); B5(5, 10, 15, 20, 25, 30, 35, 40).

Replication 2

B1(1, 9, 15, 17, 22, 28, 33, 39); B2(2, 10, 11, 18, 23, 29, 34, 40); B3(3, 6, 12, 19, 24, 30, 35, 36);
B4(4, 7, 13, 20, 25, 26, 31, 37); B5(5, 8, 14, 16, 21, 27, 32, 38).

Replication 3

B1(1, 10, 13, 19, 23, 30, 32, 37); B2(2, 6, 14, 20, 24, 26, 33, 38); B3(3, 7, 15, 16, 25, 27, 34, 39);
B4(4, 8, 11, 17, 21, 28, 35, 40); B5(5, 9, 12, 18, 22, 29, 31, 36).

295. $v = 40, b = 20, r = 4, k = 8, AE = 0.9766, DE = 0.9887$ $\alpha(0,1,2)$

Replication 1

B1(1, 6, 11, 16, 21, 26, 31, 36); B2(2, 7, 12, 17, 22, 27, 32, 37); B3(3, 8, 13, 18, 23, 28, 33, 38);
B4(4, 9, 14, 19, 24, 29, 34, 39); B5(5, 10, 15, 20, 25, 30, 35, 40).

Replication 2

B1(1, 8, 15, 17, 23, 29, 35, 37); B2(2, 9, 11, 18, 24, 30, 31, 38); B3(3, 10, 12, 19, 25, 26, 32, 39);
B4(4, 6, 13, 20, 21, 27, 33, 40); B5(5, 7, 14, 16, 22, 28, 34, 36).

Replication 3

B1(1, 9, 13, 19, 22, 30, 32, 40); B2(2, 10, 14, 20, 23, 26, 33, 36); B3(3, 6, 15, 16, 24, 27, 34, 37);
B4(4, 7, 11, 17, 25, 28, 35, 38); B5(5, 8, 12, 18, 21, 29, 31, 39).

Replication 4

B1(1, 7, 14, 18, 25, 27, 33, 39); B2(2, 8, 15, 19, 21, 28, 34, 40); B3(3, 9, 11, 20, 22, 29, 35, 36);
B4(4, 10, 12, 16, 23, 30, 31, 37); B5(5, 6, 13, 17, 24, 26, 32, 38).

296. $v = 40, b = 25, r = 5, k = 8, AE = 0.9845, DE = 0.9923$ $\alpha(0,1,2,3)$

Replication 1

B1(1, 6, 11, 16, 21, 26, 31, 36); B2(2, 7, 12, 17, 22, 27, 32, 37); B3(3, 8, 13, 18, 23, 28, 33, 38);
B4(4, 9, 14, 19, 24, 29, 34, 39); B5(5, 10, 15, 20, 25, 30, 35, 40).

Replication 2

B1(1, 10, 12, 19, 23, 28, 35, 37); B2(2, 6, 13, 20, 24, 29, 31, 38); B3(3, 7, 14, 16, 25, 30, 32, 39);
B4(4, 8, 15, 17, 21, 26, 33, 40); B5(5, 9, 11, 18, 22, 27, 34, 36).

Replication 3

B1(1, 7, 13, 18, 25, 29, 34, 40); B2(2, 8, 14, 19, 21, 30, 35, 36); B3(3, 9, 15, 20, 22, 26, 31, 37);
B4(4, 10, 11, 16, 23, 27, 32, 38); B5(5, 6, 12, 17, 24, 28, 33, 39).

Replication 4

B1(1, 9, 15, 17, 24, 30, 32, 38); B2(2, 10, 11, 18, 25, 26, 33, 39); B3(3, 6, 12, 19, 21, 27, 34, 40);
B4(4, 7, 13, 20, 22, 28, 35, 36); B5(5, 8, 14, 16, 23, 29, 31, 37).

Replication 5

B1(1, 8, 14, 20, 22, 27, 33, 39); B2(2, 9, 15, 16, 23, 28, 34, 40); B3(3, 10, 11, 17, 24, 29, 35, 36);
B4(4, 6, 12, 18, 25, 30, 31, 37); B5(5, 7, 13, 19, 21, 26, 32, 38).

297. $v = 48, b = 12, r = 2, k = 8, AE = 0.9144, DE = 0.9630$ $\alpha(0,1,2)$

Replication 1

B1(1, 7, 13, 19, 25, 31, 37, 43); B2(2, 8, 14, 20, 26, 32, 38, 44); B3(3, 9, 15, 21, 27, 33, 39, 45);
B4(4, 10, 16, 22, 28, 34, 40, 46); B5(5, 11, 17, 23, 29, 35, 41, 47); B6(6, 12, 18, 24, 30, 36, 42, 48).

Replication 2

B1(1, 12, 17, 21, 26, 34, 38, 46); B2(2, 7, 18, 22, 27, 35, 39, 47); B3(3, 8, 13, 23, 28, 36, 40, 48);
B4(4, 9, 14, 24, 29, 31, 41, 43); B5(5, 10, 15, 19, 30, 32, 42, 44); B6(6, 11, 16, 20, 25, 33, 37, 45).

298. $v = 48, b = 18, r = 3, k = 8, AE = 0.9603, DE = 0.9813$ $\alpha(0,1,2)$

Replication 1
 B1(1, 7, 13, 19, 25, 31, 37, 43); B2(2, 8, 14, 20, 26, 32, 38, 44); B3(3, 9, 15, 21, 27, 33, 39, 45);
 B4(4, 10, 16, 22, 28, 34, 40, 46); B5(5, 11, 17, 23, 29, 35, 41, 47); B6(6, 12, 18, 24, 30, 36, 42, 48).

Replication 2
 B1(1, 8, 17, 23, 28, 32, 39, 48); B2(2, 9, 18, 24, 29, 33, 40, 43); B3(3, 10, 13, 19, 30, 34, 41, 44);
 B4(4, 11, 14, 20, 25, 35, 42, 45); B5(5, 12, 15, 21, 26, 36, 37, 46); B6(6, 7, 16, 22, 27, 31, 38, 47).

Replication 3
 B1(1, 12, 16, 20, 29, 33, 41, 46); B2(2, 7, 17, 21, 30, 34, 42, 47); B3(3, 8, 18, 22, 25, 35, 37, 48);
 B4(4, 9, 13, 23, 26, 36, 38, 43); B5(5, 10, 14, 24, 27, 31, 39, 44); B6(6, 11, 15, 19, 28, 32, 40, 45).

299. $v = 48, b = 24, r = 4, k = 8, AE = 0.9737, DE = 0.9874$ $\alpha(0,1,2,3)$

Replication 1
 B1(1, 7, 13, 19, 25, 31, 37, 43); B2(2, 8, 14, 20, 26, 32, 38, 44); B3(3, 9, 15, 21, 27, 33, 39, 45);
 B4(4, 10, 16, 22, 28, 34, 40, 46); B5(5, 11, 17, 23, 29, 35, 41, 47); B6(6, 12, 18, 24, 30, 36, 42, 48).

Replication 2
 B1(1, 9, 16, 23, 26, 32, 38, 46); B2(2, 10, 17, 24, 27, 33, 39, 47); B3(3, 11, 18, 19, 28, 34, 40, 48);
 B4(4, 12, 13, 20, 29, 35, 41, 43); B5(5, 7, 14, 21, 30, 36, 42, 44); B6(6, 8, 15, 22, 25, 31, 37, 45).

Replication 3
 B1(1, 10, 15, 24, 29, 34, 42, 44); B2(2, 11, 16, 19, 30, 35, 37, 45); B3(3, 12, 17, 20, 25, 36, 38, 46);
 B4(4, 7, 18, 21, 26, 31, 39, 47); B5(5, 8, 13, 22, 27, 32, 40, 48); B6(6, 9, 14, 23, 28, 33, 41, 43).

Replication 4
 B1(1, 8, 17, 21, 28, 35, 39, 48); B2(2, 9, 18, 22, 29, 36, 40, 43); B3(3, 10, 13, 23, 30, 31, 41, 44);
 B4(4, 11, 14, 24, 25, 32, 42, 45); B5(5, 12, 15, 19, 26, 33, 37, 46); B6(6, 7, 16, 20, 27, 34, 38, 47).

300. $v = 48, b = 30, r = 5, k = 8, AE = 0.9831, DE = 0.9917$ $\alpha(0,1,2)$

Replication 1
 B1(1, 7, 13, 19, 25, 31, 37, 43); B2(2, 8, 14, 20, 26, 32, 38, 44); B3(3, 9, 15, 21, 27, 33, 39, 45);
 B4(4, 10, 16, 22, 28, 34, 40, 46); B5(5, 11, 17, 23, 29, 35, 41, 47); B6(6, 12, 18, 24, 30, 36, 42, 48).

Replication 2
 B1(1, 7, 16, 24, 26, 35, 39, 46); B2(2, 8, 17, 19, 27, 36, 40, 47); B3(3, 9, 18, 20, 28, 31, 41, 48);
 B4(4, 10, 13, 21, 29, 32, 42, 43); B5(5, 11, 14, 22, 30, 33, 37, 44); B6(6, 12, 15, 23, 25, 34, 38, 45).

Replication 3
 B1(1, 10, 17, 23, 29, 33, 38, 48); B2(2, 11, 18, 24, 30, 34, 39, 43); B3(3, 12, 13, 19, 25, 35, 40, 44);
 B4(4, 7, 14, 20, 26, 36, 41, 45); B5(5, 8, 15, 21, 27, 31, 42, 46); B6(6, 9, 16, 22, 28, 32, 37, 47).

Replication 4
 B1(1, 12, 18, 22, 27, 32, 41, 44); B2(2, 7, 13, 23, 28, 33, 42, 45); B3(3, 8, 14, 24, 29, 34, 37, 46);
 B4(4, 9, 15, 19, 30, 35, 38, 47); B5(5, 10, 16, 20, 25, 36, 39, 48); B6(6, 11, 17, 21, 26, 31, 40, 43).

Replication 5
 B1(1, 11, 15, 20, 28, 34, 42, 47); B2(2, 12, 16, 21, 29, 35, 37, 48); B3(3, 7, 17, 22, 30, 36, 38, 43);
 B4(4, 8, 18, 23, 25, 31, 39, 44); B5(5, 9, 13, 24, 26, 32, 40, 45); B6(6, 10, 14, 19, 27, 33, 41, 46).

301. $v = 56, b = 14, r = 2, k = 8, AE = 0.9162, DE = 0.9633$ $\alpha(0,1,2)$

Replication 1
 B1(1, 8, 15, 22, 29, 36, 43, 50); B2(2, 9, 16, 23, 30, 37, 44, 51); B3(3, 10, 17, 24, 31, 38, 45, 52);

B4(4, 11, 18, 25, 32, 39, 46, 53); B5(5, 12, 19, 26, 33, 40, 47, 54); B6(6, 13, 20, 27, 34, 41, 48, 55);
B7(7, 14, 21, 28, 35, 42, 49, 56).

Replication 2

B1(1, 9, 20, 24, 35, 40, 44, 53); B2(2, 10, 21, 25, 29, 41, 45, 54); B3(3, 11, 15, 26, 30, 42, 46, 55);
B4(4, 12, 16, 27, 31, 36, 47, 56); B5(5, 13, 17, 28, 32, 37, 48, 50); B6(6, 14, 18, 22, 33, 38, 49, 51);
B7(7, 8, 19, 23, 34, 39, 43, 52).

302. $v = 56, b = 21, r = 3, k = 8, AE = 0.9612, DE = 0.9816$ $\alpha(0,1,2)$

Replication 1

B1(1, 8, 15, 22, 29, 36, 43, 50); B2(2, 9, 16, 23, 30, 37, 44, 51); B3(3, 10, 17, 24, 31, 38, 45, 52);
B4(4, 11, 18, 25, 32, 39, 46, 53); B5(5, 12, 19, 26, 33, 40, 47, 54); B6(6, 13, 20, 27, 34, 41, 48, 55);
B7(7, 14, 21, 28, 35, 42, 49, 56).

Replication 2

B1(1, 10, 19, 25, 34, 39, 44, 56); B2(2, 11, 20, 26, 35, 40, 45, 50); B3(3, 12, 21, 27, 29, 41, 46, 51);
B4(4, 13, 15, 28, 30, 42, 47, 52); B5(5, 14, 16, 22, 31, 36, 48, 53); B6(6, 8, 17, 23, 32, 37, 49, 54);
B7(7, 9, 18, 24, 33, 38, 43, 55).

Replication 3

B1(1, 9, 18, 28, 31, 41, 45, 54); B2(2, 10, 19, 22, 32, 42, 46, 55); B3(3, 11, 20, 23, 33, 36, 47, 56);
B4(4, 12, 21, 24, 34, 37, 48, 50); B5(5, 13, 15, 25, 35, 38, 49, 51); B6(6, 14, 16, 26, 29, 39, 43, 52);
B7(7, 8, 17, 27, 30, 40, 44, 53).

303. $v = 56, b = 28, r = 4, k = 8, AE = 0.9754, DE = 0.9880$ $\alpha(0,1,2)$

Replication 1

B1(1, 8, 15, 22, 29, 36, 43, 50); B2(2, 9, 16, 23, 30, 37, 44, 51); B3(3, 10, 17, 24, 31, 38, 45, 52);
B4(4, 11, 18, 25, 32, 39, 46, 53); B5(5, 12, 19, 26, 33, 40, 47, 54); B6(6, 13, 20, 27, 34, 41, 48, 55);
B7(7, 14, 21, 28, 35, 42, 49, 56).

Replication 2

B1(1, 13, 19, 27, 32, 38, 46, 56); B2(2, 14, 20, 28, 33, 39, 47, 50); B3(3, 8, 21, 22, 34, 40, 48, 51);
B4(4, 9, 15, 23, 35, 41, 49, 52); B5(5, 10, 16, 24, 29, 42, 43, 53); B6(6, 11, 17, 25, 30, 36, 44, 54);
B7(7, 12, 18, 26, 31, 37, 45, 55).

Replication 3

B1(1, 9, 17, 28, 31, 41, 47, 53); B2(2, 10, 18, 22, 32, 42, 48, 54); B3(3, 11, 19, 23, 33, 36, 49, 55);
B4(4, 12, 20, 24, 34, 37, 43, 56); B5(5, 13, 21, 25, 35, 38, 44, 50); B6(6, 14, 15, 26, 29, 39, 45, 51);
B7(7, 8, 16, 27, 30, 40, 46, 52).

Replication 4

B1(1, 14, 16, 25, 33, 37, 48, 52); B2(2, 8, 17, 26, 34, 38, 49, 53); B3(3, 9, 18, 27, 35, 39, 43, 54);
B4(4, 10, 19, 28, 29, 40, 44, 55); B5(5, 11, 20, 22, 30, 41, 45, 56); B6(6, 12, 21, 23, 31, 42, 46, 50);
B7(7, 13, 15, 24, 32, 36, 47, 51).

304. $v = 56, b = 35, r = 5, k = 8, AE = 0.9831, DE = 0.9917$ $\alpha(0,1,2)$

Replication 1

B1(1, 8, 15, 22, 29, 36, 43, 50); B2(2, 9, 16, 23, 30, 37, 44, 51); B3(3, 10, 17, 24, 31, 38, 45, 52);
B4(4, 11, 18, 25, 32, 39, 46, 53); B5(5, 12, 19, 26, 33, 40, 47, 54); B6(6, 13, 20, 27, 34, 41, 48, 55);
B7(7, 14, 21, 28, 35, 42, 49, 56).

Replication 2

B1(1, 10, 17, 23, 35, 39, 47, 53); B2(2, 11, 18, 24, 29, 40, 48, 54); B3(3, 12, 19, 25, 30, 41, 49, 55);

B4(4, 13, 20, 26, 31, 42, 43, 56); B5(5, 14, 21, 27, 32, 36, 44, 50); B6(6, 8, 15, 28, 33, 37, 45, 51);
B7(7, 9, 16, 22, 34, 38, 46, 52).

Replication 3

B1(1, 14, 16, 25, 34, 42, 45, 54); B2(2, 8, 17, 26, 35, 36, 46, 55); B3(3, 9, 18, 27, 29, 37, 47, 56);
B4(4, 10, 19, 28, 30, 38, 48, 50); B5(5, 11, 20, 22, 31, 39, 49, 51); B6(6, 12, 21, 23, 32, 40, 43, 52);
B7(7, 13, 15, 24, 33, 41, 44, 53).

Replication 4

B1(1, 11, 19, 28, 31, 41, 44, 52); B2(2, 12, 20, 22, 32, 42, 45, 53); B3(3, 13, 21, 23, 33, 36, 46, 54);
B4(4, 14, 15, 24, 34, 37, 47, 55); B5(5, 8, 16, 25, 35, 38, 48, 56); B6(6, 9, 17, 26, 29, 39, 49, 50);
B7(7, 10, 18, 27, 30, 40, 43, 51).

Replication 5

B1(1, 13, 18, 26, 32, 38, 49, 51); B2(2, 14, 19, 27, 33, 39, 43, 52); B3(3, 8, 20, 28, 34, 40, 44, 53);
B4(4, 9, 21, 22, 35, 41, 45, 54); B5(5, 10, 15, 23, 29, 42, 46, 55); B6(6, 11, 16, 24, 30, 36, 47, 56);
B7(7, 12, 17, 25, 31, 37, 48, 50).

305. $v = 64, b = 16, r = 2, k = 8, AE = 0.9205, DE = 0.9644$ $\alpha(0,1)$; LS102, Square-Lattice

Replication 1

B1(1, 9, 17, 25, 33, 41, 49, 57); B2(2, 10, 18, 26, 34, 42, 50, 58); B3(3, 11, 19, 27, 35, 43, 51, 59);
B4(4, 12, 20, 28, 36, 44, 52, 60); B5(5, 13, 21, 29, 37, 45, 53, 61); B6(6, 14, 22, 30, 38, 46, 54, 62);
B7(7, 15, 23, 31, 39, 47, 55, 63); B8(8, 16, 24, 32, 40, 48, 56, 64).

Replication 2

B1(1, 15, 19, 30, 40, 42, 52, 61); B2(2, 16, 20, 31, 33, 43, 53, 62); B3(3, 9, 21, 32, 34, 44, 54, 63);
B4(4, 10, 22, 25, 35, 45, 55, 64); B5(5, 11, 23, 26, 36, 46, 56, 57); B6(6, 12, 24, 27, 37, 47, 49, 58);
B7(7, 13, 17, 28, 38, 48, 50, 59); B8(8, 14, 18, 29, 39, 41, 51, 60).

306. $v = 64, b = 24, r = 3, k = 8, AE = 0.9618, DE = 0.9818$ $\alpha(0,1,2)$;

Replication 1

B1(1, 9, 17, 25, 33, 41, 49, 57); B2(2, 10, 18, 26, 34, 42, 50, 58); B3(3, 11, 19, 27, 35, 43, 51, 59);
B4(4, 12, 20, 28, 36, 44, 52, 60); B5(5, 13, 21, 29, 37, 45, 53, 61); B6(6, 14, 22, 30, 38, 46, 54, 62);
B7(7, 15, 23, 31, 39, 47, 55, 63); B8(8, 16, 24, 32, 40, 48, 56, 64).

Replication 2

B1(1, 12, 22, 30, 40, 43, 55, 61); B2(2, 13, 23, 31, 33, 44, 56, 62); B3(3, 14, 24, 32, 34, 45, 49, 63);
B4(4, 15, 17, 25, 35, 46, 50, 64); B5(5, 16, 18, 26, 36, 47, 51, 57); B6(6, 9, 19, 27, 37, 48, 52, 58);
B7(7, 10, 20, 28, 38, 41, 53, 59); B8(8, 11, 21, 29, 39, 42, 54, 60).

Replication 3

B1(1, 16, 19, 28, 39, 45, 50, 62); B2(2, 9, 20, 29, 40, 46, 51, 63); B3(3, 10, 21, 30, 33, 47, 52, 64);
B4(4, 11, 22, 31, 34, 48, 53, 57); B5(5, 12, 23, 32, 35, 41, 54, 58); B6(6, 13, 24, 25, 36, 42, 55, 59);
B7(7, 14, 17, 26, 37, 43, 56, 60); B8(8, 15, 18, 27, 38, 44, 49, 61).

307. $v = 64, b = 32, r = 4, k = 8, AE = 0.9778, DE = 0.9891$ $\alpha(0,1,2)^{***}$

Replication 1

B1(1, 9, 17, 25, 33, 41, 49, 57); B2(2, 10, 18, 26, 34, 42, 50, 58); B3(3, 11, 19, 27, 35, 43, 51, 59);
B4(4, 12, 20, 28, 36, 44, 52, 60); B5(5, 13, 21, 29, 37, 45, 53, 61); B6(6, 14, 22, 30, 38, 46, 54, 62);
B7(7, 15, 23, 31, 39, 47, 55, 63); B8(8, 16, 24, 32, 40, 48, 56, 64).

Replication 2

B1(1, 11, 24, 31, 40, 46, 53, 58); B2(2, 12, 17, 32, 33, 47, 54, 59); B3(3, 13, 18, 25, 34, 48, 55, 60);

B4(4, 14, 19, 26, 35, 41, 56, 61); B5(5, 15, 20, 27, 36, 42, 49, 62); B6(6, 16, 21, 28, 37, 43, 50, 63);
 B7(7, 9, 22, 29, 38, 44, 51, 64); B8(8, 10, 23, 30, 39, 45, 52, 57).

Replication 3

B1(1, 15, 18, 28, 35, 45, 54, 64); B2(2, 16, 19, 29, 36, 46, 55, 57); B3(3, 9, 20, 30, 37, 47, 56, 58);
 B4(4, 10, 21, 31, 38, 48, 49, 59); B5(5, 11, 22, 32, 39, 41, 50, 60); B6(6, 12, 23, 25, 40, 42, 51, 61);
 B7(7, 13, 24, 26, 33, 43, 52, 62); B8(8, 14, 17, 27, 34, 44, 53, 63).

Replication 4

B1(1, 10, 19, 32, 37, 44, 55, 62); B2(2, 11, 20, 25, 38, 45, 56, 63); B3(3, 12, 21, 26, 39, 46, 49, 64);
 B4(4, 13, 22, 27, 40, 47, 50, 57); B5(5, 14, 23, 28, 33, 48, 51, 58); B6(6, 15, 24, 29, 34, 41, 52, 59);
 B7(7, 16, 17, 30, 35, 42, 53, 60); B8(8, 9, 18, 31, 36, 43, 54, 61).

308. $v = 64, b = 40, r = 5, k = 8, AE = 0.9824, DE = 0.9914$ $\alpha(0,1,2)$

Replication 1

B1(1, 9, 17, 25, 33, 41, 49, 57); B2(2, 10, 18, 26, 34, 42, 50, 58); B3(3, 11, 19, 27, 35, 43, 51, 59);
 B4(4, 12, 20, 28, 36, 44, 52, 60); B5(5, 13, 21, 29, 37, 45, 53, 61); B6(6, 14, 22, 30, 38, 46, 54, 62);
 B7(7, 15, 23, 31, 39, 47, 55, 63); B8(8, 16, 24, 32, 40, 48, 56, 64).

Replication 2

B1(1, 12, 22, 29, 36, 42, 55, 64); B2(2, 13, 23, 30, 37, 43, 56, 57); B3(3, 14, 24, 31, 38, 44, 49, 58);
 B4(4, 15, 17, 32, 39, 45, 50, 59); B5(5, 16, 18, 25, 40, 46, 51, 60); B6(6, 9, 19, 26, 33, 47, 52, 61);
 B7(7, 10, 20, 27, 34, 48, 53, 62); B8(8, 11, 21, 28, 35, 41, 54, 63).

Replication 3

B1(1, 16, 24, 27, 39, 45, 52, 62); B2(2, 9, 17, 28, 40, 46, 53, 63); B3(3, 10, 18, 29, 33, 47, 54, 64);
 B4(4, 11, 19, 30, 34, 48, 55, 57); B5(5, 12, 20, 31, 35, 41, 56, 58); B6(6, 13, 21, 32, 36, 42, 49, 59);
 B7(7, 14, 22, 25, 37, 43, 50, 60); B8(8, 15, 23, 26, 38, 44, 51, 61).

Replication 4

B1(1, 14, 23, 28, 34, 47, 51, 59); B2(2, 15, 24, 29, 35, 48, 52, 60); B3(3, 16, 17, 30, 36, 41, 53, 61);
 B4(4, 9, 18, 31, 37, 42, 54, 62); B5(5, 10, 19, 32, 38, 43, 55, 63); B6(6, 11, 20, 25, 39, 44, 56, 64);
 B7(7, 12, 21, 26, 40, 45, 49, 57); B8(8, 13, 22, 27, 33, 46, 50, 58).

Replication 5

B1(1, 15, 20, 30, 40, 43, 54, 58); B2(2, 16, 21, 31, 33, 44, 55, 59); B3(3, 9, 22, 32, 34, 45, 56, 60);
 B4(4, 10, 23, 25, 35, 46, 49, 61); B5(5, 11, 24, 26, 36, 47, 50, 62); B6(6, 12, 17, 27, 37, 48, 51, 63);
 B7(7, 13, 18, 28, 38, 41, 52, 64); B8(8, 14, 19, 29, 39, 42, 53, 57).

309. $v = 72, b = 18, r = 2, k = 8, AE = 0.9144, DE = 0.9623$ $\alpha(0,1)$, Rect.-Lattice

Replication 1

B1(1, 10, 19, 28, 37, 46, 55, 64); B2(2, 11, 20, 29, 38, 47, 56, 65); B3(3, 12, 21, 30, 39, 48, 57, 66);
 B4(4, 13, 22, 31, 40, 49, 58, 67); B5(5, 14, 23, 32, 41, 50, 59, 68); B6(6, 15, 24, 33, 42, 51, 60, 69);
 B7(7, 16, 25, 34, 43, 52, 61, 70); B8(8, 17, 26, 35, 44, 53, 62, 71); B9(9, 18, 27, 36, 45, 54, 63, 72).

Replication 2

B1(1, 11, 21, 36, 43, 53, 60, 67); B2(2, 12, 22, 28, 44, 54, 61, 68); B3(3, 13, 23, 29, 45, 46, 62, 69);
 B4(4, 14, 24, 30, 37, 47, 63, 70); B5(5, 15, 25, 31, 38, 48, 55, 71); B6(6, 16, 26, 32, 39, 49, 56, 72);
 B7(7, 17, 27, 33, 40, 50, 57, 64); B8(8, 18, 19, 34, 41, 51, 58, 65); B9(9, 10, 20, 35, 42, 52, 59, 66).

310. $v = 72, b = 27, r = 3, k = 8, AE = 0.9610, DE = 0.9814$ $\alpha(0,1)$

Replication 1

B1(1, 10, 19, 28, 37, 46, 55, 64); B2(2, 11, 20, 29, 38, 47, 56, 65); B3(3, 12, 21, 30, 39, 48, 57, 66);

B4(4, 13, 22, 31, 40, 49, 58, 67); B5(5, 14, 23, 32, 41, 50, 59, 68); B6(6, 15, 24, 33, 42, 51, 60, 69);
 B7(7, 16, 25, 34, 43, 52, 61, 70); B8(8, 17, 26, 35, 44, 53, 62, 71); B9(9, 18, 27, 36, 45, 54, 63, 72).

Replication 2

B1(1, 15, 27, 32, 44, 49, 56, 70); B2(2, 16, 19, 33, 45, 50, 57, 71); B3(3, 17, 20, 34, 37, 51, 58, 72);
 B4(4, 18, 21, 35, 38, 52, 59, 64); B5(5, 10, 22, 36, 39, 53, 60, 65); B6(6, 11, 23, 28, 40, 54, 61, 66);
 B7(7, 12, 24, 29, 41, 46, 62, 67); B8(8, 13, 25, 30, 42, 47, 63, 68); B9(9, 14, 26, 31, 43, 48, 55, 69).

Replication 3

B1(1, 16, 23, 35, 39, 51, 63, 67); B2(2, 17, 24, 36, 40, 52, 55, 68); B3(3, 18, 25, 28, 41, 53, 56, 69);
 B4(4, 10, 26, 29, 42, 54, 57, 70); B5(5, 11, 27, 30, 43, 46, 58, 71); B6(6, 12, 19, 31, 44, 47, 59, 72);
 B7(7, 13, 20, 32, 45, 48, 60, 64); B8(8, 14, 21, 33, 37, 49, 61, 65); B9(9, 15, 22, 34, 38, 50, 62, 66).

311. $v = 72, b = 36, r = 4, k = 8, AE = 0.9740, DE = 0.9874$ $\alpha(0,1,2)$

Replication 1

B1(1, 10, 19, 28, 37, 46, 55, 64); B2(2, 11, 20, 29, 38, 47, 56, 65); B3(3, 12, 21, 30, 39, 48, 57, 66);
 B4(4, 13, 22, 31, 40, 49, 58, 67); B5(5, 14, 23, 32, 41, 50, 59, 68); B6(6, 15, 24, 33, 42, 51, 60, 69);
 B7(7, 16, 25, 34, 43, 52, 61, 70); B8(8, 17, 26, 35, 44, 53, 62, 71); B9(9, 18, 27, 36, 45, 54, 63, 72).

Replication 2

B1(1, 16, 23, 34, 42, 53, 56, 67); B2(2, 17, 24, 35, 43, 54, 57, 68); B3(3, 18, 25, 36, 44, 46, 58, 69);
 B4(4, 10, 26, 28, 45, 47, 59, 70); B5(5, 11, 27, 29, 37, 48, 60, 71); B6(6, 12, 19, 30, 38, 49, 61, 72);
 B7(7, 13, 20, 31, 39, 50, 62, 64); B8(8, 14, 21, 32, 40, 51, 63, 65); B9(9, 15, 22, 33, 41, 52, 55, 66).

Replication 3

B1(1, 18, 26, 35, 41, 48, 61, 65); B2(2, 10, 27, 36, 42, 49, 62, 66); B3(3, 11, 19, 28, 43, 50, 63, 67);
 B4(4, 12, 20, 29, 44, 51, 55, 68); B5(5, 13, 21, 30, 45, 52, 56, 69); B6(6, 14, 22, 31, 37, 53, 57, 70);
 B7(7, 15, 23, 32, 38, 54, 58, 71); B8(8, 16, 24, 33, 39, 46, 59, 72); B9(9, 17, 25, 34, 40, 47, 60, 64).

Replication 4

B1(1, 12, 27, 33, 40, 50, 58, 70); B2(2, 13, 19, 34, 41, 51, 59, 71); B3(3, 14, 20, 35, 42, 52, 60, 72);
 B4(4, 15, 21, 36, 43, 53, 61, 64); B5(5, 16, 22, 28, 44, 54, 62, 65); B6(6, 17, 23, 29, 45, 46, 63, 66);
 B7(7, 18, 24, 30, 37, 47, 55, 67); B8(8, 10, 25, 31, 38, 48, 56, 68); B9(9, 11, 26, 32, 39, 49, 57, 69).

312. $v = 72, b = 45, r = 5, k = 8, AE = 0.9827, DE = 0.9915$ $\alpha(0,1,2)$

Replication 1

B1(1, 10, 19, 28, 37, 46, 55, 64); B2(2, 11, 20, 29, 38, 47, 56, 65); B3(3, 12, 21, 30, 39, 48, 57, 66);
 B4(4, 13, 22, 31, 40, 49, 58, 67); B5(5, 14, 23, 32, 41, 50, 59, 68); B6(6, 15, 24, 33, 42, 51, 60, 69);
 B7(7, 16, 25, 34, 43, 52, 61, 70); B8(8, 17, 26, 35, 44, 53, 62, 71); B9(9, 18, 27, 36, 45, 54, 63, 72).

Replication 2

B1(1, 11, 21, 35, 41, 53, 60, 68); B2(2, 12, 22, 36, 42, 54, 61, 69); B3(3, 13, 23, 28, 43, 46, 62, 70);
 B4(4, 14, 24, 29, 44, 47, 63, 71); B5(5, 15, 25, 30, 45, 48, 55, 72); B6(6, 16, 26, 31, 37, 49, 56, 64);
 B7(7, 17, 27, 32, 38, 50, 57, 65); B8(8, 18, 19, 33, 39, 51, 58, 66); B9(9, 10, 20, 34, 40, 52, 59, 67).

Replication 3

B1(1, 17, 22, 29, 43, 51, 59, 72); B2(2, 18, 23, 30, 44, 52, 60, 64); B3(3, 10, 24, 31, 45, 53, 61, 65);
 B4(4, 11, 25, 32, 37, 54, 62, 66); B5(5, 12, 26, 33, 38, 46, 63, 67); B6(6, 13, 27, 34, 39, 47, 55, 68);
 B7(7, 14, 19, 35, 40, 48, 56, 69); B8(8, 15, 20, 36, 41, 49, 57, 70); B9(9, 16, 21, 28, 42, 50, 58, 71).

Replication 4

B1(1, 15, 23, 34, 38, 49, 61, 66); B2(2, 16, 24, 35, 39, 50, 62, 67); B3(3, 17, 25, 36, 40, 51, 63, 68);
 B4(4, 18, 26, 28, 41, 52, 55, 69); B5(5, 10, 27, 29, 42, 53, 56, 70); B6(6, 11, 19, 30, 43, 54, 57, 71);
 B7(7, 12, 20, 31, 44, 46, 58, 72); B8(8, 13, 21, 32, 45, 47, 59, 64); B9(9, 14, 22, 33, 37, 48, 60, 65).

Replication 5

B1(1, 18, 25, 31, 42, 47, 57, 67); B2(2, 10, 26, 32, 43, 48, 58, 68); B3(3, 11, 27, 33, 44, 49, 59, 69);
B4(4, 12, 19, 34, 45, 50, 60, 70); B5(5, 13, 20, 35, 37, 51, 61, 71); B6(6, 14, 21, 36, 38, 52, 62, 72);
B7(7, 15, 22, 28, 39, 53, 63, 64); B8(8, 16, 23, 29, 40, 54, 55, 65); B9(9, 17, 24, 30, 41, 46, 56, 66).

313. $v = 80, b = 20, r = 2, k = 8, AE = 0.9093, DE = 0.9606$ $\alpha(0,1)$

Replication 1

B1(1, 11, 21, 31, 41, 51, 61, 71); B2(2, 12, 22, 32, 42, 52, 62, 72); B3(3, 13, 23, 33, 43, 53, 63, 73);
B4(4, 14, 24, 34, 44, 54, 64, 74); B5(5, 15, 25, 35, 45, 55, 65, 75); B6(6, 16, 26, 36, 46, 56, 66, 76);
B7(7, 17, 27, 37, 47, 57, 67, 77); B8(8, 18, 28, 38, 48, 58, 68, 78); B9(9, 19, 29, 39, 49, 59, 69, 79);
B10(10, 20, 30, 40, 50, 60, 70, 80).

Replication 2

B1(1, 19, 28, 32, 47, 60, 66, 74); B2(2, 20, 29, 33, 48, 51, 67, 75); B3(3, 11, 30, 34, 49, 52, 68, 76);
B4(4, 12, 21, 35, 50, 53, 69, 77); B5(5, 13, 22, 36, 41, 54, 70, 78); B6(6, 14, 23, 37, 42, 55, 61, 79);
B7(7, 15, 24, 38, 43, 56, 62, 80); B8(8, 16, 25, 39, 44, 57, 63, 71); B9(9, 17, 26, 40, 45, 58, 64, 72);
B10(10, 18, 27, 31, 46, 59, 65, 73).

314. $v = 80, b = 30, r = 3, k = 8, AE = 0.9582, DE = 0.9802$ $\alpha(0,1)$

Replication 1

B1(1, 11, 21, 31, 41, 51, 61, 71); B2(2, 12, 22, 32, 42, 52, 62, 72); B3(3, 13, 23, 33, 43, 53, 63, 73);
B4(4, 14, 24, 34, 44, 54, 64, 74); B5(5, 15, 25, 35, 45, 55, 65, 75); B6(6, 16, 26, 36, 46, 56, 66, 76);
B7(7, 17, 27, 37, 47, 57, 67, 77); B8(8, 18, 28, 38, 48, 58, 68, 78); B9(9, 19, 29, 39, 49, 59, 69, 79);
B10(10, 20, 30, 40, 50, 60, 70, 80).

Replication 2

B1(1, 19, 26, 38, 45, 53, 70, 74); B2(2, 20, 27, 39, 46, 54, 61, 75); B3(3, 11, 28, 40, 47, 55, 62, 76);
B4(4, 12, 29, 31, 48, 56, 63, 77); B5(5, 13, 30, 32, 49, 57, 64, 78); B6(6, 14, 21, 33, 50, 58, 65, 79);
B7(7, 15, 22, 34, 41, 59, 66, 80); B8(8, 16, 23, 35, 42, 60, 67, 71); B9(9, 17, 24, 36, 43, 51, 68, 72);
B10(10, 18, 25, 37, 44, 52, 69, 73).

Replication 3

B1(1, 16, 22, 33, 48, 57, 69, 75); B2(2, 17, 23, 34, 49, 58, 70, 76); B3(3, 18, 24, 35, 50, 59, 61, 77);
B4(4, 19, 25, 36, 41, 60, 62, 78); B5(5, 20, 26, 37, 42, 51, 63, 79); B6(6, 11, 27, 38, 43, 52, 64, 80);
B7(7, 12, 28, 39, 44, 53, 65, 71); B8(8, 13, 29, 40, 45, 54, 66, 72); B9(9, 14, 30, 31, 46, 55, 67, 73);
B10(10, 15, 21, 32, 47, 56, 68, 74).

315. $v = 80, b = 40, r = 4, k = 8, AE = 0.9740, DE = 0.9874$ $\alpha(0,1,2)$

Replication 1

B1(1, 11, 21, 31, 41, 51, 61, 71); B2(2, 12, 22, 32, 42, 52, 62, 72); B3(3, 13, 23, 33, 43, 53, 63, 73);
B4(4, 14, 24, 34, 44, 54, 64, 74); B5(5, 15, 25, 35, 45, 55, 65, 75); B6(6, 16, 26, 36, 46, 56, 66, 76);
B7(7, 17, 27, 37, 47, 57, 67, 77); B8(8, 18, 28, 38, 48, 58, 68, 78); B9(9, 19, 29, 39, 49, 59, 69, 79);
B10(10, 20, 30, 40, 50, 60, 70, 80).

Replication 2

B1(1, 19, 23, 39, 50, 58, 62, 74); B2(2, 20, 24, 40, 41, 59, 63, 75); B3(3, 11, 25, 31, 42, 60, 64, 76);
B4(4, 12, 26, 32, 43, 51, 65, 77); B5(5, 13, 27, 33, 44, 52, 66, 78); B6(6, 14, 28, 34, 45, 53, 67, 79);
B7(7, 15, 29, 35, 46, 54, 68, 80); B8(8, 16, 30, 36, 47, 55, 69, 71); B9(9, 17, 21, 37, 48, 56, 70, 72);
B10(10, 18, 22, 38, 49, 57, 61, 73).

Replication 3

B1(1, 12, 29, 36, 45, 57, 63, 78); B2(2, 13, 30, 37, 46, 58, 64, 79); B3(3, 14, 21, 38, 47, 59, 65, 80);
B4(4, 15, 22, 39, 48, 60, 66, 71); B5(5, 16, 23, 40, 49, 51, 67, 72); B6(6, 17, 24, 31, 50, 52, 68, 73);

B7(7, 18, 25, 32, 41, 53, 69, 74); B8(8, 19, 26, 33, 42, 54, 70, 75); B9(9, 20, 27, 34, 43, 55, 61, 76);
B10(10, 11, 28, 35, 44, 56, 62, 77).

Replication 4

B1(1, 13, 24, 32, 48, 55, 67, 80); B2(2, 14, 25, 33, 49, 56, 68, 71); B3(3, 15, 26, 34, 50, 57, 69, 72);
B4(4, 16, 27, 35, 41, 58, 70, 73); B5(5, 17, 28, 36, 42, 59, 61, 74); B6(6, 18, 29, 37, 43, 60, 62, 75);
B7(7, 19, 30, 38, 44, 51, 63, 76); B8(8, 20, 21, 39, 45, 52, 64, 77); B9(9, 11, 22, 40, 46, 53, 65, 78);
B10(10, 12, 23, 31, 47, 54, 66, 79).

316. $v = 80, b = 50, r = 5, k = 8, AE = 0.9808, DE = 0.9906$

$\alpha(0,1,2)$

Replication 1

B1(1, 11, 21, 31, 41, 51, 61, 71); B2(2, 12, 22, 32, 42, 52, 62, 72); B3(3, 13, 23, 33, 43, 53, 63, 73);
B4(4, 14, 24, 34, 44, 54, 64, 74); B5(5, 15, 25, 35, 45, 55, 65, 75); B6(6, 16, 26, 36, 46, 56, 66, 76);
B7(7, 17, 27, 37, 47, 57, 67, 77); B8(8, 18, 28, 38, 48, 58, 68, 78); B9(9, 19, 29, 39, 49, 59, 69, 79);
B10(10, 20, 30, 40, 50, 60, 70, 80).

Replication 2

B1(1, 13, 29, 34, 42, 55, 66, 80); B2(2, 14, 30, 35, 43, 56, 67, 71); B3(3, 15, 21, 36, 44, 57, 68, 72);
B4(4, 16, 22, 37, 45, 58, 69, 73); B5(5, 17, 23, 38, 46, 59, 70, 74); B6(6, 18, 24, 39, 47, 60, 61, 75);
B7(7, 19, 25, 40, 48, 51, 62, 76); B8(8, 20, 26, 31, 49, 52, 63, 77); B9(9, 11, 27, 32, 50, 53, 64, 78);
B10(10, 12, 28, 33, 41, 54, 65, 79).

Replication 3

B1(1, 17, 22, 33, 49, 60, 62, 75); B2(2, 18, 23, 34, 50, 51, 63, 76); B3(3, 19, 24, 35, 41, 52, 64, 77);
B4(4, 20, 25, 36, 42, 53, 65, 78); B5(5, 11, 26, 37, 43, 54, 66, 79); B6(6, 12, 27, 38, 44, 55, 67, 80);
B7(7, 13, 28, 39, 45, 56, 68, 71); B8(8, 14, 29, 40, 46, 57, 69, 72); B9(9, 15, 30, 31, 47, 58, 70, 73);
B10(10, 16, 21, 32, 48, 59, 61, 74).

Replication 4

B1(1, 18, 30, 32, 46, 54, 68, 77); B2(2, 19, 21, 33, 47, 55, 69, 78); B3(3, 20, 22, 34, 48, 56, 70, 79);
B4(4, 11, 23, 35, 49, 57, 61, 80); B5(5, 12, 24, 36, 50, 58, 62, 71); B6(6, 13, 25, 37, 41, 59, 63, 72);
B7(7, 14, 26, 38, 42, 60, 64, 73); B8(8, 15, 27, 39, 43, 51, 65, 74); B9(9, 16, 28, 40, 44, 52, 66, 75);
B10(10, 17, 29, 31, 45, 53, 67, 76).

Replication 5

B1(1, 20, 28, 36, 43, 59, 64, 76); B2(2, 11, 29, 37, 44, 60, 65, 77); B3(3, 12, 30, 38, 45, 51, 66, 78);
B4(4, 13, 21, 39, 46, 52, 67, 79); B5(5, 14, 22, 40, 47, 53, 68, 80); B6(6, 15, 23, 31, 48, 54, 69, 71);
B7(7, 16, 24, 32, 49, 55, 70, 72); B8(8, 17, 25, 33, 50, 56, 61, 73); B9(9, 18, 26, 34, 41, 57, 62, 74);
B10(10, 19, 27, 35, 42, 58, 63, 75).

317. $v = 88, b = 22, r = 2, k = 8, AE = 0.9052, DE = 0.9592$

$\alpha(0,1)$

Replication 1

B1(1, 12, 23, 34, 45, 56, 67, 78); B2(2, 13, 24, 35, 46, 57, 68, 79); B3(3, 14, 25, 36, 47, 58, 69, 80);
B4(4, 15, 26, 37, 48, 59, 70, 81); B5(5, 16, 27, 38, 49, 60, 71, 82); B6(6, 17, 28, 39, 50, 61, 72, 83);
B7(7, 18, 29, 40, 51, 62, 73, 84); B8(8, 19, 30, 41, 52, 63, 74, 85); B9(9, 20, 31, 42, 53, 64, 75, 86);
B10(10, 21, 32, 43, 54, 65, 76, 87); B11(11, 22, 33, 44, 55, 66, 77, 88).

Replication 2

B1(1, 20, 28, 38, 55, 62, 68, 81); B2(2, 21, 29, 39, 45, 63, 69, 82); B3(3, 22, 30, 40, 46, 64, 70, 83);
B4(4, 12, 31, 41, 47, 65, 71, 84); B5(5, 13, 32, 42, 48, 66, 72, 85); B6(6, 14, 33, 43, 49, 56, 73, 86);
B7(7, 15, 23, 44, 50, 57, 74, 87); B8(8, 16, 24, 34, 51, 58, 75, 88); B9(9, 17, 25, 35, 52, 59, 76, 78);
B10(10, 18, 26, 36, 53, 60, 77, 79); B11(11, 19, 27, 37, 54, 61, 67, 80).

318. $v = 88, b = 33, r = 3, k = 8, AE = 0.9563, DE = 0.9794$

$\alpha(0,1)$

Replication 1

B1(1, 12, 23, 34, 45, 56, 67, 78); B2(2, 13, 24, 35, 46, 57, 68, 79); B3(3, 14, 25, 36, 47, 58, 69, 80);
B4(4, 15, 26, 37, 48, 59, 70, 81); B5(5, 16, 27, 38, 49, 60, 71, 82); B6(6, 17, 28, 39, 50, 61, 72, 83);
B7(7, 18, 29, 40, 51, 62, 73, 84); B8(8, 19, 30, 41, 52, 63, 74, 85); B9(9, 20, 31, 42, 53, 64, 75, 86);
B10(10, 21, 32, 43, 54, 65, 76, 87); B11(11, 22, 33, 44, 55, 66, 77, 88).

Replication 2

B1(1, 14, 27, 41, 55, 57, 70, 87); B2(2, 15, 28, 42, 45, 58, 71, 88); B3(3, 16, 29, 43, 46, 59, 72, 78);
B4(4, 17, 30, 44, 47, 60, 73, 79); B5(5, 18, 31, 34, 48, 61, 74, 80); B6(6, 19, 32, 35, 49, 62, 75, 81);
B7(7, 20, 33, 36, 50, 63, 76, 82); B8(8, 21, 23, 37, 51, 64, 77, 83); B9(9, 22, 24, 38, 52, 65, 67, 84);
B10(10, 12, 25, 39, 53, 66, 68, 85); B11(11, 13, 26, 40, 54, 56, 69, 86).

Replication 3

B1(1, 20, 26, 38, 47, 62, 68, 83); B2(2, 21, 27, 39, 48, 63, 69, 84); B3(3, 22, 28, 40, 49, 64, 70, 85);
B4(4, 12, 29, 41, 50, 65, 71, 86); B5(5, 13, 30, 42, 51, 66, 72, 87); B6(6, 14, 31, 43, 52, 56, 73, 88);
B7(7, 15, 32, 44, 53, 57, 74, 78); B8(8, 16, 33, 34, 54, 58, 75, 79); B9(9, 17, 23, 35, 55, 59, 76, 80);
B10(10, 18, 24, 36, 45, 60, 77, 81); B11(11, 19, 25, 37, 46, 61, 67, 82).

319. $v = 88, b = 44, r = 4, k = 8, AE = 0.9724, DE = 0.9867$ $\alpha(0,1,2)$

Replication 1

B1(1, 12, 23, 34, 45, 56, 67, 78); B2(2, 13, 24, 35, 46, 57, 68, 79); B3(3, 14, 25, 36, 47, 58, 69, 80);
B4(4, 15, 26, 37, 48, 59, 70, 81); B5(5, 16, 27, 38, 49, 60, 71, 82); B6(6, 17, 28, 39, 50, 61, 72, 83);
B7(7, 18, 29, 40, 51, 62, 73, 84); B8(8, 19, 30, 41, 52, 63, 74, 85); B9(9, 20, 31, 42, 53, 64, 75, 86);
B10(10, 21, 32, 43, 54, 65, 76, 87); B11(11, 22, 33, 44, 55, 66, 77, 88).

Replication 2

B1(1, 15, 30, 39, 55, 60, 69, 87); B2(2, 16, 31, 40, 45, 61, 70, 88); B3(3, 17, 32, 41, 46, 62, 71, 78);
B4(4, 18, 33, 42, 47, 63, 72, 79); B5(5, 19, 23, 43, 48, 64, 73, 80); B6(6, 20, 24, 44, 49, 65, 74, 81);
B7(7, 21, 25, 34, 50, 66, 75, 82); B8(8, 22, 26, 35, 51, 56, 76, 83); B9(9, 12, 27, 36, 52, 57, 77, 84);
B10(10, 13, 28, 37, 53, 58, 67, 85); B11(11, 14, 29, 38, 54, 59, 68, 86).

Replication 3

B1(1, 19, 32, 38, 51, 61, 75, 79); B2(2, 20, 33, 39, 52, 62, 76, 80); B3(3, 21, 23, 40, 53, 63, 77, 81);
B4(4, 22, 24, 41, 54, 64, 67, 82); B5(5, 12, 25, 42, 55, 65, 68, 83); B6(6, 13, 26, 43, 45, 66, 69, 84);
B7(7, 14, 27, 44, 46, 56, 70, 85); B8(8, 15, 28, 34, 47, 57, 71, 86); B9(9, 16, 29, 35, 48, 58, 72, 87);
B10(10, 17, 30, 36, 49, 59, 73, 88); B11(11, 18, 31, 37, 50, 60, 74, 78).

Replication 4

B1(1, 14, 28, 40, 49, 64, 76, 84); B2(2, 15, 29, 41, 50, 65, 77, 85); B3(3, 16, 30, 42, 51, 66, 67, 86);
B4(4, 17, 31, 43, 52, 56, 68, 87); B5(5, 18, 32, 44, 53, 57, 69, 88); B6(6, 19, 33, 34, 54, 58, 70, 78);
B7(7, 20, 23, 35, 55, 59, 71, 79); B8(8, 21, 24, 36, 45, 60, 72, 80); B9(9, 22, 25, 37, 46, 61, 73, 81);
B10(10, 12, 26, 38, 47, 62, 74, 82); B11(11, 13, 27, 39, 48, 63, 75, 83).

320. $v = 88, b = 55, r = 5, k = 8, AE = 0.9810, DE = 0.9907$ $\alpha(0,1,2)$

Replication 1

B1(1, 12, 23, 34, 45, 56, 67, 78); B2(2, 13, 24, 35, 46, 57, 68, 79); B3(3, 14, 25, 36, 47, 58, 69, 80);
B4(4, 15, 26, 37, 48, 59, 70, 81); B5(5, 16, 27, 38, 49, 60, 71, 82); B6(6, 17, 28, 39, 50, 61, 72, 83);
B7(7, 18, 29, 40, 51, 62, 73, 84); B8(8, 19, 30, 41, 52, 63, 74, 85); B9(9, 20, 31, 42, 53, 64, 75, 86);
B10(10, 21, 32, 43, 54, 65, 76, 87); B11(11, 22, 33, 44, 55, 66, 77, 88).

Replication 2

B1(1, 16, 26, 36, 55, 63, 75, 87); B2(2, 17, 27, 37, 45, 64, 76, 88); B3(3, 18, 28, 38, 46, 65, 77, 78);

B4(4, 19, 29, 39, 47, 66, 67, 79); B5(5, 20, 30, 40, 48, 56, 68, 80); B6(6, 21, 31, 41, 49, 57, 69, 81);
B7(7, 22, 32, 42, 50, 58, 70, 82); B8(8, 12, 33, 43, 51, 59, 71, 83); B9(9, 13, 23, 44, 52, 60, 72, 84);
B10(10, 14, 24, 34, 53, 61, 73, 85); B11(11, 15, 25, 35, 54, 62, 74, 86).

Replication 3

B1(1, 20, 27, 41, 54, 58, 72, 79); B2(2, 21, 28, 42, 55, 59, 73, 80); B3(3, 22, 29, 43, 45, 60, 74, 81);
B4(4, 12, 30, 44, 46, 61, 75, 82); B5(5, 13, 31, 34, 47, 62, 76, 83); B6(6, 14, 32, 35, 48, 63, 77, 84);
B7(7, 15, 33, 36, 49, 64, 67, 85); B8(8, 16, 23, 37, 50, 65, 68, 86); B9(9, 17, 24, 38, 51, 66, 69, 87);
B10(10, 18, 25, 39, 52, 56, 70, 88); B11(11, 19, 26, 40, 53, 57, 71, 78).

Replication 4

B1(1, 22, 25, 39, 49, 59, 68, 84); B2(2, 12, 26, 40, 50, 60, 69, 85); B3(3, 13, 27, 41, 51, 61, 70, 86);
B4(4, 14, 28, 42, 52, 62, 71, 87); B5(5, 15, 29, 43, 53, 63, 72, 88); B6(6, 16, 30, 44, 54, 64, 73, 78);
B7(7, 17, 31, 34, 55, 65, 74, 79); B8(8, 18, 32, 35, 45, 66, 75, 80); B9(9, 19, 33, 36, 46, 56, 76, 81);
B10(10, 20, 23, 37, 47, 57, 77, 82); B11(11, 21, 24, 38, 48, 58, 67, 83).

Replication 5

B1(1, 13, 29, 42, 48, 65, 69, 85); B2(2, 14, 30, 43, 49, 66, 70, 86); B3(3, 15, 31, 44, 50, 56, 71, 87);
B4(4, 16, 32, 34, 51, 57, 72, 88); B5(5, 17, 33, 35, 52, 58, 73, 78); B6(6, 18, 23, 36, 53, 59, 74, 79);
B7(7, 19, 24, 37, 54, 60, 75, 80); B8(8, 20, 25, 38, 55, 61, 76, 81); B9(9, 21, 26, 39, 45, 62, 77, 82);
B10(10, 22, 27, 40, 46, 63, 67, 83); B11(11, 12, 28, 41, 47, 64, 68, 84).

321. $v = 96, b = 24, r = 2, k = 8, AE = 0.9020, DE = 0.9580$ $\alpha(0,1)$;

Replication 1

B1(1, 13, 25, 37, 49, 61, 73, 85); B2(2, 14, 26, 38, 50, 62, 74, 86); B3(3, 15, 27, 39, 51, 63, 75, 87);
B4(4, 16, 28, 40, 52, 64, 76, 88); B5(5, 17, 29, 41, 53, 65, 77, 89); B6(6, 18, 30, 42, 54, 66, 78, 90);
B7(7, 19, 31, 43, 55, 67, 79, 91); B8(8, 20, 32, 44, 56, 68, 80, 92); B9(9, 21, 33, 45, 57, 69, 81, 93);
B10(10, 22, 34, 46, 58, 70, 82, 94); B11(11, 23, 35, 47, 59, 71, 83, 95); B12(12, 24, 36, 48, 60, 72, 84, 96).

Replication 2

B1(1, 15, 33, 38, 59, 65, 80, 88); B2(2, 16, 34, 39, 60, 66, 81, 89); B3(3, 17, 35, 40, 49, 67, 82, 90);
B4(4, 18, 36, 41, 50, 68, 83, 91); B5(5, 19, 25, 42, 51, 69, 84, 92); B6(6, 20, 26, 43, 52, 70, 73, 93);
B7(7, 21, 27, 44, 53, 71, 74, 94); B8(8, 22, 28, 45, 54, 72, 75, 95); B9(9, 23, 29, 46, 55, 61, 76, 96);
B10(10, 24, 30, 47, 56, 62, 77, 85); B11(11, 13, 31, 48, 57, 63, 78, 86); B12(12, 14, 32, 37, 58, 64, 79, 87).

322. $v = 96, b = 36, r = 3, k = 8, AE = 0.9539, DE = 0.9785$ $\alpha(0,1)***$

Replication 1

B1(1, 13, 25, 37, 49, 61, 73, 85); B2(2, 14, 26, 38, 50, 62, 74, 86); B3(3, 15, 27, 39, 51, 63, 75, 87);
B4(4, 16, 28, 40, 52, 64, 76, 88); B5(5, 17, 29, 41, 53, 65, 77, 89); B6(6, 18, 30, 42, 54, 66, 78, 90);
B7(7, 19, 31, 43, 55, 67, 79, 91); B8(8, 20, 32, 44, 56, 68, 80, 92); B9(9, 21, 33, 45, 57, 69, 81, 93);
B10(10, 22, 34, 46, 58, 70, 82, 94); B11(11, 23, 35, 47, 59, 71, 83, 95); B12(12, 24, 36, 48, 60, 72, 84, 96).

Replication 2

B1(1, 19, 29, 39, 52, 71, 84, 86); B2(2, 20, 30, 40, 53, 72, 73, 87); B3(3, 21, 31, 41, 54, 61, 74, 88);
B4(4, 22, 32, 42, 55, 62, 75, 89); B5(5, 23, 33, 43, 56, 63, 76, 90); B6(6, 24, 34, 44, 57, 64, 77, 91);
B7(7, 13, 35, 45, 58, 65, 78, 92); B8(8, 14, 36, 46, 59, 66, 79, 93); B9(9, 15, 25, 47, 60, 67, 80, 94);
B10(10, 16, 26, 48, 49, 68, 81, 95); B11(11, 17, 27, 37, 50, 69, 82, 96); B12(12, 18, 28, 38, 51, 70, 83, 85).

Replication 3

B1(1, 23, 36, 41, 57, 62, 82, 92); B2(2, 24, 25, 42, 58, 63, 83, 93); B3(3, 13, 26, 43, 59, 64, 84, 94);
B4(4, 14, 27, 44, 60, 65, 73, 95); B5(5, 15, 28, 45, 49, 66, 74, 96); B6(6, 16, 29, 46, 50, 67, 75, 85);

B7(7, 17, 30, 47, 51, 68, 76, 86); B8(8, 18, 31, 48, 52, 69, 77, 87); B9(9, 19, 32, 37, 53, 70, 78, 88);
B10(10, 20, 33, 38, 54, 71, 79, 89); B11(11, 21, 34, 39, 55, 72, 80, 90); B12(12, 22, 35, 40, 56, 61, 81, 91).

323. $v = 96, b = 48, r = 4, k = 8, AE = 0.9718, DE = 0.9864$ $\alpha(0,1)***$

Replication 1

B1(1, 13, 25, 37, 49, 61, 73, 85); B2(2, 14, 26, 38, 50, 62, 74, 86); B3(3, 15, 27, 39, 51, 63, 75, 87);
B4(4, 16, 28, 40, 52, 64, 76, 88); B5(5, 17, 29, 41, 53, 65, 77, 89); B6(6, 18, 30, 42, 54, 66, 78, 90);
B7(7, 19, 31, 43, 55, 67, 79, 91); B8(8, 20, 32, 44, 56, 68, 80, 92); B9(9, 21, 33, 45, 57, 69, 81, 93);
B10(10, 22, 34, 46, 58, 70, 82, 94); B11(11, 23, 35, 47, 59, 71, 83, 95); B12(12, 24, 36, 48, 60, 72, 84, 96).

Replication 2

B1(1, 15, 30, 46, 56, 64, 84, 89); B2(2, 16, 31, 47, 57, 65, 73, 90); B3(3, 17, 32, 48, 58, 66, 74, 91);
B4(4, 18, 33, 37, 59, 67, 75, 92); B5(5, 19, 34, 38, 60, 68, 76, 93); B6(6, 20, 35, 39, 49, 69, 77, 94);
B7(7, 21, 36, 40, 50, 70, 78, 95); B8(8, 22, 25, 41, 51, 71, 79, 96); B9(9, 23, 26, 42, 52, 72, 80, 85);
B10(10, 24, 27, 43, 53, 61, 81, 86); B11(11, 13, 28, 44, 54, 62, 82, 87); B12(12, 14, 29, 45, 55, 63, 83, 88).

Replication 3

B1(1, 14, 28, 47, 53, 70, 75, 96); B2(2, 15, 29, 48, 54, 71, 76, 85); B3(3, 16, 30, 37, 55, 72, 77, 86);
B4(4, 17, 31, 38, 56, 61, 78, 87); B5(5, 18, 32, 39, 57, 62, 79, 88); B6(6, 19, 33, 40, 58, 63, 80, 89);
B7(7, 20, 34, 41, 59, 64, 81, 90); B8(8, 21, 35, 42, 60, 65, 82, 91); B9(9, 22, 36, 43, 49, 66, 83, 92);
B10(10, 23, 25, 44, 50, 67, 84, 93); B11(11, 24, 26, 45, 51, 68, 73, 94); B12(12, 13, 27, 46, 52, 69, 74, 95).

Replication 4

B1(1, 24, 33, 41, 52, 62, 78, 91); B2(2, 13, 34, 42, 53, 63, 79, 92); B3(3, 14, 35, 43, 54, 64, 80, 93);
B4(4, 15, 36, 44, 55, 65, 81, 94); B5(5, 16, 25, 45, 56, 66, 82, 95); B6(6, 17, 26, 46, 57, 67, 83, 96);
B7(7, 18, 27, 47, 58, 68, 84, 85); B8(8, 19, 28, 48, 59, 69, 73, 86); B9(9, 20, 29, 37, 60, 70, 74, 87);
B10(10, 21, 30, 38, 49, 71, 75, 88); B11(11, 22, 31, 39, 50, 72, 76, 89); B12(12, 23, 32, 40, 51, 61, 77, 90).

324. $v = 96, b = 60, r = 5, k = 8, AE = 0.9807, DE = 0.9906$ $\alpha(0,1)$

Replication 1

B1(1, 13, 25, 37, 49, 61, 73, 85); B2(2, 14, 26, 38, 50, 62, 74, 86); B3(3, 15, 27, 39, 51, 63, 75, 87);
B4(4, 16, 28, 40, 52, 64, 76, 88); B5(5, 17, 29, 41, 53, 65, 77, 89); B6(6, 18, 30, 42, 54, 66, 78, 90);
B7(7, 19, 31, 43, 55, 67, 79, 91); B8(8, 20, 32, 44, 56, 68, 80, 92); B9(9, 21, 33, 45, 57, 69, 81, 93);
B10(10, 22, 34, 46, 58, 70, 82, 94); B11(11, 23, 35, 47, 59, 71, 83, 95); B12(12, 24, 36, 48, 60, 72, 84, 96).

Replication 2

B1(1, 16, 34, 42, 55, 72, 83, 92); B2(2, 17, 35, 43, 56, 61, 84, 93); B3(3, 18, 36, 44, 57, 62, 73, 94);
B4(4, 19, 25, 45, 58, 63, 74, 95); B5(5, 20, 26, 46, 59, 64, 75, 96); B6(6, 21, 27, 47, 60, 65, 76, 85);
B7(7, 22, 28, 48, 49, 66, 77, 86); B8(8, 23, 29, 37, 50, 67, 78, 87); B9(9, 24, 30, 38, 51, 68, 79, 88);
B10(10, 13, 31, 39, 52, 69, 80, 89); B11(11, 14, 32, 40, 53, 70, 81, 90); B12(12, 15, 33, 41, 54, 71, 82, 91).

Replication 3

B1(1, 20, 28, 38, 60, 63, 81, 94); B2(2, 21, 29, 39, 49, 64, 82, 95); B3(3, 22, 30, 40, 50, 65, 83, 96);
B4(4, 23, 31, 41, 51, 66, 84, 85); B5(5, 24, 32, 42, 52, 67, 73, 86); B6(6, 13, 33, 43, 53, 68, 74, 87);
B7(7, 14, 34, 44, 54, 69, 75, 88); B8(8, 15, 35, 45, 55, 70, 76, 89); B9(9, 16, 36, 46, 56, 71, 77, 90);
B10(10, 17, 25, 47, 57, 72, 78, 91); B11(11, 18, 26, 48, 58, 61, 79, 92); B12(12, 19, 27, 37, 59, 62, 80, 93).

Replication 4

B1(1, 22, 29, 43, 52, 62, 75, 90); B2(2, 23, 30, 44, 53, 63, 76, 91); B3(3, 24, 31, 45, 54, 64, 77, 92);
B4(4, 13, 32, 46, 55, 65, 78, 93); B5(5, 14, 33, 47, 56, 66, 79, 94); B6(6, 15, 34, 48, 57, 67, 80, 95);
B7(7, 16, 35, 37, 58, 68, 81, 96); B8(8, 17, 36, 38, 59, 69, 82, 85); B9(9, 18, 25, 39, 60, 70, 83, 86);
B10(10, 19, 26, 40, 49, 71, 84, 87); B11(11, 20, 27, 41, 50, 72, 73, 88); B12(12, 21, 28, 42, 51, 61, 74, 89).

Replication 5

B1(1, 19, 32, 39, 57, 66, 76, 96); B2(2, 20, 33, 40, 58, 67, 77, 85); B3(3, 21, 34, 41, 59, 68, 78, 86);
B4(4, 22, 35, 42, 60, 69, 79, 87); B5(5, 23, 36, 43, 49, 70, 80, 88); B6(6, 24, 25, 44, 50, 71, 81, 89);

B7(7, 13, 26, 45, 51, 72, 82, 90); B8(8, 14, 27, 46, 52, 61, 83, 91); B9(9, 15, 28, 47, 53, 62, 84, 92);
B10(10, 16, 29, 48, 54, 63, 73, 93); B11(11, 17, 30, 37, 55, 64, 74, 94); B12(12, 18, 31, 38, 56, 65, 75, 95).

325. $v = 104, b = 26, r = 2, k = 8, AE = 0.8990, DE = 0.9570$ $\alpha(0,1)$

Replication 1

B1(1, 14, 27, 40, 53, 66, 79, 92); B2(2, 15, 28, 41, 54, 67, 80, 93); B3(3, 16, 29, 42, 55, 68, 81, 94);
B4(4, 17, 30, 43, 56, 69, 82, 95); B5(5, 18, 31, 44, 57, 70, 83, 96); B6(6, 19, 32, 45, 58, 71, 84, 97);
B7(7, 20, 33, 46, 59, 72, 85, 98); B8(8, 21, 34, 47, 60, 73, 86, 99); B9(9, 22, 35, 48, 61, 74, 87, 100);
B10(10, 23, 36, 49, 62, 75, 88, 101); B11(11, 24, 37, 50, 63, 76, 89, 102);
B12(12, 25, 38, 51, 64, 77, 90, 103); B13(13, 26, 39, 52, 65, 78, 91, 104).

Replication 2

B1(1, 24, 29, 46, 64, 71, 83, 95); B2(2, 25, 30, 47, 65, 72, 84, 96); B3(3, 26, 31, 48, 53, 73, 85, 97);
B4(4, 14, 32, 49, 54, 74, 86, 98); B5(5, 15, 33, 50, 55, 75, 87, 99); B6(6, 16, 34, 51, 56, 76, 88, 100);
B7(7, 17, 35, 52, 57, 77, 89, 101); B8(8, 18, 36, 40, 58, 78, 90, 102); B9(9, 19, 37, 41, 59, 66, 91, 103);
B10(10, 20, 38, 42, 60, 67, 79, 104); B11(11, 21, 39, 43, 61, 68, 80, 92);
B12(12, 22, 27, 44, 62, 69, 81, 93); B13(13, 23, 28, 45, 63, 70, 82, 94).

326. $v = 104, b = 39, r = 3, k = 8, AE = 0.9527, DE = 0.9780$ $\alpha(0,1)$

Replication 1

B1(1, 14, 27, 40, 53, 66, 79, 92); B2(2, 15, 28, 41, 54, 67, 80, 93); B3(3, 16, 29, 42, 55, 68, 81, 94);
B4(4, 17, 30, 43, 56, 69, 82, 95); B5(5, 18, 31, 44, 57, 70, 83, 96); B6(6, 19, 32, 45, 58, 71, 84, 97);
B7(7, 20, 33, 46, 59, 72, 85, 98); B8(8, 21, 34, 47, 60, 73, 86, 99); B9(9, 22, 35, 48, 61, 74, 87, 100);
B10(10, 23, 36, 49, 62, 75, 88, 101); B11(11, 24, 37, 50, 63, 76, 89, 102);
B12(12, 25, 38, 51, 64, 77, 90, 103); B13(13, 26, 39, 52, 65, 78, 91, 104).

Replication 2

B1(1, 23, 39, 51, 60, 67, 84, 102); B2(2, 24, 27, 52, 61, 68, 85, 103); B3(3, 25, 28, 40, 62, 69, 86, 104);
B4(4, 26, 29, 41, 63, 70, 87, 92); B5(5, 14, 30, 42, 64, 71, 88, 93); B6(6, 15, 31, 43, 65, 72, 89, 94);
B7(7, 16, 32, 44, 53, 73, 90, 95); B8(8, 17, 33, 45, 54, 74, 91, 96); B9(9, 18, 34, 46, 55, 75, 79, 97);
B10(10, 19, 35, 47, 56, 76, 80, 98); B11(11, 20, 36, 48, 57, 77, 81, 99); B12(12, 21, 37, 49, 58, 78, 82, 100);
B13(13, 22, 38, 50, 59, 66, 83, 101).

Replication 3

B1(1, 19, 38, 43, 61, 78, 81, 96); B2(2, 20, 39, 44, 62, 66, 82, 97); B3(3, 21, 27, 45, 63, 67, 83, 98);
B4(4, 22, 28, 46, 64, 68, 84, 99); B5(5, 23, 29, 47, 65, 69, 85, 100); B6(6, 24, 30, 48, 53, 70, 86, 101);
B7(7, 25, 31, 49, 54, 71, 87, 102); B8(8, 26, 32, 50, 55, 72, 88, 103); B9(9, 14, 33, 51, 56, 73, 89, 104);
B10(10, 15, 34, 52, 57, 74, 90, 92); B11(11, 16, 35, 40, 58, 75, 91, 93); B12(12, 17, 36, 41, 59, 76, 79, 94);
B13(13, 18, 37, 42, 60, 77, 80, 95).

327. $v = 104, b = 52, r = 4, k = 8, AE = 0.9702, DE = 0.9858$ $\alpha(0,1)$

Replication 1

B 1(1, 14, 27, 40, 53, 66, 79, 92); B 2(2, 15, 28, 41, 54, 67, 80, 93); B 3(3, 16, 29, 42, 55, 68, 81, 94);
B 4(4, 17, 30, 43, 56, 69, 82, 95); B 5(5, 18, 31, 44, 57, 70, 83, 96); B 6(6, 19, 32, 45, 58, 71, 84, 97);
B 7(7, 20, 33, 46, 59, 72, 85, 98); B 8(8, 21, 34, 47, 60, 73, 86, 99); B 9(9, 22, 35, 48, 61, 74, 87, 100);
B10(10, 23, 36, 49, 62, 75, 88, 101); B11(11, 24, 37, 50, 63, 76, 89, 102);
B12(12, 25, 38, 51, 64, 77, 90, 103); B13(13, 26, 39, 52, 65, 78, 91, 104).

Replication 2

B 1(1, 16, 33, 51, 63, 75, 91, 99); B 2(2, 17, 34, 52, 64, 76, 79, 100); B 3(3, 18, 35, 40, 65, 77, 80, 101);
B 4(4, 19, 36, 41, 53, 78, 81, 102); B 5(5, 20, 37, 42, 54, 66, 82, 103); B 6(6, 21, 38, 43, 55, 67, 83, 104);
B 7(7, 22, 39, 44, 56, 68, 84, 92); B 8(8, 23, 27, 45, 57, 69, 85, 93); B 9(9, 24, 28, 46, 58, 70, 86, 94);
B10(10, 25, 29, 47, 59, 71, 87, 95); B11(11, 26, 30, 48, 60, 72, 88, 96); B12(12, 14, 31, 49, 61, 73, 89, 97);
B13(13, 15, 32, 50, 62, 74, 90, 98).

Replication 3

B 1(1, 21, 31, 48, 65, 76, 81, 98); B 2(2, 22, 32, 49, 53, 77, 82, 99); B 3(3, 23, 33, 50, 54, 78, 83, 100);
 B 4(4, 24, 34, 51, 55, 66, 84, 101); B 5(5, 25, 35, 52, 56, 67, 85, 102); B 6(6, 26, 36, 40, 57, 68, 86, 103);
 B 7(7, 14, 37, 41, 58, 69, 87, 104); B 8(8, 15, 38, 42, 59, 70, 88, 92); B 9(9, 16, 39, 43, 60, 71, 89, 93);
 B10(10, 17, 27, 44, 61, 72, 90, 94); B11(11, 18, 28, 45, 62, 73, 91, 95); B12(12, 19, 29, 46, 63, 74, 79, 96);
 B13(13, 20, 30, 47, 64, 75, 80, 97).

Replication 4

B 1(1, 17, 39, 42, 57, 77, 87, 97); B 2(2, 18, 27, 43, 58, 78, 88, 98); B 3(3, 19, 28, 44, 59, 66, 89, 99);
 B 4(4, 20, 29, 45, 60, 67, 90, 100); B 5(5, 21, 30, 46, 61, 68, 91, 101); B 6(6, 22, 31, 47, 62, 69, 79, 102);
 B 7(7, 23, 32, 48, 63, 70, 80, 103); B 8(8, 24, 33, 49, 64, 71, 81, 104); B 9(9, 25, 34, 50, 65, 72, 82, 92);
 B10(10, 26, 35, 51, 53, 73, 83, 93); B11(11, 14, 36, 52, 54, 74, 84, 94); B12(12, 15, 37, 40, 55, 75, 85, 95);
 B13(13, 16, 38, 41, 56, 76, 86, 96).

328. $v = 104, b = 65, r = 5, k = 8, AE = 0.9797, DE = 0.9901$ $\alpha(0,1)$

Replication 1

B1(1, 14, 27, 40, 53, 66, 79, 92); B2(2, 15, 28, 41, 54, 67, 80, 93); B3(3, 16, 29, 42, 55, 68, 81, 94);
 B4(4, 17, 30, 43, 56, 69, 82, 95); B5(5, 18, 31, 44, 57, 70, 83, 96); B6(6, 19, 32, 45, 58, 71, 84, 97);
 B7(7, 20, 33, 46, 59, 72, 85, 98); B8(8, 21, 34, 47, 60, 73, 86, 99); B9(9, 22, 35, 48, 61, 74, 87, 100);
 B10(10, 23, 36, 49, 62, 75, 88, 101); B11(11, 24, 37, 50, 63, 76, 89, 102);
 B12(12, 25, 38, 51, 64, 77, 90, 103); B13(13, 26, 39, 52, 65, 78, 91, 104).

Replication 2

B1(1, 16, 33, 51, 63, 75, 91, 99); B2(2, 17, 34, 52, 64, 76, 79, 100); B3(3, 18, 35, 40, 65, 77, 80, 101);
 B4(4, 19, 36, 41, 53, 78, 81, 102); B5(5, 20, 37, 42, 54, 66, 82, 103); B6(6, 21, 38, 43, 55, 67, 83, 104);
 B7(7, 22, 39, 44, 56, 68, 84, 92); B8(8, 23, 27, 45, 57, 69, 85, 93); B9(9, 24, 28, 46, 58, 70, 86, 94);
 B10(10, 25, 29, 47, 59, 71, 87, 95); B11(11, 26, 30, 48, 60, 72, 88, 96); B12(12, 14, 31, 49, 61, 73, 89, 97);
 B13(13, 15, 32, 50, 62, 74, 90, 98).

Replication 3

B1(1, 21, 31, 48, 65, 76, 81, 98); B2(2, 22, 32, 49, 53, 77, 82, 99); B3(3, 23, 33, 50, 54, 78, 83, 100);
 B4(4, 24, 34, 51, 55, 66, 84, 101); B5(5, 25, 35, 52, 56, 67, 85, 102); B6(6, 26, 36, 40, 57, 68, 86, 103);
 B7(7, 14, 37, 41, 58, 69, 87, 104); B8(8, 15, 38, 42, 59, 70, 88, 92); B9(9, 16, 39, 43, 60, 71, 89, 93);
 B10(10, 17, 27, 44, 61, 72, 90, 94); B11(11, 18, 28, 45, 62, 73, 91, 95); B12(12, 19, 29, 46, 63, 74, 79, 96);
 B13(13, 20, 30, 47, 64, 75, 80, 97).

Replication 4

B1(1, 17, 39, 42, 57, 77, 87, 97); B2(2, 18, 27, 43, 58, 78, 88, 98); B3(3, 19, 28, 44, 59, 66, 89, 99);
 B4(4, 20, 29, 45, 60, 67, 90, 100); B5(5, 21, 30, 46, 61, 68, 91, 101); B6(6, 22, 31, 47, 62, 69, 79, 102);
 B7(7, 23, 32, 48, 63, 70, 80, 103); B8(8, 24, 33, 49, 64, 71, 81, 104); B9(9, 25, 34, 50, 65, 72, 82, 92);
 B10(10, 26, 35, 51, 53, 73, 83, 93); B11(11, 14, 36, 52, 54, 74, 84, 94); B12(12, 15, 37, 40, 55, 75, 85, 95);
 B13(13, 16, 38, 41, 56, 76, 86, 96).

Replication 5

B1(1, 19, 35, 47, 54, 70, 90, 104); B2(2, 20, 36, 48, 55, 71, 91, 92); B3(3, 21, 37, 49, 56, 72, 79, 93);
 B4(4, 22, 38, 50, 57, 73, 80, 94); B5(5, 23, 39, 51, 58, 74, 81, 95); B6(6, 24, 27, 52, 59, 75, 82, 96);
 B7(7, 25, 28, 40, 60, 76, 83, 97); B8(8, 26, 29, 41, 61, 77, 84, 98); B9(9, 14, 30, 42, 62, 78, 85, 99);
 B10(10, 15, 31, 43, 63, 66, 86, 100); B11(11, 16, 32, 44, 64, 67, 87, 101);
 B12(12, 17, 33, 45, 65, 68, 88, 102); B13(13, 18, 34, 46, 53, 69, 89, 103).

329. $v = 112, b = 28, r = 2, k = 8, AE = 0.8966, DE = 0.9562$ $\alpha(0,1)$

Replication 1

B1(1, 15, 29, 43, 57, 71, 85, 99); B2(2, 16, 30, 44, 58, 72, 86, 100); B3(3, 17, 31, 45, 59, 73, 87, 101);
 B4(4, 18, 32, 46, 60, 74, 88, 102); B5(5, 19, 33, 47, 61, 75, 89, 103); B6(6, 20, 34, 48, 62, 76, 90, 104);
 B7(7, 21, 35, 49, 63, 77, 91, 105); B8(8, 22, 36, 50, 64, 78, 92, 106); B9(9, 23, 37, 51, 65, 79, 93, 107);
 B10(10, 24, 38, 52, 66, 80, 94, 108); B11(11, 25, 39, 53, 67, 81, 95, 109);
 B12(12, 26, 40, 54, 68, 82, 96, 110); B13(13, 27, 41, 55, 69, 83, 97, 111);
 B14(14, 28, 42, 56, 70, 84, 98, 112).

Replication 2

B1(1, 21, 34, 45, 58, 83, 89, 108); B2(2, 22, 35, 46, 59, 84, 90, 109); B3(3, 23, 36, 47, 60, 71, 91, 110);
B4(4, 24, 37, 48, 61, 72, 92, 111); B5(5, 25, 38, 49, 62, 73, 93, 112); B6(6, 26, 39, 50, 63, 74, 94, 99);
B7(7, 27, 40, 51, 64, 75, 95, 100); B8(8, 28, 41, 52, 65, 76, 96, 101); B9(9, 15, 42, 53, 66, 77, 97, 102);
B10(10, 16, 29, 54, 67, 78, 98, 103); B11(11, 17, 30, 55, 68, 79, 85, 104);
B12(12, 18, 31, 56, 69, 80, 86, 105); B13(13, 19, 32, 43, 70, 81, 87, 106);
B14(14, 20, 33, 44, 57, 82, 88, 107).

330. $v = 112, b = 42, r = 3, k = 8, AE = 0.9513, DE = 0.9774$ $\alpha(0,1)$

Replication 1

B1(1, 15, 29, 43, 57, 71, 85, 99); B2(2, 16, 30, 44, 58, 72, 86, 100); B3(3, 17, 31, 45, 59, 73, 87, 101);
B4(4, 18, 32, 46, 60, 74, 88, 102); B5(5, 19, 33, 47, 61, 75, 89, 103); B6(6, 20, 34, 48, 62, 76, 90, 104);
B7(7, 21, 35, 49, 63, 77, 91, 105); B8(8, 22, 36, 50, 64, 78, 92, 106); B9(9, 23, 37, 51, 65, 79, 93, 107); B10(10,
24, 38, 52, 66, 80, 94, 108); B11(11, 25, 39, 53, 67, 81, 95, 109);
B12(12, 26, 40, 54, 68, 82, 96, 110); B13(13, 27, 41, 55, 69, 83, 97, 111);
B14(14, 28, 42, 56, 70, 84, 98, 112).

Replication 2

B1(1, 16, 39, 51, 70, 82, 92, 111); B2(2, 17, 40, 52, 57, 83, 93, 112); B3(3, 18, 41, 53, 58, 84, 94, 99);
B4(4, 19, 42, 54, 59, 71, 95, 100); B5(5, 20, 29, 55, 60, 72, 96, 101); B6(6, 21, 30, 56, 61, 73, 97, 102);
B7(7, 22, 31, 43, 62, 74, 98, 103); B8(8, 23, 32, 44, 63, 75, 85, 104); B9(9, 24, 33, 45, 64, 76, 86, 105);
B10(10, 25, 34, 46, 65, 77, 87, 106); B11(11, 26, 35, 47, 66, 78, 88, 107); B12(12, 27, 36, 48, 67, 79, 89, 108);
B13(13, 28, 37, 49, 68, 80, 90, 109); B14(14, 15, 38, 50, 69, 81, 91, 110).

Replication 3

B1(1, 28, 35, 44, 60, 76, 87, 108); B2(2, 15, 36, 45, 61, 77, 88, 109); B3(3, 16, 37, 46, 62, 78, 89, 110);
B4(4, 17, 38, 47, 63, 79, 90, 111); B5(5, 18, 39, 48, 64, 80, 91, 112); B6(6, 19, 40, 49, 65, 81, 92, 99);
B7(7, 20, 41, 50, 66, 82, 93, 100); B8(8, 21, 42, 51, 67, 83, 94, 101); B9(9, 22, 29, 52, 68, 84, 95, 102);
B10(10, 23, 30, 53, 69, 71, 96, 103); B11(11, 24, 31, 54, 70, 72, 97, 104); B12(12, 25, 32, 55, 57, 73, 98, 105);
B13(13, 26, 33, 56, 58, 74, 85, 106); B14(14, 27, 34, 43, 59, 75, 86, 107).

331. $v = 112, b = 56, r = 4, k = 8, AE = 0.9684, DE = 0.9849$ $\alpha(0,1,2)$

Replication 1

B 1(1, 15, 29, 43, 57, 71, 85, 99); B 2(2, 16, 30, 44, 58, 72, 86, 100); B 3(3, 17, 31, 45, 59, 73, 87, 101);
B 4(4, 18, 32, 46, 60, 74, 88, 102); B 5(5, 19, 33, 47, 61, 75, 89, 103); B 6(6, 20, 34, 48, 62, 76, 90, 104);
B 7(7, 21, 35, 49, 63, 77, 91, 105); B 8(8, 22, 36, 50, 64, 78, 92, 106); B 9(9, 23, 37, 51, 65, 79, 93, 107);
B10(10, 24, 38, 52, 66, 80, 94, 108); B11(11, 25, 39, 53, 67, 81, 95, 109);
B12(12, 26, 40, 54, 68, 82, 96, 110); B13(13, 27, 41, 55, 69, 83, 97, 111);
B14(14, 28, 42, 56, 70, 84, 98, 112).

Replication 2

B 1(1, 21, 33, 44, 62, 79, 94, 111); B 2(2, 22, 34, 45, 63, 80, 95, 112); B 3(3, 23, 35, 46, 64, 81, 96, 99);
B 4(4, 24, 36, 47, 65, 82, 97, 100); B 5(5, 25, 37, 48, 66, 83, 98, 101); B 6(6, 26, 38, 49, 67, 84, 85, 102);
B 7(7, 27, 39, 50, 68, 71, 86, 103); B 8(8, 28, 40, 51, 69, 72, 87, 104); B 9(9, 15, 41, 52, 70, 73, 88, 105);
B10(10, 16, 42, 53, 57, 74, 89, 106); B11(11, 17, 29, 54, 58, 75, 90, 107); B12(12, 18, 30, 55, 59, 76, 91, 108);
B13(13, 19, 31, 56, 60, 77, 92, 109); B14(14, 20, 32, 43, 61, 78, 93, 110).

Replication 3

B 1(1, 18, 42, 46, 63, 75, 92, 110); B 2(2, 19, 29, 47, 64, 76, 93, 111); B 3(3, 20, 30, 48, 65, 77, 94, 112);
B 4(4, 21, 31, 49, 66, 78, 95, 99); B 5(5, 22, 32, 50, 67, 79, 96, 100); B 6(6, 23, 33, 51, 68, 80, 97, 101);
B 7(7, 24, 34, 52, 69, 81, 98, 102); B 8(8, 25, 35, 53, 70, 82, 85, 103); B 9(9, 26, 36, 54, 57, 83, 86, 104);
B10(10, 27, 37, 55, 58, 84, 87, 105); B11(11, 28, 38, 56, 59, 71, 88, 106); B12(12, 15, 39, 43, 60, 72, 89, 107);
B13(13, 16, 40, 44, 61, 73, 90, 108); B14(14, 17, 41, 45, 62, 74, 91, 109).

Replication 4

B 1(1, 27, 31, 51, 70, 81, 90, 100); B 2(2, 28, 32, 52, 57, 82, 91, 101); B 3(3, 15, 33, 53, 58, 83, 92, 102);

B 4(4, 16, 34, 54, 59, 84, 93, 103); B 5(5, 17, 35, 55, 60, 71, 94, 104); B 6(6, 18, 36, 56, 61, 72, 95, 105);
B 7(7, 19, 37, 43, 62, 73, 96, 106); B 8(8, 20, 38, 44, 63, 74, 97, 107); B 9(9, 21, 39, 45, 64, 75, 98, 108);
B10(10, 22, 40, 46, 65, 76, 85, 109);B11(11, 23, 41, 47, 66, 77, 86, 110);B12(12, 24, 42, 48, 67, 78, 87, 111);
B13(13, 25, 29, 49, 68, 79, 88, 112); B14(14, 26, 30, 50, 69, 80, 89, 99).

332. $v = 112, b = 70, r = 5, k = 8, AE = 0.9783, DE = 0.9894$ $\alpha(0,1,2)$

Replication 1

B1(1, 15, 29, 43, 57, 71, 85, 99); B2(2, 16, 30, 44, 58, 72, 86, 100); B3(3, 17, 31, 45, 59, 73, 87, 101);
B4(4, 18, 32, 46, 60, 74, 88, 102); B5(5, 19, 33, 47, 61, 75, 89, 103); B6(6, 20, 34, 48, 62, 76, 90, 104);
B7(7, 21, 35, 49, 63, 77, 91, 105); B8(8, 22, 36, 50, 64, 78, 92, 106); B9(9, 23, 37, 51, 65, 79, 93, 107);
B10(10, 24, 38, 52, 66, 80, 94, 108);B11(11, 25, 39, 53, 67, 81, 95, 109);B12(12, 26, 40, 54, 68, 82, 96, 110);
B13(13, 27, 41, 55, 69, 83, 97, 111); B14(14, 28, 42, 56, 70, 84, 98, 112).

Replication 2

B1(1, 21, 33, 44, 62, 79, 94, 111); B2(2, 22, 34, 45, 63, 80, 95, 112); B3(3, 23, 35, 46, 64, 81, 96, 99);
B4(4, 24, 36, 47, 65, 82, 97, 100); B5(5, 25, 37, 48, 66, 83, 98, 101); B6(6, 26, 38, 49, 67, 84, 85, 102);
B7(7, 27, 39, 50, 68, 71, 86, 103); B8(8, 28, 40, 51, 69, 72, 87, 104); B9(9, 15, 41, 52, 70, 73, 88, 105);
B10(10, 16, 42, 53, 57, 74, 89, 106);B11(11, 17, 29, 54, 58, 75, 90, 107);B12(12, 18, 30, 55, 59, 76, 91, 108);
B13(13, 19, 31, 56, 60, 77, 92, 109); B14(14, 20, 32, 43, 61, 78, 93, 110).

Replication 3

B1(1, 18, 42, 46, 63, 75, 92, 110); B2(2, 19, 29, 47, 64, 76, 93, 111); B3(3, 20, 30, 48, 65, 77, 94, 112);
B4(4, 21, 31, 49, 66, 78, 95, 99); B5(5, 22, 32, 50, 67, 79, 96, 100); B6(6, 23, 33, 51, 68, 80, 97, 101);
B7(7, 24, 34, 52, 69, 81, 98, 102); B8(8, 25, 35, 53, 70, 82, 85, 103); B9(9, 26, 36, 54, 57, 83, 86, 104);
B10(10, 27, 37, 55, 58, 84, 87, 105);B11(11, 28, 38, 56, 59, 71, 88, 106);B12(12, 15, 39, 43, 60, 72, 89, 107);
B13(13, 16, 40, 44, 61, 73, 90, 108); B14(14, 17, 41, 45, 62, 74, 91, 109).

Replication 4

B1(1, 27, 31, 51, 70, 81, 90, 100); B2(2, 28, 32, 52, 57, 82, 91, 101); B3(3, 15, 33, 53, 58, 83, 92, 102);
B4(4, 16, 34, 54, 59, 84, 93, 103); B5(5, 17, 35, 55, 60, 71, 94, 104); B6(6, 18, 36, 56, 61, 72, 95, 105);
B7(7, 19, 37, 43, 62, 73, 96, 106); B8(8, 20, 38, 44, 63, 74, 97, 107); B9(9, 21, 39, 45, 64, 75, 98, 108);
B10(10, 22, 40, 46, 65, 76, 85, 109);B11(11, 23, 41, 47, 66, 77, 86, 110);B12(12, 24, 42, 48, 67, 78, 87, 111);
B13(13, 25, 29, 49, 68, 79, 88, 112); B14(14, 26, 30, 50, 69, 80, 89, 99).

Replication 5

B1(1, 25, 36, 45, 69, 84, 96, 107); B2(2, 26, 37, 46, 70, 71, 97, 108); B3(3, 27, 38, 47, 57, 72, 98, 109);
B4(4, 28, 39, 48, 58, 73, 85, 110); B5(5, 15, 40, 49, 59, 74, 86, 111); B6(6, 16, 41, 50, 60, 75, 87, 112);
B7(7, 17, 42, 51, 61, 76, 88, 99); B8(8, 18, 29, 52, 62, 77, 89, 100); B9(9, 19, 30, 53, 63, 78, 90, 101);
B10(10, 20, 31, 54, 64, 79, 91, 102);B11(11, 21, 32, 55, 65, 80, 92, 103);B12(12, 22, 33, 56, 66, 81, 93, 104);
B13(13, 23, 34, 43, 67, 82, 94, 105); B14(14, 24, 35, 44, 68, 83, 95, 106).

333. $v = 120, b = 30, r = 2, k = 8, AE = 0.8947, DE = 0.9555$ $\alpha(0,1)$

Replication 1

B1(1, 16, 31, 46, 61, 76, 91, 106); B2(2, 17, 32, 47, 62, 77, 92, 107); B3(3, 18, 33, 48, 63, 78, 93, 108);
B4(4, 19, 34, 49, 64, 79, 94, 109); B5(5, 20, 35, 50, 65, 80, 95, 110); B6(6, 21, 36, 51, 66, 81, 96, 111);
B7(7, 22, 37, 52, 67, 82, 97, 112); B8(8, 23, 38, 53, 68, 83, 98, 113); B9(9, 24, 39, 54, 69, 84, 99, 114);
B10(10, 25, 40, 55, 70, 85, 100, 115); B11(11, 26, 41, 56, 71, 86, 101, 116);
B12(12, 27, 42, 57, 72, 87, 102, 117); B13(13, 28, 43, 58, 73, 88, 103, 118);
B14(14, 29, 44, 59, 74, 89, 104, 119); B15(15, 30, 45, 60, 75, 90, 105, 120).

Replication 2

B1(1, 25, 34, 47, 66, 82, 104, 120);B2(2, 26, 35, 48, 67, 83, 105, 106);B3(3, 27, 36, 49, 68, 84, 91, 107);
 B4(4, 28, 37, 50, 69, 85, 92, 108); B5(5, 29, 38, 51, 70, 86, 93, 109); B6(6, 30, 39, 52, 71, 87, 94, 110);
 B7(7, 16, 40, 53, 72, 88, 95, 111); B8(8, 17, 41, 54, 73, 89, 96, 112); B9(9, 18, 42, 55, 74, 90, 97, 113);
 B10(10, 19, 43, 56, 75, 76, 98, 114); B11(11, 20, 44, 57, 61, 77, 99, 115);
 B12(12, 21, 45, 58, 62, 78, 100, 116); B13(13, 22, 31, 59, 63, 79, 101, 117);
 B14(14, 23, 32, 60, 64, 80, 102, 118); B15(15, 24, 33, 46, 65, 81, 103, 119).

334. $v = 120, b = 45, r = 3, k = 8, AE = 0.9497, DE = 0.9768$ $\alpha(0,1)$

Replication 1

B1(1, 16, 31, 46, 61, 76, 91, 106); B2(2, 17, 32, 47, 62, 77, 92, 107); B3(3, 18, 33, 48, 63, 78, 93, 108);
 B4(4, 19, 34, 49, 64, 79, 94, 109); B5(5, 20, 35, 50, 65, 80, 95, 110); B6(6, 21, 36, 51, 66, 81, 96, 111);
 B7(7, 22, 37, 52, 67, 82, 97, 112); B8(8, 23, 38, 53, 68, 83, 98, 113); B9(9, 24, 39, 54, 69, 84, 99, 114);
 B10(10, 25, 40, 55, 70, 85, 100, 115); B11(11, 26, 41, 56, 71, 86, 101, 116);
 B12(12, 27, 42, 57, 72, 87, 102, 117); B13(13, 28, 43, 58, 73, 88, 103, 118);
 B14(14, 29, 44, 59, 74, 89, 104, 119); B15(15, 30, 45, 60, 75, 90, 105, 120).

Replication 2

B1(1, 28, 37, 51, 62, 85, 95, 119); B2(2, 29, 38, 52, 63, 86, 96, 120); B3(3, 30, 39, 53, 64, 87, 97, 106);
 B4(4, 16, 40, 54, 65, 88, 98, 107); B5(5, 17, 41, 55, 66, 89, 99, 108); B6(6, 18, 42, 56, 67, 90, 100, 109);
 B7(7, 19, 43, 57, 68, 76, 101, 110);B8(8, 20, 44, 58, 69, 77, 102, 111);B9(9, 21, 45, 59, 70, 78, 103, 112);
 B10(10, 22, 31, 60, 71, 79, 104, 113); B11(11, 23, 32, 46, 72, 80, 105, 114);
 B12(12, 24, 33, 47, 73, 81, 91, 115); B13(13, 25, 34, 48, 74, 82, 92, 116);
 B14(14, 26, 35, 49, 75, 83, 93, 117); B15(15, 27, 36, 50, 61, 84, 94, 118).

Replication 3

B1(1, 29, 43, 55, 69, 90, 93, 116); B2(2, 30, 44, 56, 70, 76, 94, 117); B3(3, 16, 45, 57, 71, 77, 95, 118);
 B4(4, 17, 31, 58, 72, 78, 96, 119); B5(5, 18, 32, 59, 73, 79, 97, 120); B6(6, 19, 33, 60, 74, 80, 98, 106);
 B7(7, 20, 34, 46, 75, 81, 99, 107);B8(8, 21, 35, 47, 61, 82, 100, 108); B9(9, 22, 36, 48, 62, 83, 101, 109);
 B10(10, 23, 37, 49, 63, 84, 102, 110); B11(11, 24, 38, 50, 64, 85, 103, 111);
 B12(12, 25, 39, 51, 65, 86, 104, 112); B13(13, 26, 40, 52, 66, 87, 105, 113);
 B14(14, 27, 41, 53, 67, 88, 91, 114); B15(15, 28, 42, 54, 68, 89, 92, 115).

335. $v = 120, b = 60, r = 4, k = 8, AE = 0.9689, DE = 0.9851$ $\alpha(0,1)$

Replication 1

B 1(1, 16, 31, 46, 61, 76, 91, 106); B 2(2, 17, 32, 47, 62, 77, 92, 107); B 3(3, 18, 33, 48, 63, 78, 93, 108);
 B 4(4, 19, 34, 49, 64, 79, 94, 109); B 5(5, 20, 35, 50, 65, 80, 95, 110); B 6(6, 21, 36, 51, 66, 81, 96, 111);
 B 7(7, 22, 37, 52, 67, 82, 97, 112); B 8(8, 23, 38, 53, 68, 83, 98, 113); B 9(9, 24, 39, 54, 69, 84, 99, 114);
 B10(10, 25, 40, 55, 70, 85, 100, 115); B11(11, 26, 41, 56, 71, 86, 101, 116);
 B12(12, 27, 42, 57, 72, 87, 102, 117); B13(13, 28, 43, 58, 73, 88, 103, 118);
 B14(14, 29, 44, 59, 74, 89, 104, 119); B15(15, 30, 45, 60, 75, 90, 105, 120).

Replication 2

B 1(1, 21, 32, 56, 67, 89, 100, 109);B 2(2, 22, 33, 57, 68, 90, 101, 110);B 3(3, 23, 34, 58, 69, 76, 102, 111);
 B 4(4, 24, 35, 59, 70, 77, 103, 112);B 5(5, 25, 36, 60, 71, 78, 104, 113);B 6(6, 26, 37, 46, 72, 79, 105, 114);
 B 7(7, 27, 38, 47, 73, 80, 91, 115); B 8(8, 28, 39, 48, 74, 81, 92, 116); B 9(9, 29, 40, 49, 75, 82, 93, 117);
 B10(10, 30, 41, 50, 61, 83, 94, 118); B11(11, 16, 42, 51, 62, 84, 95, 119);
 B12(12, 17, 43, 52, 63, 85, 96, 120); B13(13, 18, 44, 53, 64, 86, 97, 106);
 B14(14, 19, 45, 54, 65, 87, 98, 107); B15(15, 20, 31, 55, 66, 88, 99, 108).

Replication 3

B 1(1, 20, 37, 48, 75, 87, 103, 113);B 2(2, 21, 38, 49, 61, 88, 104, 114);B 3(3, 22, 39, 50, 62, 89, 105, 115);
 B 4(4, 23, 40, 51, 63, 90, 91, 116); B 5(5, 24, 41, 52, 64, 76, 92, 117); B 6(6, 25, 42, 53, 65, 77, 93, 118);

B 7(7, 26, 43, 54, 66, 78, 94, 119); B 8(8, 27, 44, 55, 67, 79, 95, 120); B 9(9, 28, 45, 56, 68, 80, 96, 106);
 B10(10, 29, 31, 57, 69, 81, 97, 107); B11(11, 30, 32, 58, 70, 82, 98, 108);
 B12(12, 16, 33, 59, 71, 83, 99, 109); B13(13, 17, 34, 60, 72, 84, 100, 110);
 B14(14, 18, 35, 46, 73, 85, 101, 111); B15(15, 19, 36, 47, 74, 86, 102, 112).

Replication 4

B 1(1, 27, 33, 58, 65, 86, 92, 114); B 2(2, 28, 34, 59, 66, 87, 93, 115); B 3(3, 29, 35, 60, 67, 88, 94, 116);
 B 4(4, 30, 36, 46, 68, 89, 95, 117); B 5(5, 16, 37, 47, 69, 90, 96, 118); B 6(6, 17, 38, 48, 70, 76, 97, 119);
 B 7(7, 18, 39, 49, 71, 77, 98, 120); B 8(8, 19, 40, 50, 72, 78, 99, 106); B 9(9, 20, 41, 51, 73, 79, 100, 107);
 B10(10, 21, 42, 52, 74, 80, 101, 108); B11(11, 22, 43, 53, 75, 81, 102, 109);
 B12(12, 23, 44, 54, 61, 82, 103, 110); B13(13, 24, 45, 55, 62, 83, 104, 111);
 B14(14, 25, 31, 56, 63, 84, 105, 112); B15(15, 26, 32, 57, 64, 85, 91, 113).

336. $v = 120, b = 75, r = 5, k = 8, AE = 0.9783, DE = 0.9894$ $\alpha(0,1)$

Replication 1

B1(1, 16, 31, 46, 61, 76, 91, 106); B2(2, 17, 32, 47, 62, 77, 92, 107); B3(3, 18, 33, 48, 63, 78, 93, 108);
 B4(4, 19, 34, 49, 64, 79, 94, 109); B5(5, 20, 35, 50, 65, 80, 95, 110); B6(6, 21, 36, 51, 66, 81, 96, 111);
 B7(7, 22, 37, 52, 67, 82, 97, 112); B8(8, 23, 38, 53, 68, 83, 98, 113); B9(9, 24, 39, 54, 69, 84, 99, 114);
 B10(10, 25, 40, 55, 70, 85, 100, 115); B11(11, 26, 41, 56, 71, 86, 101, 116);
 B12(12, 27, 42, 57, 72, 87, 102, 117); B13(13, 28, 43, 58, 73, 88, 103, 118);
 B14(14, 29, 44, 59, 74, 89, 104, 119); B15(15, 30, 45, 60, 75, 90, 105, 120).

Replication 2

B1(1, 21, 32, 56, 67, 89, 100, 109); B2(2, 22, 33, 57, 68, 90, 101, 110); B3(3, 23, 34, 58, 69, 76, 102, 111);
 B4(4, 24, 35, 59, 70, 77, 103, 112); B5(5, 25, 36, 60, 71, 78, 104, 113); B6(6, 26, 37, 46, 72, 79, 105, 114);
 B7(7, 27, 38, 47, 73, 80, 91, 115); B8(8, 28, 39, 48, 74, 81, 92, 116); B9(9, 29, 40, 49, 75, 82, 93, 117);
 B10(10, 30, 41, 50, 61, 83, 94, 118); B11(11, 16, 42, 51, 62, 84, 95, 119);
 B12(12, 17, 43, 52, 63, 85, 96, 120); B13(13, 18, 44, 53, 64, 86, 97, 106);
 B14(14, 19, 45, 54, 65, 87, 98, 107); B15(15, 20, 31, 55, 66, 88, 99, 108).

Replication 3

B1(1, 20, 37, 48, 75, 87, 103, 113); B2(2, 21, 38, 49, 61, 88, 104, 114); B3(3, 22, 39, 50, 62, 89, 105, 115);
 B4(4, 23, 40, 51, 63, 90, 91, 116); B5(5, 24, 41, 52, 64, 76, 92, 117); B6(6, 25, 42, 53, 65, 77, 93, 118);
 B7(7, 26, 43, 54, 66, 78, 94, 119); B8(8, 27, 44, 55, 67, 79, 95, 120); B9(9, 28, 45, 56, 68, 80, 96, 106);
 B10(10, 29, 31, 57, 69, 81, 97, 107); B11(11, 30, 32, 58, 70, 82, 98, 108);
 B12(12, 16, 33, 59, 71, 83, 99, 109); B13(13, 17, 34, 60, 72, 84, 100, 110);
 B14(14, 18, 35, 46, 73, 85, 101, 111); B15(15, 19, 36, 47, 74, 86, 102, 112).

Replication 4

B1(1, 27, 33, 58, 65, 86, 92, 114); B2(2, 28, 34, 59, 66, 87, 93, 115); B3(3, 29, 35, 60, 67, 88, 94, 116);
 B4(4, 30, 36, 46, 68, 89, 95, 117); B5(5, 16, 37, 47, 69, 90, 96, 118); B6(6, 17, 38, 48, 70, 76, 97, 119);
 B7(7, 18, 39, 49, 71, 77, 98, 120); B8(8, 19, 40, 50, 72, 78, 99, 106); B9(9, 20, 41, 51, 73, 79, 100, 107);
 B10(10, 21, 42, 52, 74, 80, 101, 108); B11(11, 22, 43, 53, 75, 81, 102, 109);
 B12(12, 23, 44, 54, 61, 82, 103, 110); B13(13, 24, 45, 55, 62, 83, 104, 111);
 B14(14, 25, 31, 56, 63, 84, 105, 112); B15(15, 26, 32, 57, 64, 85, 91, 113).

Replication 5

B1(1, 28, 40, 60, 69, 77, 101, 119); B2(2, 29, 41, 46, 70, 78, 102, 120); B3(3, 30, 42, 47, 71, 79, 103, 106);
 B4(4, 16, 43, 48, 72, 80, 104, 107); B5(5, 17, 44, 49, 73, 81, 105, 108); B6(6, 18, 45, 50, 74, 82, 91, 109);
 B7(7, 19, 31, 51, 75, 83, 92, 110); B8(8, 20, 32, 52, 61, 84, 93, 111); B9(9, 21, 33, 53, 62, 85, 94, 112);
 B10(10, 22, 34, 54, 63, 86, 95, 113); B11(11, 23, 35, 55, 64, 87, 96, 114);
 B12(12, 24, 36, 56, 65, 88, 97, 115); B13(13, 25, 37, 57, 66, 89, 98, 116);
 B14(14, 26, 38, 58, 67, 90, 99, 117); B15(15, 27, 39, 59, 68, 76, 100, 118).

BLOCK SIZE 9

337. $v = 18, b = 4, r = 2, k = 9, AE = 0.9482, DE = 0.9786$ $\alpha(0,1,2)$
Replication 1
B1(1, 3, 5, 7, 9, 11, 13, 15, 17); B2(2, 4, 6, 8, 10, 12, 14, 16, 18).
Replication 2
B1(1, 3, 6, 8, 10, 12, 14, 15, 17); B2(2, 4, 5, 7, 9, 11, 13, 16, 18).
338. $v = 18, b = 6, r = 3, k = 9, AE = 0.9711, DE = 0.9872$ $\alpha(0,1,2,3)$
Replication 1
B1(1, 3, 5, 7, 9, 11, 13, 15, 17); B2(2, 4, 6, 8, 10, 12, 14, 16, 18).
Replication 2
B1(1, 4, 5, 8, 9, 12, 14, 15, 18); B2(2, 3, 6, 7, 10, 11, 13, 16, 17).
Replication 3
B1(1, 4, 6, 7, 10, 11, 14, 16, 18); B2(2, 3, 5, 8, 9, 12, 13, 15, 17).
339. $v = 18, b = 8, r = 4, k = 9, AE = 0.9811, DE = 0.9912$ $\alpha(0,2,4)$
Replication 1
B1(1, 3, 5, 7, 9, 11, 13, 15, 17); B2(2, 4, 6, 8, 10, 12, 14, 16, 18).
Replication 2
B1(1, 4, 6, 8, 9, 11, 14, 16, 18); B2(2, 3, 5, 7, 10, 12, 13, 15, 17).
Replication 3
B1(1, 3, 6, 7, 10, 12, 14, 16, 17); B2(2, 4, 5, 8, 9, 11, 13, 15, 18).
Replication 4
B1(1, 4, 5, 8, 10, 12, 13, 15, 18); B2(2, 3, 6, 7, 9, 11, 14, 16, 17).
340. $v = 18, b = 10, r = 5, k = 9, AE = 0.9878, DE = 0.9942$ $\alpha(0,1,2,3,4)$
Replication 1
B1(1, 3, 5, 7, 9, 11, 13, 15, 17); B2(2, 4, 6, 8, 10, 12, 14, 16, 18).
Replication 2
B1(1, 4, 5, 8, 9, 12, 14, 16, 18); B2(2, 3, 6, 7, 10, 11, 13, 15, 17).
Replication 3
B1(1, 4, 6, 7, 10, 12, 14, 15, 17); B2(2, 3, 5, 8, 9, 11, 13, 16, 18).
Replication 4
B1(1, 3, 6, 8, 10, 12, 13, 15, 18); B2(2, 4, 5, 7, 9, 11, 14, 16, 17).
Replication 5
B1(1, 3, 5, 8, 10, 11, 14, 16, 17); B2(2, 4, 6, 7, 9, 12, 13, 15, 18).
341. $v = 27, b = 6, r = 2, k = 9, AE = 0.9294, DE = 0.9709$ $\alpha(0,1,2)$
Replication 1
B1(1, 4, 7, 10, 13, 16, 19, 22, 25); B2(2, 5, 8, 11, 14, 17, 20, 23, 26); B3(3, 6, 9, 12, 15, 18, 21, 24, 27).
Replication 2
B1(1, 4, 8, 11, 14, 18, 21, 24, 27); B2(2, 5, 9, 12, 15, 16, 19, 22, 25); B3(3, 6, 7, 10, 13, 17, 20, 23, 26).
342. $v = 27, b = 9, r = 3, k = 9, AE = 0.9626, DE = 0.9832$ $\alpha(0,1,2,3)$

Replication 1

B1(1, 4, 7, 10, 13, 16, 19, 22, 25);B2(2, 5, 8, 11, 14, 17, 20, 23, 26);B3(3, 6, 9, 12, 15, 18, 21, 24, 27).

Replication 2

B1(1, 6, 8, 12, 14, 17, 21, 24, 26);B2(2, 4, 9, 10, 15, 18, 19, 22, 27);B3(3, 5, 7, 11, 13, 16, 20, 23, 25).

Replication 3

B1(1, 5, 9, 11, 15, 18, 21, 23, 25);B2(2, 6, 7, 12, 13, 16, 19, 24, 26);B3(3, 4, 8, 10, 14, 17, 20, 22, 27).

343. $v = 27, b = 12, r = 4, k = 9, AE = 0.9795, DE = 0.9903$ $\alpha(0,1,2,3)$

Replication 1

B1(1, 4, 7, 10, 13, 16, 19, 22, 25);B2(2, 5, 8, 11, 14, 17, 20, 23, 26);B3(3, 6, 9, 12, 15, 18, 21, 24, 27).

Replication 2

B1(1, 4, 9, 11, 14, 16, 21, 24, 26);B2(2, 5, 7, 12, 15, 17, 19, 22, 27);B3(3, 6, 8, 10, 13, 18, 20, 23, 25).

Replication 3

B1(1, 5, 8, 12, 14, 18, 19, 23, 27);B2(2, 6, 9, 10, 15, 16, 20, 24, 25);B3(3, 4, 7, 11, 13, 17, 21, 22, 26).

Replication 4

B1(1, 6, 7, 11, 15, 17, 20, 23, 27);B2(2, 4, 8, 12, 13, 18, 21, 24, 25);B3(3, 5, 9, 10, 14, 16, 19, 22, 26).

344. $v = 27, b = 15, r = 5, k = 9, AE = 0.9859, DE = 0.9932$ $\alpha(0,1,2,3)$

Replication 1

B1(1, 4, 7, 10, 13, 16, 19, 22, 25);B2(2, 5, 8, 11, 14, 17, 20, 23, 26);B3(3, 6, 9, 12, 15, 18, 21, 24, 27).

Replication 2

B1(1, 6, 7, 11, 15, 17, 20, 24, 27);B2(2, 4, 8, 12, 13, 18, 21, 22, 25);B3(3, 5, 9, 10, 14, 16, 19, 23, 26).

Replication 3

B1(1, 5, 8, 12, 15, 16, 21, 23, 25);B2(2, 6, 9, 10, 13, 17, 19, 24, 26);B3(3, 4, 7, 11, 14, 18, 20, 22, 27).

Replication 4

B1(1, 4, 8, 11, 14, 18, 19, 24, 26);B2(2, 5, 9, 12, 15, 16, 20, 22, 27);B3(3, 6, 7, 10, 13, 17, 21, 23, 25).

Replication 5

B1(1, 6, 9, 12, 13, 18, 20, 23, 26);B2(2, 4, 7, 10, 14, 16, 21, 24, 27);B3(3, 5, 8, 11, 15, 17, 19, 22, 25).

345. $v = 36, b = 8, r = 2, k = 9, AE = 0.9207, DE = 0.9673$ $\alpha(0,1,2)$

Replication 1

B1(1, 5, 9, 13, 17, 21, 25, 29, 33); B2(2, 6, 10, 14, 18, 22, 26, 30, 34);

B3(3, 7, 11, 15, 19, 23, 27, 31, 35); B4(4, 8, 12, 16, 20, 24, 28, 32, 36).

Replication 2

B1(1, 7, 12, 15, 20, 23, 26, 30, 34); B2(2, 8, 9, 16, 17, 24, 27, 31, 35);

B3(3, 5, 10, 13, 18, 21, 28, 32, 36); B4(4, 6, 11, 14, 19, 22, 25, 29, 33).

346. $v = 36, b = 12, r = 3, k = 9, AE = 0.9634, DE = 0.9833$ $\alpha(0,1,2,3)$

Replication 1

B1(1, 5, 9, 13, 17, 21, 25, 29, 33); B2(2, 6, 10, 14, 18, 22, 26, 30, 34);

B3(3, 7, 11, 15, 19, 23, 27, 31, 35); B4(4, 8, 12, 16, 20, 24, 28, 32, 36).

Replication 2

B1(1, 5, 11, 14, 20, 23, 26, 32, 34); B2(2, 6, 12, 15, 17, 24, 27, 29, 35);

B3(3, 7, 9, 16, 18, 21, 28, 30, 36); B4(4, 8, 10, 13, 19, 22, 25, 31, 33).

Replication 3

B1(1, 8, 10, 15, 18, 24, 27, 31, 36); B2(2, 5, 11, 16, 19, 21, 28, 32, 33);
B3(3, 6, 12, 13, 20, 22, 25, 29, 34); B4(4, 7, 9, 14, 17, 23, 26, 30, 35).

347. $v = 36, b = 16, r = 4, k = 9, AE = 0.9747, DE = 0.9881$ $\alpha(0,1,2,4)$

Replication 1

B1(1, 5, 9, 13, 17, 21, 25, 29, 33); B2(2, 6, 10, 14, 18, 22, 26, 30, 34);
B3(3, 7, 11, 15, 19, 23, 27, 31, 35); B4(4, 8, 12, 16, 20, 24, 28, 32, 36).

Replication 2

B1(1, 8, 10, 16, 19, 23, 28, 30, 35); B2(2, 5, 11, 13, 20, 24, 25, 31, 36);
B3(3, 6, 12, 14, 17, 21, 26, 32, 33); B4(4, 7, 9, 15, 18, 22, 27, 29, 34).

Replication 3

B1(1, 7, 11, 14, 20, 22, 26, 32, 34); B2(2, 8, 12, 15, 17, 23, 27, 29, 35);
B3(3, 5, 9, 16, 18, 24, 28, 30, 36); B4(4, 6, 10, 13, 19, 21, 25, 31, 33).

Replication 4

B1(1, 6, 12, 15, 18, 24, 27, 31, 36); B2(2, 7, 9, 16, 19, 21, 28, 32, 33);
B3(3, 8, 10, 13, 20, 22, 25, 29, 34); B4(4, 5, 11, 14, 17, 23, 26, 30, 35).

348. $v = 36, b = 20, r = 5, k = 9, AE = 0.9843, DE = 0.9924$ $\alpha(0,1,2,3)$

Replication 1

B1(1, 5, 9, 13, 17, 21, 25, 29, 33); B2(2, 6, 10, 14, 18, 22, 26, 30, 34);
B3(3, 7, 11, 15, 19, 23, 27, 31, 35); B4(4, 8, 12, 16, 20, 24, 28, 32, 36).

Replication 2

B1(1, 8, 10, 15, 18, 24, 26, 29, 35); B2(2, 5, 11, 16, 19, 21, 27, 30, 36);
B3(3, 6, 12, 13, 20, 22, 28, 31, 33); B4(4, 7, 9, 14, 17, 23, 25, 32, 34).

Replication 3

B1(1, 7, 11, 16, 19, 22, 26, 32, 34); B2(2, 8, 12, 13, 20, 23, 27, 29, 35);
B3(3, 5, 9, 14, 17, 24, 28, 30, 36); B4(4, 6, 10, 15, 18, 21, 25, 31, 33).

Replication 4

B1(1, 6, 9, 15, 20, 23, 28, 30, 34); B2(2, 7, 10, 16, 17, 24, 25, 31, 35);
B3(3, 8, 11, 13, 18, 21, 26, 32, 36); B4(4, 5, 12, 14, 19, 22, 27, 29, 33).

Replication 5

B1(1, 6, 12, 14, 17, 21, 27, 31, 36); B2(2, 7, 9, 15, 18, 22, 28, 32, 33);
B3(3, 8, 10, 16, 19, 23, 25, 29, 34); B4(4, 5, 11, 13, 20, 24, 26, 30, 35).

349. $v = 45, b = 10, r = 2, k = 9, AE = 0.9272, DE = 0.9687$ $\alpha(0,1,2)$

Replication 1

B1(1, 6, 11, 16, 21, 26, 31, 36, 41); B2(2, 7, 12, 17, 22, 27, 32, 37, 42);
B3(3, 8, 13, 18, 23, 28, 33, 38, 43); B4(4, 9, 14, 19, 24, 29, 34, 39, 44);
B5(5, 10, 15, 20, 25, 30, 35, 40, 45).

Replication 2

B1(1, 7, 12, 20, 25, 29, 33, 39, 43); B2(2, 8, 13, 16, 21, 30, 34, 40, 44);
B3(3, 9, 14, 17, 22, 26, 35, 36, 45); B4(4, 10, 15, 18, 23, 27, 31, 37, 41);

B5(5, 6, 11, 19, 24, 28, 32, 38, 42).

350. $v = 45, b = 15, r = 3, k = 9, AE = 0.9660, DE = 0.9840$ $\alpha(0,1,2)$

Replication 1

B1(1, 6, 11, 16, 21, 26, 31, 36, 41); B2(2, 7, 12, 17, 22, 27, 32, 37, 42);
B3(3, 8, 13, 18, 23, 28, 33, 38, 43); B4(4, 9, 14, 19, 24, 29, 34, 39, 44);
B5(5, 10, 15, 20, 25, 30, 35, 40, 45).

Replication 2

B1(1, 8, 15, 20, 22, 27, 34, 39, 43); B2(2, 9, 11, 16, 23, 28, 35, 40, 44);
B3(3, 10, 12, 17, 24, 29, 31, 36, 45); B4(4, 6, 13, 18, 25, 30, 32, 37, 41);
B5(5, 7, 14, 19, 21, 26, 33, 38, 42).

Replication 3

B1(1, 9, 12, 18, 24, 30, 33, 40, 42); B2(2, 10, 13, 19, 25, 26, 34, 36, 43);
B3(3, 6, 14, 20, 21, 27, 35, 37, 44); B4(4, 7, 15, 16, 22, 28, 31, 38, 45);
B5(5, 8, 11, 17, 23, 29, 32, 39, 41).

351. $v = 45, b = 20, r = 4, k = 9, AE = 0.9795, DE = 0.9900$ $\alpha(0,1,2,3)$

Replication 1

B1(1, 6, 11, 16, 21, 26, 31, 36, 41); B2(2, 7, 12, 17, 22, 27, 32, 37, 42);
B3(3, 8, 13, 18, 23, 28, 33, 38, 43); B4(4, 9, 14, 19, 24, 29, 34, 39, 44);
B5(5, 10, 15, 20, 25, 30, 35, 40, 45).

Replication 2

B1(1, 10, 13, 17, 23, 29, 34, 37, 45); B2(2, 6, 14, 18, 24, 30, 35, 38, 41);
B3(3, 7, 15, 19, 25, 26, 31, 39, 42); B4(4, 8, 11, 20, 21, 27, 32, 40, 43);
B5(5, 9, 12, 16, 22, 28, 33, 36, 44).

Replication 3

B1(1, 8, 12, 19, 22, 30, 35, 39, 43); B2(2, 9, 13, 20, 23, 26, 31, 40, 44);
B3(3, 10, 14, 16, 24, 27, 32, 36, 45); B4(4, 6, 15, 17, 25, 28, 33, 37, 41);
B5(5, 7, 11, 18, 21, 29, 34, 38, 42).

Replication 4

B1(1, 7, 15, 20, 24, 28, 32, 38, 44); B2(2, 8, 11, 16, 25, 29, 33, 39, 45);
B3(3, 9, 12, 17, 21, 30, 34, 40, 41); B4(4, 10, 13, 18, 22, 26, 35, 36, 42);
B5(5, 6, 14, 19, 23, 27, 31, 37, 43).

352. $v = 45, b = 25, r = 5, k = 9, AE = 0.9863, DE = 0.9932$ $\alpha(0,1,2,3)$

Replication 1

B 1(1, 6, 11, 16, 21, 26, 31, 36, 41); B 2(2, 7, 12, 17, 22, 27, 32, 37, 42);
B 3(3, 8, 13, 18, 23, 28, 33, 38, 43); B 4(4, 9, 14, 19, 24, 29, 34, 39, 44);
B 5(5, 10, 15, 20, 25, 30, 35, 40, 45).

Replication 2

B 1(1, 10, 13, 17, 23, 29, 34, 37, 45); B 2(2, 6, 14, 18, 24, 30, 35, 38, 41);
B 3(3, 7, 15, 19, 25, 26, 31, 39, 42); B 4(4, 8, 11, 20, 21, 27, 32, 40, 43);
B 5(5, 9, 12, 16, 22, 28, 33, 36, 44).

Replication 3

B 1(1, 8, 12, 19, 22, 30, 35, 39, 43); B 2(2, 9, 13, 20, 23, 26, 31, 40, 44);
B 3(3, 10, 14, 16, 24, 27, 32, 36, 45); B 4(4, 6, 15, 17, 25, 28, 33, 37, 41);
B 5(5, 7, 11, 18, 21, 29, 34, 38, 42).

Replication 4

B 1(1, 7, 15, 20, 24, 28, 32, 38, 44);
B 3(3, 9, 12, 17, 21, 30, 34, 40, 41);
B 5(5, 6, 14, 19, 23, 27, 31, 37, 43).

B 2(2, 8, 11, 16, 25, 29, 33, 39, 45);
B 4(4, 10, 13, 18, 22, 26, 35, 36, 42);

Replication 5

B 1(1, 9, 14, 18, 25, 27, 33, 40, 42);
B 3(3, 6, 11, 20, 22, 29, 35, 37, 44);
B 5(5, 8, 13, 17, 24, 26, 32, 39, 41).

B 2(2, 10, 15, 19, 21, 28, 34, 36, 43);
B 4(4, 7, 12, 16, 23, 30, 31, 38, 45);

353. $v = 54, b = 12, r = 2, k = 9, AE = 0.9221, DE = 0.9667$ $\alpha(0,1,2)$

Replication 1

B1(1, 7, 13, 19, 25, 31, 37, 43, 49);
B3(3, 9, 15, 21, 27, 33, 39, 45, 51);
B5(5, 11, 17, 23, 29, 35, 41, 47, 53);

B2(2, 8, 14, 20, 26, 32, 38, 44, 50);
B4(4, 10, 16, 22, 28, 34, 40, 46, 52);
B6(6, 12, 18, 24, 30, 36, 42, 48, 54).

Replication 2

B1(1, 10, 18, 20, 27, 35, 40, 45, 53);
B3(3, 12, 14, 22, 29, 31, 42, 47, 49);
B5(5, 8, 16, 24, 25, 33, 38, 43, 51);

B2(2, 11, 13, 21, 28, 36, 41, 46, 54);
B4(4, 7, 15, 23, 30, 32, 37, 48, 50);
B6(6, 9, 17, 19, 26, 34, 39, 44, 52).

354. $v = 54, b = 18, r = 3, k = 9, AE = 0.9632, DE = 0.9829$ $\alpha(0,1,2)$

Replication 1

B1(1, 7, 13, 19, 25, 31, 37, 43, 49);
B3(3, 9, 15, 21, 27, 33, 39, 45, 51);
B5(5, 11, 17, 23, 29, 35, 41, 47, 53);

B2(2, 8, 14, 20, 26, 32, 38, 44, 50);
B4(4, 10, 16, 22, 28, 34, 40, 46, 52);
B6(6, 12, 18, 24, 30, 36, 42, 48, 54).

Replication 2

B1(1, 11, 17, 20, 26, 34, 39, 48, 52);
B3(3, 7, 13, 22, 28, 36, 41, 44, 54);
B5(5, 9, 15, 24, 30, 32, 37, 46, 50);

B2(2, 12, 18, 21, 27, 35, 40, 43, 53);
B4(4, 8, 14, 23, 29, 31, 42, 45, 49);
B6(6, 10, 16, 19, 25, 33, 38, 47, 51).

Replication 3

B1(1, 12, 16, 23, 27, 36, 41, 45, 50);
B3(3, 8, 18, 19, 29, 32, 37, 47, 52);
B5(5, 10, 14, 21, 25, 34, 39, 43, 54);

B2(2, 7, 17, 24, 28, 31, 42, 46, 51);
B4(4, 9, 13, 20, 30, 33, 38, 48, 53);
B6(6, 11, 15, 22, 26, 35, 40, 44, 49).

355. $v = 54, b = 24, r = 4, k = 9, AE = 0.9760, DE = 0.9886$ $\alpha(0,1,2,3)$

Replication 1

B 1(1, 7, 13, 19, 25, 31, 37, 43, 49);
B 3(3, 9, 15, 21, 27, 33, 39, 45, 51);
B 5(5, 11, 17, 23, 29, 35, 41, 47, 53);

B 2(2, 8, 14, 20, 26, 32, 38, 44, 50);
B 4(4, 10, 16, 22, 28, 34, 40, 46, 52);
B 6(6, 12, 18, 24, 30, 36, 42, 48, 54).

Replication 2

B 1(1, 11, 17, 20, 26, 34, 39, 48, 52);
B 3(3, 7, 13, 22, 28, 36, 41, 44, 54);
B 5(5, 9, 15, 24, 30, 32, 37, 46, 50);

B 2(2, 12, 18, 21, 27, 35, 40, 43, 53);
B 4(4, 8, 14, 23, 29, 31, 42, 45, 49);
B 6(6, 10, 16, 19, 25, 33, 38, 47, 51).

Replication 3

B 1(1, 12, 16, 23, 27, 36, 41, 45, 50);
B 3(3, 8, 18, 19, 29, 32, 37, 47, 52);
B 5(5, 10, 14, 21, 25, 34, 39, 43, 54);

B 2(2, 7, 17, 24, 28, 31, 42, 46, 51);
B 4(4, 9, 13, 20, 30, 33, 38, 48, 53);
B 6(6, 11, 15, 22, 26, 35, 40, 44, 49).

Replication 4

B 1(1, 10, 14, 24, 29, 33, 40, 47, 54); B 2(2, 11, 15, 19, 30, 34, 41, 48, 49);
B 3(3, 12, 16, 20, 25, 35, 42, 43, 50); B 4(4, 7, 17, 21, 26, 36, 37, 44, 51);
B 5(5, 8, 18, 22, 27, 31, 38, 45, 52); B 6(6, 9, 13, 23, 28, 32, 39, 46, 53).

356. $v = 54, b = 30, r = 5, k = 9, AE = 0.9840, DE = 0.9922$ $\alpha(0,1,2,3)$

Replication 1

B 1(1, 7, 13, 19, 25, 31, 37, 43, 49); B 2(2, 8, 14, 20, 26, 32, 38, 44, 50);
B 3(3, 9, 15, 21, 27, 33, 39, 45, 51); B 4(4, 10, 16, 22, 28, 34, 40, 46, 52);
B 5(5, 11, 17, 23, 29, 35, 41, 47, 53); B 6(6, 12, 18, 24, 30, 36, 42, 48, 54).

Replication 2

B 1(1, 8, 16, 24, 27, 32, 41, 46, 50); B 2(2, 9, 17, 19, 28, 33, 42, 47, 51);
B 3(3, 10, 18, 20, 29, 34, 37, 48, 52); B 4(4, 11, 13, 21, 30, 35, 38, 43, 53);
B 5(5, 12, 14, 22, 25, 36, 39, 44, 54); B 6(6, 7, 15, 23, 26, 31, 40, 45, 49).

Replication 3

B 1(1, 9, 15, 23, 28, 34, 38, 44, 54); B 2(2, 10, 16, 24, 29, 35, 39, 45, 49);
B 3(3, 11, 17, 19, 30, 36, 40, 46, 50); B 4(4, 12, 18, 20, 25, 31, 41, 47, 51);
B 5(5, 7, 13, 21, 26, 32, 42, 48, 52); B 6(6, 8, 14, 22, 27, 33, 37, 43, 53).

Replication 4

B 1(1, 11, 14, 20, 30, 33, 42, 45, 52); B 2(2, 12, 15, 21, 25, 34, 37, 46, 53);
B 3(3, 7, 16, 22, 26, 35, 38, 47, 54); B 4(4, 8, 17, 23, 27, 36, 39, 48, 49);
B 5(5, 9, 18, 24, 28, 31, 40, 43, 50); B 6(6, 10, 13, 19, 29, 32, 41, 44, 51).

Replication 5

B 1(1, 12, 17, 22, 26, 35, 40, 48, 51); B 2(2, 7, 18, 23, 27, 36, 41, 43, 52);
B 3(3, 8, 13, 24, 28, 31, 42, 44, 53); B 4(4, 9, 14, 19, 29, 32, 37, 45, 54);
B 5(5, 10, 15, 20, 30, 33, 38, 46, 49); B 6(6, 11, 16, 21, 25, 34, 39, 47, 50).

357. $v = 63, b = 14, r = 2, k = 9, AE = 0.9213, DE = 0.9662$ $\alpha(0,1,2)$

Replication 1

B1(1, 8, 15, 22, 29, 36, 43, 50, 57); B2(2, 9, 16, 23, 30, 37, 44, 51, 58);
B3(3, 10, 17, 24, 31, 38, 45, 52, 59); B4(4, 11, 18, 25, 32, 39, 46, 53, 60);
B5(5, 12, 19, 26, 33, 40, 47, 54, 61); B6(6, 13, 20, 27, 34, 41, 48, 55, 62);
B7(7, 14, 21, 28, 35, 42, 49, 56, 63).

Replication 2

B1(1, 13, 19, 23, 32, 42, 45, 54, 60); B2(2, 14, 20, 24, 33, 36, 46, 55, 61);
B3(3, 8, 21, 25, 34, 37, 47, 56, 62); B4(4, 9, 15, 26, 35, 38, 48, 50, 63);
B5(5, 10, 16, 27, 29, 39, 49, 51, 57); B6(6, 11, 17, 28, 30, 40, 43, 52, 58);
B7(7, 12, 18, 22, 31, 41, 44, 53, 59).

358. $v = 63, b = 21, r = 3, k = 9, AE = 0.9628, DE = 0.9827$ $\alpha(0,1,2)$

Replication 1

B1(1, 8, 15, 22, 29, 36, 43, 50, 57); B2(2, 9, 16, 23, 30, 37, 44, 51, 58);
B3(3, 10, 17, 24, 31, 38, 45, 52, 59); B4(4, 11, 18, 25, 32, 39, 46, 53, 60);
B5(5, 12, 19, 26, 33, 40, 47, 54, 61); B6(6, 13, 20, 27, 34, 41, 48, 55, 62);
B7(7, 14, 21, 28, 35, 42, 49, 56, 63).

Replication 2

B1(1, 10, 20, 26, 32, 41, 44, 54, 63); B2(2, 11, 21, 27, 33, 42, 45, 55, 57);

B3(3, 12, 15, 28, 34, 36, 46, 56, 58);
B5(5, 14, 17, 23, 29, 38, 48, 51, 60);
B7(7, 9, 19, 25, 31, 40, 43, 53, 62).

B4(4, 13, 16, 22, 35, 37, 47, 50, 59);
B6(6, 8, 18, 24, 30, 39, 49, 52, 61);

Replication 3

B1(1, 13, 17, 25, 30, 42, 45, 56, 61);
B3(3, 8, 19, 27, 32, 37, 47, 51, 63);
B5(5, 10, 21, 22, 34, 39, 49, 53, 58);
B7(7, 12, 16, 24, 29, 41, 44, 55, 60).

B2(2, 14, 18, 26, 31, 36, 46, 50, 62);
B4(4, 9, 20, 28, 33, 38, 48, 52, 57);
B6(6, 11, 15, 23, 35, 40, 43, 54, 59);

359. $v = 63, b = 28, r = 4, k = 9, AE = 0.9703, DE = 0.9862$

$\alpha(0,1,2,3)$

Replication 1

B 1(1, 8, 15, 22, 29, 36, 43, 50, 57);
B 3(3, 10, 17, 24, 31, 38, 45, 52, 59);
B 5(5, 12, 19, 26, 33, 40, 47, 54, 61);
B 7(7, 14, 21, 28, 35, 42, 49, 56, 63).

B 2(2, 9, 16, 23, 30, 37, 44, 51, 58);
B 4(4, 11, 18, 25, 32, 39, 46, 53, 60);
B 6(6, 13, 20, 27, 34, 41, 48, 55, 62);

Replication 2

B 1(1, 10, 20, 26, 32, 41, 44, 54, 63);
B 3(3, 12, 15, 28, 34, 36, 46, 56, 58);
B 5(5, 14, 17, 23, 29, 38, 48, 51, 60);
B 7(7, 9, 19, 25, 31, 40, 43, 53, 62).

B 2(2, 11, 21, 27, 33, 42, 45, 55, 57);
B 4(4, 13, 16, 22, 35, 37, 47, 50, 59);
B 6(6, 8, 18, 24, 30, 39, 49, 52, 61);

Replication 3

B 1(1, 13, 17, 25, 30, 42, 45, 56, 61);
B 3(3, 8, 19, 27, 32, 37, 47, 51, 63);
B 5(5, 10, 21, 22, 34, 39, 49, 53, 58);
B 7(7, 12, 16, 24, 29, 41, 44, 55, 60).

B 2(2, 14, 18, 26, 31, 36, 46, 50, 62);
B 4(4, 9, 20, 28, 33, 38, 48, 52, 57);
B 6(6, 11, 15, 23, 35, 40, 43, 54, 59);

Replication 4

B 1(1, 9, 18, 24, 33, 39, 49, 55, 60);
B 3(3, 11, 20, 26, 35, 41, 44, 50, 62);
B 5(5, 13, 15, 28, 30, 36, 46, 52, 57);
B 7(7, 8, 17, 23, 32, 38, 48, 54, 59).

B 2(2, 10, 19, 25, 34, 40, 43, 56, 61);
B 4(4, 12, 21, 27, 29, 42, 45, 51, 63);
B 6(6, 14, 16, 22, 31, 37, 47, 53, 58);

360. $v = 63, b = 35, r = 5, k = 9, AE = 0.9845, DE = 0.9924$

$\alpha(0,1,2)$

Replication 1

B 1(1, 8, 15, 22, 29, 36, 43, 50, 57);
B 3(3, 10, 17, 24, 31, 38, 45, 52, 59);
B 5(5, 12, 19, 26, 33, 40, 47, 54, 61);
B 7(7, 14, 21, 28, 35, 42, 49, 56, 63).

B 2(2, 9, 16, 23, 30, 37, 44, 51, 58);
B 4(4, 11, 18, 25, 32, 39, 46, 53, 60);
B 6(6, 13, 20, 27, 34, 41, 48, 55, 62);

Replication 2

B 1(1, 14, 16, 24, 32, 41, 47, 51, 62);
B 3(3, 9, 18, 26, 34, 36, 49, 53, 57);
B 5(5, 11, 20, 28, 29, 38, 44, 55, 59);
B 7(7, 13, 15, 23, 31, 40, 46, 50, 61).

B 2(2, 8, 17, 25, 33, 42, 48, 52, 63);
B 4(4, 10, 19, 27, 35, 37, 43, 54, 58);
B 6(6, 12, 21, 22, 30, 39, 45, 56, 60);

Replication 3

B 1(1, 10, 18, 26, 30, 42, 46, 55, 61);
B 3(3, 12, 20, 28, 32, 37, 48, 50, 63);
B 5(5, 14, 15, 23, 34, 39, 43, 52, 58);
B 7(7, 9, 17, 25, 29, 41, 45, 54, 60).

B 2(2, 11, 19, 27, 31, 36, 47, 56, 62);
B 4(4, 13, 21, 22, 33, 38, 49, 51, 57);
B 6(6, 8, 16, 24, 35, 40, 44, 53, 59);

Replication 4

B 1(1, 13, 17, 28, 31, 39, 48, 53, 58);

B 2(2, 14, 18, 22, 32, 40, 49, 54, 59);

B 3(3, 8, 19, 23, 33, 41, 43, 55, 60); B 4(4, 9, 20, 24, 34, 42, 44, 56, 61);
 B 5(5, 10, 21, 25, 35, 36, 45, 50, 62); B 6(6, 11, 15, 26, 29, 37, 46, 51, 63);
 B 7(7, 12, 16, 27, 30, 38, 47, 52, 57).

Replication 5

B 1(1, 11, 20, 23, 35, 40, 49, 52, 60); B 2(2, 12, 21, 24, 29, 41, 43, 53, 61);
 B 3(3, 13, 15, 25, 30, 42, 44, 54, 62); B 4(4, 14, 16, 26, 31, 36, 45, 55, 63);
 B 5(5, 8, 17, 27, 32, 37, 46, 56, 57); B 6(6, 9, 18, 28, 33, 38, 47, 50, 58);
 B 7(7, 10, 19, 22, 34, 39, 48, 51, 59).

361. $v = 72, b = 16, r = 2, k = 9, AE = 0.9229, DE = 0.9665$ $\alpha(0,1,2)$

Replication 1

B1(1, 9, 17, 25, 33, 41, 49, 57, 65); B2(2, 10, 18, 26, 34, 42, 50, 58, 66);
 B3(3, 11, 19, 27, 35, 43, 51, 59, 67); B4(4, 12, 20, 28, 36, 44, 52, 60, 68);
 B5(5, 13, 21, 29, 37, 45, 53, 61, 69); B6(6, 14, 22, 30, 38, 46, 54, 62, 70);
 B7(7, 15, 23, 31, 39, 47, 55, 63, 71); B8(8, 16, 24, 32, 40, 48, 56, 64, 72).

Replication 2

B1(1, 15, 24, 27, 36, 45, 54, 58, 66); B2(2, 16, 17, 28, 37, 46, 55, 59, 67);
 B3(3, 9, 18, 29, 38, 47, 56, 60, 68); B4(4, 10, 19, 30, 39, 48, 49, 61, 69);
 B5(5, 11, 20, 31, 40, 41, 50, 62, 70); B6(6, 12, 21, 32, 33, 42, 51, 63, 71);
 B7(7, 13, 22, 25, 34, 43, 52, 64, 72); B8(8, 14, 23, 26, 35, 44, 53, 57, 65).

362. $v = 72, b = 24, r = 3, k = 9, AE = 0.9641, DE = 0.9831$ $\alpha(0,1,2)$

Replication 1

B1(1, 9, 17, 25, 33, 41, 49, 57, 65); B2(2, 10, 18, 26, 34, 42, 50, 58, 66);
 B3(3, 11, 19, 27, 35, 43, 51, 59, 67); B4(4, 12, 20, 28, 36, 44, 52, 60, 68);
 B5(5, 13, 21, 29, 37, 45, 53, 61, 69); B6(6, 14, 22, 30, 38, 46, 54, 62, 70);
 B7(7, 15, 23, 31, 39, 47, 55, 63, 71); B8(8, 16, 24, 32, 40, 48, 56, 64, 72).

Replication 2

B1(1, 11, 18, 30, 39, 45, 56, 60, 71); B2(2, 12, 19, 31, 40, 46, 49, 61, 72);
 B3(3, 13, 20, 32, 33, 47, 50, 62, 65); B4(4, 14, 21, 25, 34, 48, 51, 63, 66);
 B5(5, 15, 22, 26, 35, 41, 52, 64, 67); B6(6, 16, 23, 27, 36, 42, 53, 57, 68);
 B7(7, 9, 24, 28, 37, 43, 54, 58, 69); B8(8, 10, 17, 29, 38, 44, 55, 59, 70).

Replication 3

B1(1, 12, 23, 29, 35, 48, 50, 62, 69); B2(2, 13, 24, 30, 36, 41, 51, 63, 70);
 B3(3, 14, 17, 31, 37, 42, 52, 64, 71); B4(4, 15, 18, 32, 38, 43, 53, 57, 72);
 B5(5, 16, 19, 25, 39, 44, 54, 58, 65); B6(6, 9, 20, 26, 40, 45, 55, 59, 66);
 B7(7, 10, 21, 27, 33, 46, 56, 60, 67); B8(8, 11, 22, 28, 34, 47, 49, 61, 68).

363. $v = 72, b = 32, r = 4, k = 9, AE = 0.9750, DE = 0.9881$ $\alpha(0,1,2,3)$

Replication 1

B 1(1, 9, 17, 25, 33, 41, 49, 57, 65); B 2(2, 10, 18, 26, 34, 42, 50, 58, 66);
 B 3(3, 11, 19, 27, 35, 43, 51, 59, 67); B 4(4, 12, 20, 28, 36, 44, 52, 60, 68);
 B 5(5, 13, 21, 29, 37, 45, 53, 61, 69); B 6(6, 14, 22, 30, 38, 46, 54, 62, 70);
 B 7(7, 15, 23, 31, 39, 47, 55, 63, 71); B 8(8, 16, 24, 32, 40, 48, 56, 64, 72).

Replication 2

B 1(1, 11, 18, 30, 39, 45, 56, 60, 71); B 2(2, 12, 19, 31, 40, 46, 49, 61, 72);

B 3(3, 13, 20, 32, 33, 47, 50, 62, 65);
 B 5(5, 15, 22, 26, 35, 41, 52, 64, 67);
 B 7(7, 9, 24, 28, 37, 43, 54, 58, 69);

B 4(4, 14, 21, 25, 34, 48, 51, 63, 66);
 B 6(6, 16, 23, 27, 36, 42, 53, 57, 68);
 B 8(8, 10, 17, 29, 38, 44, 55, 59, 70).

Replication 3

B 1(1, 12, 23, 29, 35, 48, 50, 62, 69);
 B 3(3, 14, 17, 31, 37, 42, 52, 64, 71);
 B 5(5, 16, 19, 25, 39, 44, 54, 58, 65);
 B 7(7, 10, 21, 27, 33, 46, 56, 60, 67);

B 2(2, 13, 24, 30, 36, 41, 51, 63, 70);
 B 4(4, 15, 18, 32, 38, 43, 53, 57, 72);
 B 6(6, 9, 20, 26, 40, 45, 55, 59, 66);
 B 8(8, 11, 22, 28, 34, 47, 49, 61, 68).

Replication 4

B 1(1, 14, 19, 28, 34, 46, 53, 64, 66);
 B 3(3, 16, 21, 30, 36, 48, 55, 58, 68);
 B 5(5, 10, 23, 32, 38, 42, 49, 60, 70);
 B 7(7, 12, 17, 26, 40, 44, 51, 62, 72);

B 2(2, 15, 20, 29, 35, 47, 54, 57, 67);
 B 4(4, 9, 22, 31, 37, 41, 56, 59, 69);
 B 6(6, 11, 24, 25, 39, 43, 50, 61, 71);
 B 8(8, 13, 18, 27, 33, 45, 52, 63, 65).

364. $v = 72, b = 40, r = 5, k = 9, AE = 0.9804, DE = 0.9906$ $\alpha(0,1,2,3)$

Replication 1

B 1(1, 9, 17, 25, 33, 41, 49, 57, 65);
 B 3(3, 11, 19, 27, 35, 43, 51, 59, 67);
 B 5(5, 13, 21, 29, 37, 45, 53, 61, 69);
 B 7(7, 15, 23, 31, 39, 47, 55, 63, 71);

B 2(2, 10, 18, 26, 34, 42, 50, 58, 66);
 B 4(4, 12, 20, 28, 36, 44, 52, 60, 68);
 B 6(6, 14, 22, 30, 38, 46, 54, 62, 70);
 B 8(8, 16, 24, 32, 40, 48, 56, 64, 72).

Replication 2

B 1(1, 11, 18, 30, 39, 45, 56, 60, 71);
 B 3(3, 13, 20, 32, 33, 47, 50, 62, 65);
 B 5(5, 15, 22, 26, 35, 41, 52, 64, 67);
 B 7(7, 9, 24, 28, 37, 43, 54, 58, 69);

B 2(2, 12, 19, 31, 40, 46, 49, 61, 72);
 B 4(4, 14, 21, 25, 34, 48, 51, 63, 66);
 B 6(6, 16, 23, 27, 36, 42, 53, 57, 68);
 B 8(8, 10, 17, 29, 38, 44, 55, 59, 70).

Replication 3

B 1(1, 12, 23, 29, 35, 48, 50, 62, 69);
 B 3(3, 14, 17, 31, 37, 42, 52, 64, 71);
 B 5(5, 16, 19, 25, 39, 44, 54, 58, 65);
 B 7(7, 10, 21, 27, 33, 46, 56, 60, 67);

B 2(2, 13, 24, 30, 36, 41, 51, 63, 70);
 B 4(4, 15, 18, 32, 38, 43, 53, 57, 72);
 B 6(6, 9, 20, 26, 40, 45, 55, 59, 66);
 B 8(8, 11, 22, 28, 34, 47, 49, 61, 68).

Replication 4

B 1(1, 14, 19, 28, 34, 46, 53, 64, 66);
 B 3(3, 16, 21, 30, 36, 48, 55, 58, 68);
 B 5(5, 10, 23, 32, 38, 42, 49, 60, 70);
 B 7(7, 12, 17, 26, 40, 44, 51, 62, 72);

B 2(2, 15, 20, 29, 35, 47, 54, 57, 67);
 B 4(4, 9, 22, 31, 37, 41, 56, 59, 69);
 B 6(6, 11, 24, 25, 39, 43, 50, 61, 71);
 B 8(8, 13, 18, 27, 33, 45, 52, 63, 65).

Replication 5

B 1(1, 13, 24, 31, 36, 43, 53, 58, 67);
 B 3(3, 15, 18, 25, 38, 45, 55, 60, 69);
 B 5(5, 9, 20, 27, 40, 47, 49, 62, 71);
 B 7(7, 11, 22, 29, 34, 41, 51, 64, 65);

B 2(2, 14, 17, 32, 37, 44, 54, 59, 68);
 B 4(4, 16, 19, 26, 39, 46, 56, 61, 70);
 B 6(6, 10, 21, 28, 33, 48, 50, 63, 72);
 B 8(8, 12, 23, 30, 35, 42, 52, 57, 66).

365. $v = 81, b = 18, r = 2, k = 9, AE = 0.9259, DE = 0.9673$ $\alpha(0,1)$; LS119, square-Lattice

Replication 1

B1(1, 10, 19, 28, 37, 46, 55, 64, 73);
 B3(3, 12, 21, 30, 39, 48, 57, 66, 75);
 B5(5, 14, 23, 32, 41, 50, 59, 68, 77);
 B7(7, 16, 25, 34, 43, 52, 61, 70, 79);
 B9(9, 18, 27, 36, 45, 54, 63, 72, 81).

B2(2, 11, 20, 29, 38, 47, 56, 65, 74);
 B4(4, 13, 22, 31, 40, 49, 58, 67, 76);
 B6(6, 15, 24, 33, 42, 51, 60, 69, 78);
 B8(8, 17, 26, 35, 44, 53, 62, 71, 80);

Replication 2

B1(1, 13, 27, 34, 41, 48, 56, 71, 78); B2(2, 14, 19, 35, 42, 49, 57, 72, 79);
 B3(3, 15, 20, 36, 43, 50, 58, 64, 80); B4(4, 16, 21, 28, 44, 51, 59, 65, 81);
 B5(5, 17, 22, 29, 45, 52, 60, 66, 73); B6(6, 18, 23, 30, 37, 53, 61, 67, 74);
 B7(7, 10, 24, 31, 38, 54, 62, 68, 75); B8(8, 11, 25, 32, 39, 46, 63, 69, 76);
 B9(9, 12, 26, 33, 40, 47, 55, 70, 77).

366. $v = 81, b = 27, r = 3, k = 9, AE=0.9662, DE = 0.9839$ $\alpha(0,1)$, Square-Lattice, LS120

Replication 1

B 1(1, 10, 19, 28, 37, 46, 55, 64, 73); B 2(2, 11, 20, 29, 38, 47, 56, 65, 74);
 B 3(3, 12, 21, 30, 39, 48, 57, 66, 75); B 4(4, 13, 22, 31, 40, 49, 58, 67, 76);
 B 5(5, 14, 23, 32, 41, 50, 59, 68, 77); B 6(6, 15, 24, 33, 42, 51, 60, 69, 78);
 B 7(7, 16, 25, 34, 43, 52, 61, 70, 79); B 8(8, 17, 26, 35, 44, 53, 62, 71, 80);
 B 9(9, 18, 27, 36, 45, 54, 63, 72, 81).

Replication 2

B 1(1, 15, 21, 31, 45, 50, 56, 70, 80); B 2(2, 16, 22, 32, 37, 51, 57, 71, 81);
 B 3(3, 17, 23, 33, 38, 52, 58, 72, 73); B 4(4, 18, 24, 34, 39, 53, 59, 64, 74);
 B 5(5, 10, 25, 35, 40, 54, 60, 65, 75); B 6(6, 11, 26, 36, 41, 46, 61, 66, 76);
 B 7(7, 12, 27, 28, 42, 47, 62, 67, 77); B 8(8, 13, 19, 29, 43, 48, 63, 68, 78);
 B 9(9, 14, 20, 30, 44, 49, 55, 69, 79).

Replication 3

B 1(1, 12, 25, 36, 44, 51, 58, 68, 74); B 2(2, 13, 26, 28, 45, 52, 59, 69, 75);
 B 3(3, 14, 27, 29, 37, 53, 60, 70, 76); B 4(4, 15, 19, 30, 38, 54, 61, 71, 77);
 B 5(5, 16, 20, 31, 39, 46, 62, 72, 78); B 6(6, 17, 21, 32, 40, 47, 63, 64, 79);
 B 7(7, 18, 22, 33, 41, 48, 55, 65, 80); B 8(8, 10, 23, 34, 42, 49, 56, 66, 81);
 B 9(9, 11, 24, 35, 43, 50, 57, 67, 73).

367. $v = 81, b = 36, r = 4, k = 9, AE = 0.9790, DE = 0.9897$ $\alpha(0,1,2)^{***}$

Replication 1

B 1(1, 10, 19, 28, 37, 46, 55, 64, 73); B 2(2, 11, 20, 29, 38, 47, 56, 65, 74);
 B 3(3, 12, 21, 30, 39, 48, 57, 66, 75); B 4(4, 13, 22, 31, 40, 49, 58, 67, 76);
 B 5(5, 14, 23, 32, 41, 50, 59, 68, 77); B 6(6, 15, 24, 33, 42, 51, 60, 69, 78);
 B 7(7, 16, 25, 34, 43, 52, 61, 70, 79); B 8(8, 17, 26, 35, 44, 53, 62, 71, 80);
 B 9(9, 18, 27, 36, 45, 54, 63, 72, 81).

Replication 2

B 1(1, 15, 23, 31, 44, 52, 57, 65, 81); B 2(2, 16, 24, 32, 45, 53, 58, 66, 73);
 B 3(3, 17, 25, 33, 37, 54, 59, 67, 74); B 4(4, 18, 26, 34, 38, 46, 60, 68, 75);
 B 5(5, 10, 27, 35, 39, 47, 61, 69, 76); B 6(6, 11, 19, 36, 40, 48, 62, 70, 77);
 B 7(7, 12, 20, 28, 41, 49, 63, 71, 78); B 8(8, 13, 21, 29, 42, 50, 55, 72, 79);
 B 9(9, 14, 22, 30, 43, 51, 56, 64, 80).

Replication 3

B 1(1, 14, 24, 35, 38, 49, 63, 66, 79); B 2(2, 15, 25, 36, 39, 50, 55, 67, 80);
 B 3(3, 16, 26, 28, 40, 51, 56, 68, 81); B 4(4, 17, 27, 29, 41, 52, 57, 69, 73);
 B 5(5, 18, 19, 30, 42, 53, 58, 70, 74); B 6(6, 10, 20, 31, 43, 54, 59, 71, 75);
 B 7(7, 11, 21, 32, 44, 46, 60, 72, 76); B 8(8, 12, 22, 33, 45, 47, 61, 64, 77);
 B 9(9, 13, 23, 34, 37, 48, 62, 65, 78).

Replication 4

B 1(1, 17, 21, 36, 43, 47, 58, 68, 78); B 2(2, 18, 22, 28, 44, 48, 59, 69, 79);
 B 3(3, 10, 23, 29, 45, 49, 60, 70, 80); B 4(4, 11, 24, 30, 37, 50, 61, 71, 81);

B 5(5, 12, 25, 31, 38, 51, 62, 72, 73); B 6(6, 13, 26, 32, 39, 52, 63, 64, 74);
 B 7(7, 14, 27, 33, 40, 53, 55, 65, 75); B 8(8, 15, 19, 34, 41, 54, 56, 66, 76);
 B 9(9, 16, 20, 35, 42, 46, 57, 67, 77).

368. $v = 81, b = 45, r = 5, k = 9, AE = 0.9756, DE = 0.9886$ $\alpha(0,1,2,3)$

Replication 1

B 1(1, 10, 19, 28, 37, 46, 55, 64, 73); B 2(2, 11, 20, 29, 38, 47, 56, 65, 74);
 B 3(3, 12, 21, 30, 39, 48, 57, 66, 75); B 4(4, 13, 22, 31, 40, 49, 58, 67, 76);
 B 5(5, 14, 23, 32, 41, 50, 59, 68, 77); B 6(6, 15, 24, 33, 42, 51, 60, 69, 78);
 B 7(7, 16, 25, 34, 43, 52, 61, 70, 79); B 8(8, 17, 26, 35, 44, 53, 62, 71, 80);
 B 9(9, 18, 27, 36, 45, 54, 63, 72, 81).

Replication 2

B 1(1, 13, 27, 34, 41, 48, 56, 71, 78); B 2(2, 14, 19, 35, 42, 49, 57, 72, 79);
 B 3(3, 15, 20, 36, 43, 50, 58, 64, 80); B 4(4, 16, 21, 28, 44, 51, 59, 65, 81);
 B 5(5, 17, 22, 29, 45, 52, 60, 66, 73); B 6(6, 18, 23, 30, 37, 53, 61, 67, 74);
 B 7(7, 10, 24, 31, 38, 54, 62, 68, 75); B 8(8, 11, 25, 32, 39, 46, 63, 69, 76);
 B 9(9, 12, 26, 33, 40, 47, 55, 70, 77).

Replication 3

B 1(1, 11, 22, 33, 44, 54, 59, 70, 75); B 2(2, 12, 23, 34, 45, 46, 60, 71, 76);
 B 3(3, 13, 24, 35, 37, 47, 61, 72, 77); B 4(4, 14, 25, 36, 38, 48, 62, 64, 78);
 B 5(5, 15, 26, 28, 39, 49, 63, 65, 79); B 6(6, 16, 27, 29, 40, 50, 55, 66, 80);
 B 7(7, 17, 19, 30, 41, 51, 56, 67, 81); B 8(8, 18, 20, 31, 42, 52, 57, 68, 73);
 B 9(9, 10, 21, 32, 43, 53, 58, 69, 74).

Replication 4

B 1(1, 12, 26, 32, 38, 52, 63, 68, 76); B 2(2, 13, 27, 33, 39, 53, 55, 69, 77);
 B 3(3, 14, 19, 34, 40, 54, 56, 70, 78); B 4(4, 15, 20, 35, 41, 46, 57, 71, 79);
 B 5(5, 16, 21, 36, 42, 47, 58, 72, 80); B 6(6, 17, 22, 28, 43, 48, 59, 64, 81);
 B 7(7, 18, 23, 29, 44, 49, 60, 65, 73); B 8(8, 10, 24, 30, 45, 50, 61, 66, 74);
 B 9(9, 11, 25, 31, 37, 51, 62, 67, 75).

Replication 5

B 1(1, 14, 25, 36, 42, 49, 57, 65, 80); B 2(2, 15, 26, 28, 43, 50, 58, 66, 81);
 B 3(3, 16, 27, 29, 44, 51, 59, 67, 73); B 4(4, 17, 19, 30, 45, 52, 60, 68, 74);
 B 5(5, 18, 20, 31, 37, 53, 61, 69, 75); B 6(6, 10, 21, 32, 38, 54, 62, 70, 76);
 B 7(7, 11, 22, 33, 39, 46, 63, 71, 77); B 8(8, 12, 23, 34, 40, 47, 55, 72, 78);
 B 9(9, 13, 24, 35, 41, 48, 56, 64, 79).

369. $v = 90, b = 20, r = 2, k = 9, AE = 0.9215, DE = 0.9658$ $\alpha(0,1)$

Replication 1

B1(1, 11, 21, 31, 41, 51, 61, 71, 81); B2(2, 12, 22, 32, 42, 52, 62, 72, 82);
 B3(3, 13, 23, 33, 43, 53, 63, 73, 83); B4(4, 14, 24, 34, 44, 54, 64, 74, 84);
 B5(5, 15, 25, 35, 45, 55, 65, 75, 85); B6(6, 16, 26, 36, 46, 56, 66, 76, 86);
 B7(7, 17, 27, 37, 47, 57, 67, 77, 87); B8(8, 18, 28, 38, 48, 58, 68, 78, 88);
 B9(9, 19, 29, 39, 49, 59, 69, 79, 89); B10(10, 20, 30, 40, 50, 60, 70, 80, 90).

Replication 2

B1(1, 18, 29, 37, 42, 55, 66, 80, 84); B2(2, 19, 30, 38, 43, 56, 67, 71, 85);
 B3(3, 20, 21, 39, 44, 57, 68, 72, 86); B4(4, 11, 22, 40, 45, 58, 69, 73, 87);
 B5(5, 12, 23, 31, 46, 59, 70, 74, 88); B6(6, 13, 24, 32, 47, 60, 61, 75, 89);
 B7(7, 14, 25, 33, 48, 51, 62, 76, 90); B8(8, 15, 26, 34, 49, 52, 63, 77, 81);
 B9(9, 16, 27, 35, 50, 53, 64, 78, 82); B10(10, 17, 28, 36, 41, 54, 65, 79, 83).

370. $v = 90, b = 30, r = 3, k = 9, AE = 0.9618, DE = 0.9821$ $\alpha(0,1,2)$

Replication 1

B 1(1, 11, 21, 31, 41, 51, 61, 71, 81); B 2(2, 12, 22, 32, 42, 52, 62, 72, 82);
 B 3(3, 13, 23, 33, 43, 53, 63, 73, 83); B 4(4, 14, 24, 34, 44, 54, 64, 74, 84);
 B 5(5, 15, 25, 35, 45, 55, 65, 75, 85); B 6(6, 16, 26, 36, 46, 56, 66, 76, 86);
 B 7(7, 17, 27, 37, 47, 57, 67, 77, 87); B 8(8, 18, 28, 38, 48, 58, 68, 78, 88);
 B 9(9, 19, 29, 39, 49, 59, 69, 79, 89); B10(10, 20, 30, 40, 50, 60, 70, 80, 90);

Replication 2

B 1(1, 18, 29, 37, 46, 55, 62, 77, 90); B 2(2, 19, 30, 38, 47, 56, 63, 78, 81);
 B 3(3, 20, 21, 39, 48, 57, 64, 79, 82); B 4(4, 11, 22, 40, 49, 58, 65, 80, 83);
 B 5(5, 12, 23, 31, 50, 59, 66, 71, 84); B 6(6, 13, 24, 32, 41, 60, 67, 72, 85);
 B 7(7, 14, 25, 33, 42, 51, 68, 73, 86); B 8(8, 15, 26, 34, 43, 52, 69, 74, 87);
 B 9(9, 16, 27, 35, 44, 53, 70, 75, 88); B10(10, 17, 28, 36, 45, 54, 61, 76, 89);

Replication 3

B 1(1, 13, 26, 35, 47, 54, 68, 80, 82); B 2(2, 14, 27, 36, 48, 55, 69, 71, 83);
 B 3(3, 15, 28, 37, 49, 56, 70, 72, 84); B 4(4, 16, 29, 38, 50, 57, 61, 73, 85);
 B 5(5, 17, 30, 39, 41, 58, 62, 74, 86); B 6(6, 18, 21, 40, 42, 59, 63, 75, 87);
 B 7(7, 19, 22, 31, 43, 60, 64, 76, 88); B 8(8, 20, 23, 32, 44, 51, 65, 77, 89);
 B 9(9, 11, 24, 33, 45, 52, 66, 78, 90); B10(10, 12, 25, 34, 46, 53, 67, 79, 81);

371. $v = 90, b = 40, r = 4, k = 9, AE = 0.9707, DE = 0.9862 \quad \alpha(0,1,2,3)$

Replication 1

B 1(1, 11, 21, 31, 41, 51, 61, 71, 81); B 2(2, 12, 22, 32, 42, 52, 62, 72, 82);
 B 3(3, 13, 23, 33, 43, 53, 63, 73, 83); B 4(4, 14, 24, 34, 44, 54, 64, 74, 84);
 B 5(5, 15, 25, 35, 45, 55, 65, 75, 85); B 6(6, 16, 26, 36, 46, 56, 66, 76, 86);
 B 7(7, 17, 27, 37, 47, 57, 67, 77, 87); B 8(8, 18, 28, 38, 48, 58, 68, 78, 88);
 B 9(9, 19, 29, 39, 49, 59, 69, 79, 89); B10(10, 20, 30, 40, 50, 60, 70, 80, 90).

Replication 2

B 1(1, 18, 29, 37, 42, 55, 66, 80, 84); B 2(2, 19, 30, 38, 43, 56, 67, 71, 85);
 B 3(3, 20, 21, 39, 44, 57, 68, 72, 86); B 4(4, 11, 22, 40, 45, 58, 69, 73, 87);
 B 5(5, 12, 23, 31, 46, 59, 70, 74, 88); B 6(6, 13, 24, 32, 47, 60, 61, 75, 89);
 B 7(7, 14, 25, 33, 48, 51, 62, 76, 90); B 8(8, 15, 26, 34, 49, 52, 63, 77, 81);
 B 9(9, 16, 27, 35, 50, 53, 64, 78, 82); B10(10, 17, 28, 36, 41, 54, 65, 79, 83).

Replication 3

B 1(1, 12, 23, 40, 45, 56, 67, 78, 89); B 2(2, 13, 24, 31, 46, 57, 68, 79, 90);
 B 3(3, 14, 25, 32, 47, 58, 69, 80, 81); B 4(4, 15, 26, 33, 48, 59, 70, 71, 82);
 B 5(5, 16, 27, 34, 49, 60, 61, 72, 83); B 6(6, 17, 28, 35, 50, 51, 62, 73, 84);
 B 7(7, 18, 29, 36, 41, 52, 63, 74, 85); B 8(8, 19, 30, 37, 42, 53, 64, 75, 86);
 B 9(9, 20, 21, 38, 43, 54, 65, 76, 87); B10(10, 11, 22, 39, 44, 55, 66, 77, 88).

Replication 4

B 1(1, 13, 24, 36, 48, 59, 70, 77, 86); B 2(2, 14, 25, 37, 49, 60, 61, 78, 87);
 B 3(3, 15, 26, 38, 50, 51, 62, 79, 88); B 4(4, 16, 27, 39, 41, 52, 63, 80, 89);
 B 5(5, 17, 28, 40, 42, 53, 64, 71, 90); B 6(6, 18, 29, 31, 43, 54, 65, 72, 81);
 B 7(7, 19, 30, 32, 44, 55, 66, 73, 82); B 8(8, 20, 21, 33, 45, 56, 67, 74, 83);
 B 9(9, 11, 22, 34, 46, 57, 68, 75, 84); B10(10, 12, 23, 35, 47, 58, 69, 76, 85).

372. $v = 90, b = 50, r = 5, k = 9, AE = 0.9780, DE = 0.9895 \quad \alpha(0,1,2,3,4)$

Replication 1

B 1(1, 11, 21, 31, 41, 51, 61, 71, 81); B 2(2, 12, 22, 32, 42, 52, 62, 72, 82);

B 3(3, 13, 23, 33, 43, 53, 63, 73, 83);
B 5(5, 15, 25, 35, 45, 55, 65, 75, 85);
B 7(7, 17, 27, 37, 47, 57, 67, 77, 87);
B 9(9, 19, 29, 39, 49, 59, 69, 79, 89);

B 4(4, 14, 24, 34, 44, 54, 64, 74, 84);
B 6(6, 16, 26, 36, 46, 56, 66, 76, 86);
B 8(8, 18, 28, 38, 48, 58, 68, 78, 88);
B10(10, 20, 30, 40, 50, 60, 70, 80, 90).

Replication 2

B 1(1, 18, 29, 37, 42, 55, 66, 80, 84);
B 3(3, 20, 21, 39, 44, 57, 68, 72, 86);
B 5(5, 12, 23, 31, 46, 59, 70, 74, 88);
B 7(7, 14, 25, 33, 48, 51, 62, 76, 90);
B 9(9, 16, 27, 35, 50, 53, 64, 78, 82);

B 2(2, 19, 30, 38, 43, 56, 67, 71, 85);
B 4(4, 11, 22, 40, 45, 58, 69, 73, 87);
B 6(6, 13, 24, 32, 47, 60, 61, 75, 89);
B 8(8, 15, 26, 34, 49, 52, 63, 77, 81);
B10(10, 17, 28, 36, 41, 54, 65, 79, 83).

Replication 3

B 1(1, 12, 23, 40, 45, 56, 67, 78, 89);
B 3(3, 14, 25, 32, 47, 58, 69, 80, 81);
B 5(5, 16, 27, 34, 49, 60, 61, 72, 83);
B 7(7, 18, 29, 36, 41, 52, 63, 74, 85);
B 9(9, 20, 21, 38, 43, 54, 65, 76, 87);

B 2(2, 13, 24, 31, 46, 57, 68, 79, 90);
B 4(4, 15, 26, 33, 48, 59, 70, 71, 82);
B 6(6, 17, 28, 35, 50, 51, 62, 73, 84);
B 8(8, 19, 30, 37, 42, 53, 64, 75, 86);
B10(10, 11, 22, 39, 44, 55, 66, 77, 88).

Replication 4

B 1(1, 13, 24, 36, 48, 59, 70, 77, 86);
B 3(3, 15, 26, 38, 50, 51, 62, 79, 88);
B 5(5, 17, 28, 40, 42, 53, 64, 71, 90);
B 7(7, 19, 30, 32, 44, 55, 66, 73, 82);
B 9(9, 11, 22, 34, 46, 57, 68, 75, 84);

B 2(2, 14, 25, 37, 49, 60, 61, 78, 87);
B 4(4, 16, 27, 39, 41, 52, 63, 80, 89);
B 6(6, 18, 29, 31, 43, 54, 65, 72, 81);
B 8(8, 20, 21, 33, 45, 56, 67, 74, 83);
B10(10, 12, 23, 35, 47, 58, 69, 76, 85).

Replication 5

B 1(1, 14, 26, 37, 43, 58, 69, 75, 82);
B 3(3, 16, 28, 39, 45, 60, 61, 77, 84);
B 5(5, 18, 30, 31, 47, 52, 63, 79, 86);
B 7(7, 20, 22, 33, 49, 54, 65, 71, 88);
B 9(9, 12, 24, 35, 41, 56, 67, 73, 90);

B 2(2, 15, 27, 38, 44, 59, 70, 76, 83);
B 4(4, 17, 29, 40, 46, 51, 62, 78, 85);
B 6(6, 19, 21, 32, 48, 53, 64, 80, 87);
B 8(8, 11, 23, 34, 50, 55, 66, 72, 89);
B10(10, 13, 25, 36, 42, 57, 68, 74, 81).

373. $v = 99, b = 22, r = 2, k = 9, AE = 0.9177, DE = 0.9645$ $\alpha(0,1);$

Replication 1

B1(1, 12, 23, 34, 45, 56, 67, 78, 89);
B3(3, 14, 25, 36, 47, 58, 69, 80, 91);
B5(5, 16, 27, 38, 49, 60, 71, 82, 93);
B7(7, 18, 29, 40, 51, 62, 73, 84, 95);
B9(9, 20, 31, 42, 53, 64, 75, 86, 97);
B11(11, 22, 33, 44, 55, 66, 77, 88, 99).

B2(2, 13, 24, 35, 46, 57, 68, 79, 90);
B4(4, 15, 26, 37, 48, 59, 70, 81, 92);
B6(6, 17, 28, 39, 50, 61, 72, 83, 94);
B8(8, 19, 30, 41, 52, 63, 74, 85, 96);
B10(10, 21, 32, 43, 54, 65, 76, 87, 98);

Replication 2

B1(1, 20, 28, 38, 48, 63, 68, 84, 91);
B3(3, 22, 30, 40, 50, 65, 70, 86, 93);
B5(5, 13, 32, 42, 52, 56, 72, 88, 95);
B7(7, 15, 23, 44, 54, 58, 74, 79, 97);
B9(9, 17, 25, 35, 45, 60, 76, 81, 99);
B11(11, 19, 27, 37, 47, 62, 67, 83, 90).

B2(2, 21, 29, 39, 49, 64, 69, 85, 92);
B4(4, 12, 31, 41, 51, 66, 71, 87, 94);
B6(6, 14, 33, 43, 53, 57, 73, 78, 96);
B8(8, 16, 24, 34, 55, 59, 75, 80, 98);
B10(10, 18, 26, 36, 46, 61, 77, 82, 89);

374. $v = 99, b = 33, r = 3, k = 9, AE = 0.9617, DE = 0.9820$ $\alpha(0,1);$

Replication 1

B 1(1, 12, 23, 34, 45, 56, 67, 78, 89);
 B 3(3, 14, 25, 36, 47, 58, 69, 80, 91);
 B 5(5, 16, 27, 38, 49, 60, 71, 82, 93);
 B 7(7, 18, 29, 40, 51, 62, 73, 84, 95);
 B 9(9, 20, 31, 42, 53, 64, 75, 86, 97);
 B11(11, 22, 33, 44, 55, 66, 77, 88, 99).

B 2(2, 13, 24, 35, 46, 57, 68, 79, 90);
 B 4(4, 15, 26, 37, 48, 59, 70, 81, 92);
 B 6(6, 17, 28, 39, 50, 61, 72, 83, 94);
 B 8(8, 19, 30, 41, 52, 63, 74, 85, 96);
 B10(10, 21, 32, 43, 54, 65, 76, 87, 98);

Replication 2

B 1(1, 21, 30, 35, 50, 62, 70, 86, 99);
 B 3(3, 12, 32, 37, 52, 64, 72, 88, 90);
 B 5(5, 14, 23, 39, 54, 66, 74, 79, 92);
 B 7(7, 16, 25, 41, 45, 57, 76, 81, 94);
 B 9(9, 18, 27, 43, 47, 59, 67, 83, 96);
 B11(11, 20, 29, 34, 49, 61, 69, 85, 98).

B 2(2, 22, 31, 36, 51, 63, 71, 87, 89);
 B 4(4, 13, 33, 38, 53, 65, 73, 78, 91);
 B 6(6, 15, 24, 40, 55, 56, 75, 80, 93);
 B 8(8, 17, 26, 42, 46, 58, 77, 82, 95);
 B10(10, 19, 28, 44, 48, 60, 68, 84, 97);

Replication 3

B 1(1, 19, 29, 37, 47, 65, 77, 79, 93);
 B 3(3, 21, 31, 39, 49, 56, 68, 81, 95);
 B 5(5, 12, 33, 41, 51, 58, 70, 83, 97);
 B 7(7, 14, 24, 43, 53, 60, 72, 85, 99);
 B 9(9, 16, 26, 34, 55, 62, 74, 87, 90);
 B11(11, 18, 28, 36, 46, 64, 76, 78, 92).

B 2(2, 20, 30, 38, 48, 66, 67, 80, 94);
 B 4(4, 22, 32, 40, 50, 57, 69, 82, 96);
 B 6(6, 13, 23, 42, 52, 59, 71, 84, 98);
 B 8(8, 15, 25, 44, 54, 61, 73, 86, 89);
 B10(10, 17, 27, 35, 45, 63, 75, 88, 91);

375. $v = 99, b = 44, r = 4, k = 9, AE = 0.9761, DE = 0.9885$

$\alpha(0,1,2)^{***}$

Replication 1

B 1(1, 12, 23, 34, 45, 56, 67, 78, 89);
 B 3(3, 14, 25, 36, 47, 58, 69, 80, 91);
 B 5(5, 16, 27, 38, 49, 60, 71, 82, 93);
 B 7(7, 18, 29, 40, 51, 62, 73, 84, 95);
 B 9(9, 20, 31, 42, 53, 64, 75, 86, 97);
 B11(11, 22, 33, 44, 55, 66, 77, 88, 99).

B 2(2, 13, 24, 35, 46, 57, 68, 79, 90);
 B 4(4, 15, 26, 37, 48, 59, 70, 81, 92);
 B 6(6, 17, 28, 39, 50, 61, 72, 83, 94);
 B 8(8, 19, 30, 41, 52, 63, 74, 85, 96);
 B10(10, 21, 32, 43, 54, 65, 76, 87, 98);

Replication 2

B 1(1, 17, 31, 43, 55, 57, 73, 85, 92);
 B 3(3, 19, 33, 34, 46, 59, 75, 87, 94);
 B 5(5, 21, 24, 36, 48, 61, 77, 78, 96);
 B 7(7, 12, 26, 38, 50, 63, 68, 80, 98);
 B 9(9, 14, 28, 40, 52, 65, 70, 82, 89);
 B11(11, 16, 30, 42, 54, 56, 72, 84, 91).

B 2(2, 18, 32, 44, 45, 58, 74, 86, 93);
 B 4(4, 20, 23, 35, 47, 60, 76, 88, 95);
 B 6(6, 22, 25, 37, 49, 62, 67, 79, 97);
 B 8(8, 13, 27, 39, 51, 64, 69, 81, 99);
 B10(10, 15, 29, 41, 53, 66, 71, 83, 90);

Replication 3

B 1(1, 21, 30, 35, 50, 62, 70, 86, 99);
 B 3(3, 12, 32, 37, 52, 64, 72, 88, 90);
 B 5(5, 14, 23, 39, 54, 66, 74, 79, 92);
 B 7(7, 16, 25, 41, 45, 57, 76, 81, 94);
 B 9(9, 18, 27, 43, 47, 59, 67, 83, 96);
 B11(11, 20, 29, 34, 49, 61, 69, 85, 98).

B 2(2, 22, 31, 36, 51, 63, 71, 87, 89);
 B 4(4, 13, 33, 38, 53, 65, 73, 78, 91);
 B 6(6, 15, 24, 40, 55, 56, 75, 80, 93);
 B 8(8, 17, 26, 42, 46, 58, 77, 82, 95);
 B10(10, 19, 28, 44, 48, 60, 68, 84, 97);

Replication 4

B 1(1, 19, 29, 37, 47, 65, 77, 79, 93);
 B 3(3, 21, 31, 39, 49, 56, 68, 81, 95);
 B 5(5, 12, 33, 41, 51, 58, 70, 83, 97);
 B 7(7, 14, 24, 43, 53, 60, 72, 85, 99);
 B 9(9, 16, 26, 34, 55, 62, 74, 87, 90);
 B11(11, 18, 28, 36, 46, 64, 76, 78, 92).

B 2(2, 20, 30, 38, 48, 66, 67, 80, 94);
 B 4(4, 22, 32, 40, 50, 57, 69, 82, 96);
 B 6(6, 13, 23, 42, 52, 59, 71, 84, 98);
 B 8(8, 15, 25, 44, 54, 61, 73, 86, 89);
 B10(10, 17, 27, 35, 45, 63, 75, 88, 91);

376. $v = 99, b = 55, r = 5, k = 9, AE = 0.9801, DE = 0.9904$

$\alpha(0,1,2)$

Replication 1

B 1(1, 12, 23, 34, 45, 56, 67, 78, 89);
B 3(3, 14, 25, 36, 47, 58, 69, 80, 91);
B 5(5, 16, 27, 38, 49, 60, 71, 82, 93);
B 7(7, 18, 29, 40, 51, 62, 73, 84, 95);
B 9(9, 20, 31, 42, 53, 64, 75, 86, 97);
B11(11, 22, 33, 44, 55, 66, 77, 88, 99);

B 2(2, 13, 24, 35, 46, 57, 68, 79, 90);
B 4(4, 15, 26, 37, 48, 59, 70, 81, 92);
B 6(6, 17, 28, 39, 50, 61, 72, 83, 94);
B 8(8, 19, 30, 41, 52, 63, 74, 85, 96);
B10(10, 21, 32, 43, 54, 65, 76, 87, 98);

Replication 2

B 1(1, 20, 28, 38, 48, 63, 68, 84, 91);
B 3(3, 22, 30, 40, 50, 65, 70, 86, 93);
B 5(5, 13, 32, 42, 52, 56, 72, 88, 95);
B 7(7, 15, 23, 44, 54, 58, 74, 79, 97);
B 9(9, 17, 25, 35, 45, 60, 76, 81, 99);
B11(11, 19, 27, 37, 47, 62, 67, 83, 90);

B 2(2, 21, 29, 39, 49, 64, 69, 85, 92);
B 4(4, 12, 31, 41, 51, 66, 71, 87, 94);
B 6(6, 14, 33, 43, 53, 57, 73, 78, 96);
B 8(8, 16, 24, 34, 55, 59, 75, 80, 98);
B10(10, 18, 26, 36, 46, 61, 77, 82, 89);

Replication 3

B 1(1, 13, 30, 37, 51, 66, 76, 80, 97);
B 3(3, 15, 32, 39, 53, 57, 67, 82, 99);
B 5(5, 17, 23, 41, 55, 59, 69, 84, 90);
B 7(7, 19, 25, 43, 46, 61, 71, 86, 92);
B 9(9, 21, 27, 34, 48, 63, 73, 88, 94);
B11(11, 12, 29, 36, 50, 65, 75, 79, 96);

B 2(2, 14, 31, 38, 52, 56, 77, 81, 98);
B 4(4, 16, 33, 40, 54, 58, 68, 83, 89);
B 6(6, 18, 24, 42, 45, 60, 70, 85, 91);
B 8(8, 20, 26, 44, 47, 62, 72, 87, 93);
B10(10, 22, 28, 35, 49, 64, 74, 78, 95);

Replication 4

B 1(1, 15, 27, 40, 47, 61, 74, 87, 99);
B 3(3, 17, 29, 42, 49, 63, 76, 78, 90);
B 5(5, 19, 31, 44, 51, 65, 67, 80, 92);
B 7(7, 21, 33, 35, 53, 56, 69, 82, 94);
B 9(9, 12, 24, 37, 55, 58, 71, 84, 96);
B11(11, 14, 26, 39, 46, 60, 73, 86, 98);

B 2(2, 16, 28, 41, 48, 62, 75, 88, 89);
B 4(4, 18, 30, 43, 50, 64, 77, 79, 91);
B 6(6, 20, 32, 34, 52, 66, 68, 81, 93);
B 8(8, 22, 23, 36, 54, 57, 70, 83, 95);
B10(10, 13, 25, 38, 45, 59, 72, 85, 97);

Replication 5

B 1(1, 15, 29, 38, 46, 64, 72, 83, 96);
B 3(3, 17, 31, 40, 48, 66, 74, 85, 98);
B 5(5, 19, 33, 42, 50, 57, 76, 87, 89);
B 7(7, 21, 24, 44, 52, 59, 67, 78, 91);
B 9(9, 12, 26, 35, 54, 61, 69, 80, 93);
B11(11, 14, 28, 37, 45, 63, 71, 82, 95);

B 2(2, 16, 30, 39, 47, 65, 73, 84, 97);
B 4(4, 18, 32, 41, 49, 56, 75, 86, 99);
B 6(6, 20, 23, 43, 51, 58, 77, 88, 90);
B 8(8, 22, 25, 34, 53, 60, 68, 79, 92);
B10(10, 13, 27, 36, 55, 62, 70, 81, 94);

377. $v = 108, b = 24, r = 2, k = 9, AE = 0.9146, DE = 0.9635$ $\alpha(0,1)$

Replication 1

B 1(1, 13, 25, 37, 49, 61, 73, 85, 97);
B 3(3, 15, 27, 39, 51, 63, 75, 87, 99);
B 5(5, 17, 29, 41, 53, 65, 77, 89, 101);
B 7(7, 19, 31, 43, 55, 67, 79, 91, 103);
B 9(9, 21, 33, 45, 57, 69, 81, 93, 105);
B11(11, 23, 35, 47, 59, 71, 83, 95, 107);

B 2(2, 14, 26, 38, 50, 62, 74, 86, 98);
B 4(4, 16, 28, 40, 52, 64, 76, 88, 100);
B 6(6, 18, 30, 42, 54, 66, 78, 90, 102);
B 8(8, 20, 32, 44, 56, 68, 80, 92, 104);
B10(10, 22, 34, 46, 58, 70, 82, 94, 106);
B12(12, 24, 36, 48, 60, 72, 84, 96, 108);

Replication 2

B 1(1, 14, 32, 40, 55, 72, 82, 89, 105);	B 2(2, 15, 33, 41, 56, 61, 83, 90, 106);
B 3(3, 16, 34, 42, 57, 62, 84, 91, 107);	B 4(4, 17, 35, 43, 58, 63, 73, 92, 108);
B 5(5, 18, 36, 44, 59, 64, 74, 93, 97);	B 6(6, 19, 25, 45, 60, 65, 75, 94, 98);
B 7(7, 20, 26, 46, 49, 66, 76, 95, 99);	B 8(8, 21, 27, 47, 50, 67, 77, 96, 100);
B 9(9, 22, 28, 48, 51, 68, 78, 85, 101);	B10(10, 23, 29, 37, 52, 69, 79, 86, 102);
B11(11, 24, 30, 38, 53, 70, 80, 87, 103);	B12(12, 13, 31, 39, 54, 71, 81, 88, 104).

378. $v = 108, b = 36, r = 3, k = 9, AE = 0.9578, DE = 0.9805$ $\alpha(0,1,2)$

Replication 1

B 1(1, 13, 25, 37, 49, 61, 73, 85, 97);	B 2(2, 14, 26, 38, 50, 62, 74, 86, 98);
B 3(3, 15, 27, 39, 51, 63, 75, 87, 99);	B 4(4, 16, 28, 40, 52, 64, 76, 88, 100);
B 5(5, 17, 29, 41, 53, 65, 77, 89, 101);	B 6(6, 18, 30, 42, 54, 66, 78, 90, 102);
B 7(7, 19, 31, 43, 55, 67, 79, 91, 103);	B 8(8, 20, 32, 44, 56, 68, 80, 92, 104);
B 9(9, 21, 33, 45, 57, 69, 81, 93, 105);	B10(10, 22, 34, 46, 58, 70, 82, 94, 106);
B11(11, 23, 35, 47, 59, 71, 83, 95, 107);	B12(12, 24, 36, 48, 60, 72, 84, 96, 108).

Replication 2

B 1(1, 14, 32, 40, 55, 72, 82, 87, 105);	B 2(2, 15, 33, 41, 56, 61, 83, 88, 106);
B 3(3, 16, 34, 42, 57, 62, 84, 89, 107);	B 4(4, 17, 35, 43, 58, 63, 73, 90, 108);
B 5(5, 18, 36, 44, 59, 64, 74, 91, 97);	B 6(6, 19, 25, 45, 60, 65, 75, 92, 98);
B 7(7, 20, 26, 46, 49, 66, 76, 93, 99);	B 8(8, 21, 27, 47, 50, 67, 77, 94, 100);
B 9(9, 22, 28, 48, 51, 68, 78, 95, 101);	B10(10, 23, 29, 37, 52, 69, 79, 96, 102);
B11(11, 24, 30, 38, 53, 70, 80, 85, 103);	B12(12, 13, 31, 39, 54, 71, 81, 86, 104).

Replication 3

B 1(1, 16, 29, 43, 51, 66, 80, 94, 107);	B 2(2, 17, 30, 44, 52, 67, 81, 95, 108);
B 3(3, 18, 31, 45, 53, 68, 82, 96, 97);	B 4(4, 19, 32, 46, 54, 69, 83, 85, 98);
B 5(5, 20, 33, 47, 55, 70, 84, 86, 99);	B 6(6, 21, 34, 48, 56, 71, 73, 87, 100);
B 7(7, 22, 35, 37, 57, 72, 74, 88, 101);	B 8(8, 23, 36, 38, 58, 61, 75, 89, 102);
B 9(9, 24, 25, 39, 59, 62, 76, 90, 103);	B10(10, 13, 26, 40, 60, 63, 77, 91, 104);
B11(11, 14, 27, 41, 49, 64, 78, 92, 105);	B12(12, 15, 28, 42, 50, 65, 79, 93, 106).

379. $v = 108, b = 48, r = 4, k = 9, AE = 0.9721, DE = 0.9868$ $\alpha(0,1,2)$

Replication 1

B 1(1, 13, 25, 37, 49, 61, 73, 85, 97);	B 2(2, 14, 26, 38, 50, 62, 74, 86, 98);
B 3(3, 15, 27, 39, 51, 63, 75, 87, 99);	B 4(4, 16, 28, 40, 52, 64, 76, 88, 100);
B 5(5, 17, 29, 41, 53, 65, 77, 89, 101);	B 6(6, 18, 30, 42, 54, 66, 78, 90, 102);
B 7(7, 19, 31, 43, 55, 67, 79, 91, 103);	B 8(8, 20, 32, 44, 56, 68, 80, 92, 104);
B 9(9, 21, 33, 45, 57, 69, 81, 93, 105);	B10(10, 22, 34, 46, 58, 70, 82, 94, 106);
B11(11, 23, 35, 47, 59, 71, 83, 95, 107);	B12(12, 24, 36, 48, 60, 72, 84, 96, 108).

Replication 2

B 1(1, 21, 30, 41, 60, 68, 74, 91, 99);	B 2(2, 22, 31, 42, 49, 69, 75, 92, 100);
B 3(3, 23, 32, 43, 50, 70, 76, 93, 101);	B 4(4, 24, 33, 44, 51, 71, 77, 94, 102);
B 5(5, 13, 34, 45, 52, 72, 78, 95, 103);	B 6(6, 14, 35, 46, 53, 61, 79, 96, 104);
B 7(7, 15, 36, 47, 54, 62, 80, 85, 105);	B 8(8, 16, 25, 48, 55, 63, 81, 86, 106);
B 9(9, 17, 26, 37, 56, 64, 82, 87, 107);	B10(10, 18, 27, 38, 57, 65, 83, 88, 108);
B11(11, 19, 28, 39, 58, 66, 84, 89, 97);	B12(12, 20, 29, 40, 59, 67, 73, 90, 98).

Replication 3

B 1(1, 14, 32, 40, 55, 71, 82, 87, 105);	B 2(2, 15, 33, 41, 56, 72, 83, 88, 106);
B 3(3, 16, 34, 42, 57, 61, 84, 89, 107);	B 4(4, 17, 35, 43, 58, 62, 73, 90, 108);

B 5(5, 18, 36, 44, 59, 63, 74, 91, 97); B 6(6, 19, 25, 45, 60, 64, 75, 92, 98);
 B 7(7, 20, 26, 46, 49, 65, 76, 93, 99); B 8(8, 21, 27, 47, 50, 66, 77, 94, 100);
 B 9(9, 22, 28, 48, 51, 67, 78, 95, 101); B10(10, 23, 29, 37, 52, 68, 79, 96, 102);
 B11(11, 24, 30, 38, 53, 69, 80, 85, 103); B12(12, 13, 31, 39, 54, 70, 81, 86, 104).

Replication 4

B 1(1, 16, 29, 43, 51, 66, 80, 94, 107); B 2(2, 17, 30, 44, 52, 67, 81, 95, 108);
 B 3(3, 18, 31, 45, 53, 68, 82, 96, 97); B 4(4, 19, 32, 46, 54, 69, 83, 85, 98);
 B 5(5, 20, 33, 47, 55, 70, 84, 86, 99); B 6(6, 21, 34, 48, 56, 71, 73, 87, 100);
 B 7(7, 22, 35, 37, 57, 72, 74, 88, 101); B 8(8, 23, 36, 38, 58, 61, 75, 89, 102);
 B 9(9, 24, 25, 39, 59, 62, 76, 90, 103); B10(10, 13, 26, 40, 60, 63, 77, 91, 104);
 B11(11, 14, 27, 41, 49, 64, 78, 92, 105); B12(12, 15, 28, 42, 50, 65, 79, 93, 106).

380. $v = 108, b = 60, r = 5, k = 9, AE = 0.9793, DE = 0.9900$ $\alpha(0,1,2)$

Replication 1

B 1(1, 13, 25, 37, 49, 61, 73, 85, 97); B 2(2, 14, 26, 38, 50, 62, 74, 86, 98);
 B 3(3, 15, 27, 39, 51, 63, 75, 87, 99); B 4(4, 16, 28, 40, 52, 64, 76, 88, 100);
 B 5(5, 17, 29, 41, 53, 65, 77, 89, 101); B 6(6, 18, 30, 42, 54, 66, 78, 90, 102);
 B 7(7, 19, 31, 43, 55, 67, 79, 91, 103); B 8(8, 20, 32, 44, 56, 68, 80, 92, 104);
 B 9(9, 21, 33, 45, 57, 69, 81, 93, 105); B10(10, 22, 34, 46, 58, 70, 82, 94, 106);
 B11(11, 23, 35, 47, 59, 71, 83, 95, 107); B12(12, 24, 36, 48, 60, 72, 84, 96, 108).

Replication 2

B 1(1, 21, 30, 41, 60, 68, 74, 91, 99); B 2(2, 22, 31, 42, 49, 69, 75, 92, 100);
 B 3(3, 23, 32, 43, 50, 70, 76, 93, 101); B 4(4, 24, 33, 44, 51, 71, 77, 94, 102);
 B 5(5, 13, 34, 45, 52, 72, 78, 95, 103); B 6(6, 14, 35, 46, 53, 61, 79, 96, 104);
 B 7(7, 15, 36, 47, 54, 62, 80, 85, 105); B 8(8, 16, 25, 48, 55, 63, 81, 86, 106);
 B 9(9, 17, 26, 37, 56, 64, 82, 87, 107); B10(10, 18, 27, 38, 57, 65, 83, 88, 108);
 B11(11, 19, 28, 39, 58, 66, 84, 89, 97); B12(12, 20, 29, 40, 59, 67, 73, 90, 98).

Replication 3

B 1(1, 14, 32, 40, 55, 71, 82, 87, 105); B 2(2, 15, 33, 41, 56, 72, 83, 88, 106);
 B 3(3, 16, 34, 42, 57, 61, 84, 89, 107); B 4(4, 17, 35, 43, 58, 62, 73, 90, 108);
 B 5(5, 18, 36, 44, 59, 63, 74, 91, 97); B 6(6, 19, 25, 45, 60, 64, 75, 92, 98);
 B 7(7, 20, 26, 46, 49, 65, 76, 93, 99); B 8(8, 21, 27, 47, 50, 66, 77, 94, 100);
 B 9(9, 22, 28, 48, 51, 67, 78, 95, 101); B10(10, 23, 29, 37, 52, 68, 79, 96, 102);
 B11(11, 24, 30, 38, 53, 69, 80, 85, 103); B12(12, 13, 31, 39, 54, 70, 81, 86, 104).

Replication 4

B 1(1, 16, 29, 43, 51, 66, 80, 94, 107); B 2(2, 17, 30, 44, 52, 67, 81, 95, 108);
 B 3(3, 18, 31, 45, 53, 68, 82, 96, 97); B 4(4, 19, 32, 46, 54, 69, 83, 85, 98);
 B 5(5, 20, 33, 47, 55, 70, 84, 86, 99); B 6(6, 21, 34, 48, 56, 71, 73, 87, 100);
 B 7(7, 22, 35, 37, 57, 72, 74, 88, 101); B 8(8, 23, 36, 38, 58, 61, 75, 89, 102);
 B 9(9, 24, 25, 39, 59, 62, 76, 90, 103); B10(10, 13, 26, 40, 60, 63, 77, 91, 104);
 B11(11, 14, 27, 41, 49, 64, 78, 92, 105); B12(12, 15, 28, 42, 50, 65, 79, 93, 106).

Replication 5

B 1(1, 16, 31, 41, 50, 69, 78, 90, 104); B 2(2, 17, 32, 42, 51, 70, 79, 91, 105);
 B 3(3, 18, 33, 43, 52, 71, 80, 92, 106); B 4(4, 19, 34, 44, 53, 72, 81, 93, 107);
 B 5(5, 20, 35, 45, 54, 61, 82, 94, 108); B 6(6, 21, 36, 46, 55, 62, 83, 95, 97);
 B 7(7, 22, 25, 47, 56, 63, 84, 96, 98); B 8(8, 23, 26, 48, 57, 64, 73, 85, 99);
 B 9(9, 24, 27, 37, 58, 65, 74, 86, 100); B10(10, 13, 28, 38, 59, 66, 75, 87, 101);
 B11(11, 14, 29, 39, 60, 67, 76, 88, 102); B12(12, 15, 30, 40, 49, 68, 77, 89, 103).

381. $v = 117, b = 26, r = 2, k = 9, AE = 0.9119, DE = 0.9626$ $\alpha(0,1)$

Replication 1

B 1(1, 14, 27, 40, 53, 66, 79, 92, 105); B 2(2, 15, 28, 41, 54, 67, 80, 93, 106);
 B 3(3, 16, 29, 42, 55, 68, 81, 94, 107); B 4(4, 17, 30, 43, 56, 69, 82, 95, 108);
 B 5(5, 18, 31, 44, 57, 70, 83, 96, 109); B 6(6, 19, 32, 45, 58, 71, 84, 97, 110);
 B 7(7, 20, 33, 46, 59, 72, 85, 98, 111); B 8(8, 21, 34, 47, 60, 73, 86, 99, 112);
 B 9(9, 22, 35, 48, 61, 74, 87, 100, 113); B10(10, 23, 36, 49, 62, 75, 88, 101, 114);
 B11(11, 24, 37, 50, 63, 76, 89, 102, 115); B12(12, 25, 38, 51, 64, 77, 90, 103, 116);
 B13(13, 26, 39, 52, 65, 78, 91, 104, 117).

Replication 2

B 1(1, 15, 32, 44, 59, 77, 88, 104, 113); B 2(2, 16, 33, 45, 60, 78, 89, 92, 114);
 B 3(3, 17, 34, 46, 61, 66, 90, 93, 115); B 4(4, 18, 35, 47, 62, 67, 91, 94, 116);
 B 5(5, 19, 36, 48, 63, 68, 79, 95, 117); B 6(6, 20, 37, 49, 64, 69, 80, 96, 105);
 B 7(7, 21, 38, 50, 65, 70, 81, 97, 106); B 8(8, 22, 39, 51, 53, 71, 82, 98, 107);
 B 9(9, 23, 27, 52, 54, 72, 83, 99, 108); B10(10, 24, 28, 40, 55, 73, 84, 100, 109);
 B11(11, 25, 29, 41, 56, 74, 85, 101, 110); B12(12, 26, 30, 42, 57, 75, 86, 102, 111);
 B13(13, 14, 31, 43, 58, 76, 87, 103, 112).

382. $v = 117, b = 39, r = 3, k = 9, AE = 0.9510, DE = 0.9779$ $\alpha(0,1,2)$

Replication 1

B 1(1, 14, 27, 40, 53, 66, 79, 92, 105); B 2(2, 15, 28, 41, 54, 67, 80, 93, 106);
 B 3(3, 16, 29, 42, 55, 68, 81, 94, 107); B 4(4, 17, 30, 43, 56, 69, 82, 95, 108);
 B 5(5, 18, 31, 44, 57, 70, 83, 96, 109); B 6(6, 19, 32, 45, 58, 71, 84, 97, 110);
 B 7(7, 20, 33, 46, 59, 72, 85, 98, 111); B 8(8, 21, 34, 47, 60, 73, 86, 99, 112);
 B 9(9, 22, 35, 48, 61, 74, 87, 100, 113); B10(10, 23, 36, 49, 62, 75, 88, 101, 114);
 B11(11, 24, 37, 50, 63, 76, 89, 102, 115); B12(12, 25, 38, 51, 64, 77, 90, 103, 116);
 B13(13, 26, 39, 52, 65, 78, 91, 104, 117).

Replication 2

B 1(1, 15, 32, 44, 59, 77, 88, 104, 113); B 2(2, 16, 33, 45, 60, 78, 89, 92, 114);
 B 3(3, 17, 34, 46, 61, 66, 90, 93, 115); B 4(4, 18, 35, 47, 62, 67, 91, 94, 116);
 B 5(5, 19, 36, 48, 63, 68, 79, 95, 117); B 6(6, 20, 37, 49, 64, 69, 80, 96, 105);
 B 7(7, 21, 38, 50, 65, 70, 81, 97, 106); B 8(8, 22, 39, 51, 53, 71, 82, 98, 107);
 B 9(9, 23, 27, 52, 54, 72, 83, 99, 108); B10(10, 24, 28, 40, 55, 73, 84, 100, 109);
 B11(11, 25, 29, 41, 56, 74, 85, 101, 110); B12(12, 26, 30, 42, 57, 75, 86, 102, 111);
 B13(13, 14, 31, 43, 58, 76, 87, 103, 112).

Replication 3

B 1(1, 16, 30, 45, 60, 74, 83, 93, 115); B 2(2, 17, 31, 46, 61, 75, 84, 94, 116);
 B 3(3, 18, 32, 47, 62, 76, 85, 95, 117); B 4(4, 19, 33, 48, 63, 77, 86, 96, 105);
 B 5(5, 20, 34, 49, 64, 78, 87, 97, 106); B 6(6, 21, 35, 50, 65, 66, 88, 98, 107);
 B 7(7, 22, 36, 51, 53, 67, 89, 99, 108); B 8(8, 23, 37, 52, 54, 68, 90, 100, 109);
 B 9(9, 24, 38, 40, 55, 69, 91, 101, 110); B10(10, 25, 39, 41, 56, 70, 79, 102, 111);
 B11(11, 26, 27, 42, 57, 71, 80, 103, 112); B12(12, 14, 28, 43, 58, 72, 81, 104, 113);
 B13(13, 15, 29, 44, 59, 73, 82, 92, 114).

383. $v = 117, b = 52, r = 4, k = 9, AE = 0.9697, DE = 0.9857$ $\alpha(0,1,2)$

Replication 1

B 1(1, 14, 27, 40, 53, 66, 79, 92, 105); B 2(2, 15, 28, 41, 54, 67, 80, 93, 106);
 B 3(3, 16, 29, 42, 55, 68, 81, 94, 107); B 4(4, 17, 30, 43, 56, 69, 82, 95, 108);
 B 5(5, 18, 31, 44, 57, 70, 83, 96, 109); B 6(6, 19, 32, 45, 58, 71, 84, 97, 110);
 B 7(7, 20, 33, 46, 59, 72, 85, 98, 111); B 8(8, 21, 34, 47, 60, 73, 86, 99, 112);
 B 9(9, 22, 35, 48, 61, 74, 87, 100, 113); B10(10, 23, 36, 49, 62, 75, 88, 101, 114);
 B11(11, 24, 37, 50, 63, 76, 89, 102, 115); B12(12, 25, 38, 51, 64, 77, 90, 103, 116);
 B13(13, 26, 39, 52, 65, 78, 91, 104, 117).

Replication 2

B 1(1, 15, 32, 44, 59, 77, 88, 104, 113); B 2(2, 16, 33, 45, 60, 78, 89, 92, 114);
 B 3(3, 17, 34, 46, 61, 66, 90, 93, 115); B 4(4, 18, 35, 47, 62, 67, 91, 94, 116);
 B 5(5, 19, 36, 48, 63, 68, 79, 95, 117); B 6(6, 20, 37, 49, 64, 69, 80, 96, 105);
 B 7(7, 21, 38, 50, 65, 70, 81, 97, 106); B 8(8, 22, 39, 51, 53, 71, 82, 98, 107);
 B 9(9, 23, 27, 52, 54, 72, 83, 99, 108); B10(10, 24, 28, 40, 55, 73, 84, 100, 109);
 B11(11, 25, 29, 41, 56, 74, 85, 101, 110); B12(12, 26, 30, 42, 57, 75, 86, 102, 111);
 B13(13, 14, 31, 43, 58, 76, 87, 103, 112).

Replication 3

B 1(1, 17, 31, 47, 65, 67, 81, 98, 114); B 2(2, 18, 32, 48, 53, 68, 82, 99, 115);
 B 3(3, 19, 33, 49, 54, 69, 83, 100, 116); B 4(4, 20, 34, 50, 55, 70, 84, 101, 117);
 B 5(5, 21, 35, 51, 56, 71, 85, 102, 105); B 6(6, 22, 36, 52, 57, 72, 86, 103, 106);
 B 7(7, 23, 37, 40, 58, 73, 87, 104, 107); B 8(8, 24, 38, 41, 59, 74, 88, 92, 108);
 B 9(9, 25, 39, 42, 60, 75, 89, 93, 109); B10(10, 26, 27, 43, 61, 76, 90, 94, 110);
 B11(11, 14, 28, 44, 62, 77, 91, 95, 111); B12(12, 15, 29, 45, 63, 78, 79, 96, 112);
 B13(13, 16, 30, 46, 64, 66, 80, 97, 113).

Replication 4

B 1(1, 19, 35, 51, 63, 75, 86, 94, 108); B 2(2, 20, 36, 52, 64, 76, 87, 95, 109);
 B 3(3, 21, 37, 40, 65, 77, 88, 96, 110); B 4(4, 22, 38, 41, 53, 78, 89, 97, 111);
 B 5(5, 23, 39, 42, 54, 66, 90, 98, 112); B 6(6, 24, 27, 43, 55, 67, 91, 99, 113);
 B 7(7, 25, 28, 44, 56, 68, 79, 100, 114); B 8(8, 26, 29, 45, 57, 69, 80, 101, 115);
 B 9(9, 14, 30, 46, 58, 70, 81, 102, 116); B10(10, 15, 31, 47, 59, 71, 82, 103, 117);
 B11(11, 16, 32, 48, 60, 72, 83, 104, 105); B12(12, 17, 33, 49, 61, 73, 84, 92, 106);
 B13(13, 18, 34, 50, 62, 74, 85, 93, 107).

384. $v = 117$, $b = 65$, $r = 5$, $k = 9$, $AE = 0.9817$, $DE = 0.9911$ $\alpha(0,1,2)$

Replication 1

B 1(1, 14, 27, 40, 53, 66, 79, 92, 105); B 2(2, 15, 28, 41, 54, 67, 80, 93, 106);
 B 3(3, 16, 29, 42, 55, 68, 81, 94, 107); B 4(4, 17, 30, 43, 56, 69, 82, 95, 108);
 B 5(5, 18, 31, 44, 57, 70, 83, 96, 109); B 6(6, 19, 32, 45, 58, 71, 84, 97, 110);
 B 7(7, 20, 33, 46, 59, 72, 85, 98, 111); B 8(8, 21, 34, 47, 60, 73, 86, 99, 112);
 B 9(9, 22, 35, 48, 61, 74, 87, 100, 113); B10(10, 23, 36, 49, 62, 75, 88, 101, 114);
 B11(11, 24, 37, 50, 63, 76, 89, 102, 115); B12(12, 25, 38, 51, 64, 77, 90, 103, 116);
 B13(13, 26, 39, 52, 65, 78, 91, 104, 117).

Replication 2

B 1(1, 22, 37, 51, 56, 78, 80, 98, 112); B 2(2, 23, 38, 52, 57, 66, 81, 99, 113);
 B 3(3, 24, 39, 40, 58, 67, 82, 100, 114); B 4(4, 25, 27, 41, 59, 68, 83, 101, 115);
 B 5(5, 26, 28, 42, 60, 69, 84, 102, 116); B 6(6, 14, 29, 43, 61, 70, 85, 103, 117);
 B 7(7, 15, 30, 44, 62, 71, 86, 104, 105); B 8(8, 16, 31, 45, 63, 72, 87, 92, 106);
 B 9(9, 17, 32, 46, 64, 73, 88, 93, 107); B10(10, 18, 33, 47, 65, 74, 89, 94, 108);
 B11(11, 19, 34, 48, 53, 75, 90, 95, 109); B12(12, 20, 35, 49, 54, 76, 91, 96, 110);
 B13(13, 21, 36, 50, 55, 77, 79, 97, 111).

Replication 3

B 1(1, 15, 35, 45, 55, 75, 83, 103, 108); B 2(2, 16, 36, 46, 56, 76, 84, 104, 109);
 B 3(3, 17, 37, 47, 57, 77, 85, 92, 110); B 4(4, 18, 38, 48, 58, 78, 86, 93, 111);
 B 5(5, 19, 39, 49, 59, 66, 87, 94, 112); B 6(6, 20, 27, 50, 60, 67, 88, 95, 113);
 B 7(7, 21, 28, 51, 61, 68, 89, 96, 114); B 8(8, 22, 29, 52, 62, 69, 90, 97, 115);
 B 9(9, 23, 30, 40, 63, 70, 91, 98, 116); B10(10, 24, 31, 41, 64, 71, 79, 99, 117);
 B11(11, 25, 32, 42, 65, 72, 80, 100, 105); B12(12, 26, 33, 43, 53, 73, 81, 101, 106);
 B13(13, 14, 34, 44, 54, 74, 82, 102, 107).

Replication 4

B 1(1, 20, 28, 46, 65, 77, 82, 99, 115); B 2(2, 21, 29, 47, 53, 78, 83, 100, 116);

B 3(3, 22, 30, 48, 54, 66, 84, 101, 117); B 4(4, 23, 31, 49, 55, 67, 85, 102, 105);
 B 5(5, 24, 32, 50, 56, 68, 86, 103, 106); B 6(6, 25, 33, 51, 57, 69, 87, 104, 107);
 B 7(7, 26, 34, 52, 58, 70, 88, 92, 108); B 8(8, 14, 35, 40, 59, 71, 89, 93, 109);
 B 9(9, 15, 36, 41, 60, 72, 90, 94, 110); B10(10, 16, 37, 42, 61, 73, 91, 95, 111);
 B11(11, 17, 38, 43, 62, 74, 79, 96, 112); B12(12, 18, 39, 44, 63, 75, 80, 97, 113);
 B13(13, 19, 27, 45, 64, 76, 81, 98, 114).

Replication 5

B 1(1, 25, 31, 52, 60, 74, 84, 93, 114); B 2(2, 26, 32, 40, 61, 75, 85, 94, 115);
 B 3(3, 14, 33, 41, 62, 76, 86, 95, 116); B 4(4, 15, 34, 42, 63, 77, 87, 96, 117);
 B 5(5, 16, 35, 43, 64, 78, 88, 97, 105); B 6(6, 17, 36, 44, 65, 66, 89, 98, 106);
 B 7(7, 18, 37, 45, 53, 67, 90, 99, 107); B 8(8, 19, 38, 46, 54, 68, 91, 100, 108);
 B 9(9, 20, 39, 47, 55, 69, 79, 101, 109); B10(10, 21, 27, 48, 56, 70, 80, 102, 110);
 B11(11, 22, 28, 49, 57, 71, 81, 103, 111); B12(12, 23, 29, 50, 58, 72, 82, 104, 112);
 B13(13, 24, 30, 51, 59, 73, 83, 92, 113).

385. $v = 126, b = 28, r = 2, k = 9, AE = 0.9097, DE = 0.9618$ $\alpha(0,1)$

Replication 1

B 1(1, 15, 29, 43, 57, 71, 85, 99, 113); B 2(2, 16, 30, 44, 58, 72, 86, 100, 114);
 B 3(3, 17, 31, 45, 59, 73, 87, 101, 115); B 4(4, 18, 32, 46, 60, 74, 88, 102, 116);
 B 5(5, 19, 33, 47, 61, 75, 89, 103, 117); B 6(6, 20, 34, 48, 62, 76, 90, 104, 118);
 B 7(7, 21, 35, 49, 63, 77, 91, 105, 119); B 8(8, 22, 36, 50, 64, 78, 92, 106, 120);
 B 9(9, 23, 37, 51, 65, 79, 93, 107, 121); B10(10, 24, 38, 52, 66, 80, 94, 108, 122);
 B11(11, 25, 39, 53, 67, 81, 95, 109, 123); B12(12, 26, 40, 54, 68, 82, 96, 110, 124);
 B13(13, 27, 41, 55, 69, 83, 97, 111, 125); B14(14, 28, 42, 56, 70, 84, 98, 112, 126).

Replication 2

B 1(1, 18, 30, 45, 67, 78, 93, 112, 117); B 2(2, 19, 31, 46, 68, 79, 94, 99, 118);
 B 3(3, 20, 32, 47, 69, 80, 95, 100, 119); B 4(4, 21, 33, 48, 70, 81, 96, 101, 120);
 B 5(5, 22, 34, 49, 57, 82, 97, 102, 121); B 6(6, 23, 35, 50, 58, 83, 98, 103, 122);
 B 7(7, 24, 36, 51, 59, 84, 85, 104, 123); B 8(8, 25, 37, 52, 60, 71, 86, 105, 124);
 B 9(9, 26, 38, 53, 61, 72, 87, 106, 125); B10(10, 27, 39, 54, 62, 73, 88, 107, 126);
 B11(11, 28, 40, 55, 63, 74, 89, 108, 113); B12(12, 15, 41, 56, 64, 75, 90, 109, 114);
 B13(13, 16, 42, 43, 65, 76, 91, 110, 115); B14(14, 17, 29, 44, 66, 77, 92, 111, 116).

386. $v = 126, b = 42, r = 3, k = 9, AE = 0.9565, DE = 0.9800$ $\alpha(0,1)$

Replication 1

B 1(1, 15, 29, 43, 57, 71, 85, 99, 113); B 2(2, 16, 30, 44, 58, 72, 86, 100, 114);
 B 3(3, 17, 31, 45, 59, 73, 87, 101, 115); B 4(4, 18, 32, 46, 60, 74, 88, 102, 116);
 B 5(5, 19, 33, 47, 61, 75, 89, 103, 117); B 6(6, 20, 34, 48, 62, 76, 90, 104, 118);
 B 7(7, 21, 35, 49, 63, 77, 91, 105, 119); B 8(8, 22, 36, 50, 64, 78, 92, 106, 120);
 B 9(9, 23, 37, 51, 65, 79, 93, 107, 121); B10(10, 24, 38, 52, 66, 80, 94, 108, 122);
 B11(11, 25, 39, 53, 67, 81, 95, 109, 123); B12(12, 26, 40, 54, 68, 82, 96, 110, 124);
 B13(13, 27, 41, 55, 69, 83, 97, 111, 125); B14(14, 28, 42, 56, 70, 84, 98, 112, 126).

Replication 2

B 1(1, 18, 30, 45, 67, 78, 93, 112, 117); B 2(2, 19, 31, 46, 68, 79, 94, 99, 118);
 B 3(3, 20, 32, 47, 69, 80, 95, 100, 119); B 4(4, 21, 33, 48, 70, 81, 96, 101, 120);
 B 5(5, 22, 34, 49, 57, 82, 97, 102, 121); B 6(6, 23, 35, 50, 58, 83, 98, 103, 122);
 B 7(7, 24, 36, 51, 59, 84, 85, 104, 123); B 8(8, 25, 37, 52, 60, 71, 86, 105, 124);
 B 9(9, 26, 38, 53, 61, 72, 87, 106, 125); B10(10, 27, 39, 54, 62, 73, 88, 107, 126);
 B11(11, 28, 40, 55, 63, 74, 89, 108, 113); B12(12, 15, 41, 56, 64, 75, 90, 109, 114);
 B13(13, 16, 42, 43, 65, 76, 91, 110, 115); B14(14, 17, 29, 44, 66, 77, 92, 111, 116).

Replication 3

B 1(1, 16, 31, 53, 64, 84, 89, 107, 116); B 2(2, 17, 32, 54, 65, 71, 90, 108, 117);

B 3(3, 18, 33, 55, 66, 72, 91, 109, 118); B 4(4, 19, 34, 56, 67, 73, 92, 110, 119);
 B 5(5, 20, 35, 43, 68, 74, 93, 111, 120); B 6(6, 21, 36, 44, 69, 75, 94, 112, 121);
 B 7(7, 22, 37, 45, 70, 76, 95, 99, 122); B 8(8, 23, 38, 46, 57, 77, 96, 100, 123);
 B 9(9, 24, 39, 47, 58, 78, 97, 101, 124); B10(10, 25, 40, 48, 59, 79, 98, 102, 125);
 B11(11, 26, 41, 49, 60, 80, 85, 103, 126); B12(12, 27, 42, 50, 61, 81, 86, 104, 113);
 B13(13, 28, 29, 51, 62, 82, 87, 105, 114); B14(14, 15, 30, 52, 63, 83, 88, 106, 115).

387. $v = 126, b = 56, r = 4, k = 9, AE = 0.9699, DE = 0.9859$ $\alpha(0,1,2)$

Replication 1

B 1(1, 15, 29, 43, 57, 71, 85, 99, 113); B 2(2, 16, 30, 44, 58, 72, 86, 100, 114);
 B 3(3, 17, 31, 45, 59, 73, 87, 101, 115); B 4(4, 18, 32, 46, 60, 74, 88, 102, 116);
 B 5(5, 19, 33, 47, 61, 75, 89, 103, 117); B 6(6, 20, 34, 48, 62, 76, 90, 104, 118);
 B 7(7, 21, 35, 49, 63, 77, 91, 105, 119); B 8(8, 22, 36, 50, 64, 78, 92, 106, 120);
 B 9(9, 23, 37, 51, 65, 79, 93, 107, 121); B10(10, 24, 38, 52, 66, 80, 94, 108, 122);
 B11(11, 25, 39, 53, 67, 81, 95, 109, 123); B12(12, 26, 40, 54, 68, 82, 96, 110, 124);
 B13(13, 27, 41, 55, 69, 83, 97, 111, 125); B14(14, 28, 42, 56, 70, 84, 98, 112, 126).

Replication 2

B 1(1, 18, 30, 45, 67, 78, 93, 112, 117); B 2(2, 19, 31, 46, 68, 79, 94, 99, 118);
 B 3(3, 20, 32, 47, 69, 80, 95, 100, 119); B 4(4, 21, 33, 48, 70, 81, 96, 101, 120);
 B 5(5, 22, 34, 49, 57, 82, 97, 102, 121); B 6(6, 23, 35, 50, 58, 83, 98, 103, 122);
 B 7(7, 24, 36, 51, 59, 84, 85, 104, 123); B 8(8, 25, 37, 52, 60, 71, 86, 105, 124);
 B 9(9, 26, 38, 53, 61, 72, 87, 106, 125); B10(10, 27, 39, 54, 62, 73, 88, 107, 126);
 B11(11, 28, 40, 55, 63, 74, 89, 108, 113); B12(12, 15, 41, 56, 64, 75, 90, 109, 114);
 B13(13, 16, 42, 43, 65, 76, 91, 110, 115); B14(14, 17, 29, 44, 66, 77, 92, 111, 116).

Replication 3

B 1(1, 16, 31, 53, 64, 84, 89, 107, 116); B 2(2, 17, 32, 54, 65, 71, 90, 108, 117);
 B 3(3, 18, 33, 55, 66, 72, 91, 109, 118); B 4(4, 19, 34, 56, 67, 73, 92, 110, 119);
 B 5(5, 20, 35, 43, 68, 74, 93, 111, 120); B 6(6, 21, 36, 44, 69, 75, 94, 112, 121);
 B 7(7, 22, 37, 45, 70, 76, 95, 99, 122); B 8(8, 23, 38, 46, 57, 77, 96, 100, 123);
 B 9(9, 24, 39, 47, 58, 78, 97, 101, 124); B10(10, 25, 40, 48, 59, 79, 98, 102, 125);
 B11(11, 26, 41, 49, 60, 80, 85, 103, 126); B12(12, 27, 42, 50, 61, 81, 86, 104, 113);
 B13(13, 28, 29, 51, 62, 82, 87, 105, 114); B14(14, 15, 30, 52, 63, 83, 88, 106, 115).

Replication 4

B 1(1, 17, 32, 50, 70, 75, 86, 109, 121); B 2(2, 18, 33, 51, 57, 76, 87, 110, 122);
 B 3(3, 19, 34, 52, 58, 77, 88, 111, 123); B 4(4, 20, 35, 53, 59, 78, 89, 112, 124);
 B 5(5, 21, 36, 54, 60, 79, 90, 99, 125); B 6(6, 22, 37, 55, 61, 80, 91, 100, 126);
 B 7(7, 23, 38, 56, 62, 81, 92, 101, 113); B 8(8, 24, 39, 43, 63, 82, 93, 102, 114);
 B 9(9, 25, 40, 44, 64, 83, 94, 103, 115); B10(10, 26, 41, 45, 65, 84, 95, 104, 116);
 B11(11, 27, 42, 46, 66, 71, 96, 105, 117); B12(12, 28, 29, 47, 67, 72, 97, 106, 118);
 B13(13, 15, 30, 48, 68, 73, 98, 107, 119); B14(14, 16, 31, 49, 69, 74, 85, 108, 120).

388. $v = 126, b = 70, r = 5, k = 9, AE = 0.9776, DE = 0.9893$ $\alpha(0,1,2,3)$

Replication 1

B 1(1, 15, 29, 43, 57, 71, 85, 99, 113); B 2(2, 16, 30, 44, 58, 72, 86, 100, 114);
 B 3(3, 17, 31, 45, 59, 73, 87, 101, 115); B 4(4, 18, 32, 46, 60, 74, 88, 102, 116);
 B 5(5, 19, 33, 47, 61, 75, 89, 103, 117); B 6(6, 20, 34, 48, 62, 76, 90, 104, 118);
 B 7(7, 21, 35, 49, 63, 77, 91, 105, 119); B 8(8, 22, 36, 50, 64, 78, 92, 106, 120);
 B 9(9, 23, 37, 51, 65, 79, 93, 107, 121); B10(10, 24, 38, 52, 66, 80, 94, 108, 122);
 B11(11, 25, 39, 53, 67, 81, 95, 109, 123); B12(12, 26, 40, 54, 68, 82, 96, 110, 124);
 B13(13, 27, 41, 55, 69, 83, 97, 111, 125); B14(14, 28, 42, 56, 70, 84, 98, 112, 126).

Replication 2

B 1(1, 18, 30, 45, 67, 78, 93, 112, 117); B 2(2, 19, 31, 46, 68, 79, 94, 99, 118);
 B 3(3, 20, 32, 47, 69, 80, 95, 100, 119); B 4(4, 21, 33, 48, 70, 81, 96, 101, 120);
 B 5(5, 22, 34, 49, 57, 82, 97, 102, 121); B 6(6, 23, 35, 50, 58, 83, 98, 103, 122);
 B 7(7, 24, 36, 51, 59, 84, 85, 104, 123); B 8(8, 25, 37, 52, 60, 71, 86, 105, 124);
 B 9(9, 26, 38, 53, 61, 72, 87, 106, 125); B10(10, 27, 39, 54, 62, 73, 88, 107, 126);
 B11(11, 28, 40, 55, 63, 74, 89, 108, 113); B12(12, 15, 41, 56, 64, 75, 90, 109, 114);
 B13(13, 16, 42, 43, 65, 76, 91, 110, 115); B14(14, 17, 29, 44, 66, 77, 92, 111, 116).

Replication 3

B 1(1, 16, 31, 53, 64, 84, 89, 107, 116); B 2(2, 17, 32, 54, 65, 71, 90, 108, 117);
 B 3(3, 18, 33, 55, 66, 72, 91, 109, 118); B 4(4, 19, 34, 56, 67, 73, 92, 110, 119);
 B 5(5, 20, 35, 43, 68, 74, 93, 111, 120); B 6(6, 21, 36, 44, 69, 75, 94, 112, 121);
 B 7(7, 22, 37, 45, 70, 76, 95, 99, 122); B 8(8, 23, 38, 46, 57, 77, 96, 100, 123);
 B 9(9, 24, 39, 47, 58, 78, 97, 101, 124); B10(10, 25, 40, 48, 59, 79, 98, 102, 125);
 B11(11, 26, 41, 49, 60, 80, 85, 103, 126); B12(12, 27, 42, 50, 61, 81, 86, 104, 113);
 B13(13, 28, 29, 51, 62, 82, 87, 105, 114); B14(14, 15, 30, 52, 63, 83, 88, 106, 115).

Replication 4

B 1(1, 17, 32, 50, 70, 75, 86, 109, 121); B 2(2, 18, 33, 51, 57, 76, 87, 110, 122);
 B 3(3, 19, 34, 52, 58, 77, 88, 111, 123); B 4(4, 20, 35, 53, 59, 78, 89, 112, 124);
 B 5(5, 21, 36, 54, 60, 79, 90, 99, 125); B 6(6, 22, 37, 55, 61, 80, 91, 100, 126);
 B 7(7, 23, 38, 56, 62, 81, 92, 101, 113); B 8(8, 24, 39, 43, 63, 82, 93, 102, 114);
 B 9(9, 25, 40, 44, 64, 83, 94, 103, 115); B10(10, 26, 41, 45, 65, 84, 95, 104, 116);
 B11(11, 27, 42, 46, 66, 71, 96, 105, 117); B12(12, 28, 29, 47, 67, 72, 97, 106, 118);
 B13(13, 15, 30, 48, 68, 73, 98, 107, 119); B14(14, 16, 31, 49, 69, 74, 85, 108, 120).

Replication 5

B 1(1, 22, 42, 51, 58, 81, 87, 103, 116); B 2(2, 23, 29, 52, 59, 82, 88, 104, 117);
 B 3(3, 24, 30, 53, 60, 83, 89, 105, 118); B 4(4, 25, 31, 54, 61, 84, 90, 106, 119);
 B 5(5, 26, 32, 55, 62, 71, 91, 107, 120); B 6(6, 27, 33, 56, 63, 72, 92, 108, 121);
 B 7(7, 28, 34, 43, 64, 73, 93, 109, 122); B 8(8, 15, 35, 44, 65, 74, 94, 110, 123);
 B 9(9, 16, 36, 45, 66, 75, 95, 111, 124); B10(10, 17, 37, 46, 67, 76, 96, 112, 125);
 B11(11, 18, 38, 47, 68, 77, 97, 99, 126); B12(12, 19, 39, 48, 69, 78, 98, 100, 113);
 B13(13, 20, 40, 49, 70, 79, 85, 101, 114); B14(14, 21, 41, 50, 57, 80, 86, 102, 115).

389. $v = 135, b = 30, r = 2, k = 9, AE = 0.9076, DE = 0.9611$ $\alpha(0,1)$

Replication 1

B 1(1, 16, 31, 46, 61, 76, 91, 106, 121); B 2(2, 17, 32, 47, 62, 77, 92, 107, 122);
 B 3(3, 18, 33, 48, 63, 78, 93, 108, 123); B 4(4, 19, 34, 49, 64, 79, 94, 109, 124);
 B 5(5, 20, 35, 50, 65, 80, 95, 110, 125); B 6(6, 21, 36, 51, 66, 81, 96, 111, 126);
 B 7(7, 22, 37, 52, 67, 82, 97, 112, 127); B 8(8, 23, 38, 53, 68, 83, 98, 113, 128);
 B 9(9, 24, 39, 54, 69, 84, 99, 114, 129); B10(10, 25, 40, 55, 70, 85, 100, 115, 130);
 B11(11, 26, 41, 56, 71, 86, 101, 116, 131); B12(12, 27, 42, 57, 72, 87, 102, 117, 132);
 B13(13, 28, 43, 58, 73, 88, 103, 118, 133); B14(14, 29, 44, 59, 74, 89, 104, 119, 134);
 B15(15, 30, 45, 60, 75, 90, 105, 120, 135).

Replication 2

B 1(1, 19, 32, 48, 73, 83, 99, 120, 125); B 2(2, 20, 33, 49, 74, 84, 100, 106, 126);
 B 3(3, 21, 34, 50, 75, 85, 101, 107, 127); B 4(4, 22, 35, 51, 61, 86, 102, 108, 128);
 B 5(5, 23, 36, 52, 62, 87, 103, 109, 129); B 6(6, 24, 37, 53, 63, 88, 104, 110, 130);
 B 7(7, 25, 38, 54, 64, 89, 105, 111, 131); B 8(8, 26, 39, 55, 65, 90, 91, 112, 132);
 B 9(9, 27, 40, 56, 66, 76, 92, 113, 133); B10(10, 28, 41, 57, 67, 77, 93, 114, 134);
 B11(11, 29, 42, 58, 68, 78, 94, 115, 135); B12(12, 30, 43, 59, 69, 79, 95, 116, 121);
 B13(13, 16, 44, 60, 70, 80, 96, 117, 122); B14(14, 17, 45, 46, 71, 81, 97, 118, 123);
 B15(15, 18, 31, 47, 72, 82, 98, 119, 124).

390. $v = 135, b = 45, r = 3, k = 9, AE = 0.9554, DE = 0.9796$ $\alpha(0,1)$

Replication 1

B 1(1, 16, 31, 46, 61, 76, 91, 106, 121);	B 2(2, 17, 32, 47, 62, 77, 92, 107, 122);
B 3(3, 18, 33, 48, 63, 78, 93, 108, 123);	B 4(4, 19, 34, 49, 64, 79, 94, 109, 124);
B 5(5, 20, 35, 50, 65, 80, 95, 110, 125);	B 6(6, 21, 36, 51, 66, 81, 96, 111, 126);
B 7(7, 22, 37, 52, 67, 82, 97, 112, 127);	B 8(8, 23, 38, 53, 68, 83, 98, 113, 128);
B 9(9, 24, 39, 54, 69, 84, 99, 114, 129);	B10(10, 25, 40, 55, 70, 85, 100, 115, 130);
B11(11, 26, 41, 56, 71, 86, 101, 116, 131);	B12(12, 27, 42, 57, 72, 87, 102, 117, 132);
B13(13, 28, 43, 58, 73, 88, 103, 118, 133);	B14(14, 29, 44, 59, 74, 89, 104, 119, 134);
B15(15, 30, 45, 60, 75, 90, 105, 120, 135).	

Replication 2

B 1(1, 19, 32, 48, 73, 83, 99, 120, 125);	B 2(2, 20, 33, 49, 74, 84, 100, 106, 126);
B 3(3, 21, 34, 50, 75, 85, 101, 107, 127);	B 4(4, 22, 35, 51, 61, 86, 102, 108, 128);
B 5(5, 23, 36, 52, 62, 87, 103, 109, 129);	B 6(6, 24, 37, 53, 63, 88, 104, 110, 130);
B 7(7, 25, 38, 54, 64, 89, 105, 111, 131);	B 8(8, 26, 39, 55, 65, 90, 91, 112, 132);
B 9(9, 27, 40, 56, 66, 76, 92, 113, 133);	B10(10, 28, 41, 57, 67, 77, 93, 114, 134);
B11(11, 29, 42, 58, 68, 78, 94, 115, 135);	B12(12, 30, 43, 59, 69, 79, 95, 116, 121);
B13(13, 16, 44, 60, 70, 80, 96, 117, 122);	B14(14, 17, 45, 46, 71, 81, 97, 118, 123);
B15(15, 18, 31, 47, 72, 82, 98, 119, 124).	

Replication 3

B 1(1, 17, 33, 56, 68, 89, 95, 114, 124);	B 2(2, 18, 34, 57, 69, 90, 96, 115, 125);
B 3(3, 19, 35, 58, 70, 76, 97, 116, 126);	B 4(4, 20, 36, 59, 71, 77, 98, 117, 127);
B 5(5, 21, 37, 60, 72, 78, 99, 118, 128);	B 6(6, 22, 38, 46, 73, 79, 100, 119, 129);
B 7(7, 23, 39, 47, 74, 80, 101, 120, 130);	B 8(8, 24, 40, 48, 75, 81, 102, 106, 131);
B 9(9, 25, 41, 49, 61, 82, 103, 107, 132);	B10(10, 26, 42, 50, 62, 83, 104, 108, 133);
B11(11, 27, 43, 51, 63, 84, 105, 109, 134);	B12(12, 28, 44, 52, 64, 85, 91, 110, 135);
B13(13, 29, 45, 53, 65, 86, 92, 111, 121);	B14(14, 30, 31, 54, 66, 87, 93, 112, 122);
B15(15, 16, 32, 55, 67, 88, 94, 113, 123).	

391. $v = 135, b = 60, r = 4, k = 9, AE = 0.9693, DE = 0.9856$ $\alpha(0,1,2)$

Replication 1

B 1(1, 16, 31, 46, 61, 76, 91, 106, 121);	B 2(2, 17, 32, 47, 62, 77, 92, 107, 122);
B 3(3, 18, 33, 48, 63, 78, 93, 108, 123);	B 4(4, 19, 34, 49, 64, 79, 94, 109, 124);
B 5(5, 20, 35, 50, 65, 80, 95, 110, 125);	B 6(6, 21, 36, 51, 66, 81, 96, 111, 126);
B 7(7, 22, 37, 52, 67, 82, 97, 112, 127);	B 8(8, 23, 38, 53, 68, 83, 98, 113, 128);
B 9(9, 24, 39, 54, 69, 84, 99, 114, 129);	B10(10, 25, 40, 55, 70, 85, 100, 115, 130);
B11(11, 26, 41, 56, 71, 86, 101, 116, 131);	B12(12, 27, 42, 57, 72, 87, 102, 117, 132);
B13(13, 28, 43, 58, 73, 88, 103, 118, 133);	B14(14, 29, 44, 59, 74, 89, 104, 119, 134);
B15(15, 30, 45, 60, 75, 90, 105, 120, 135).	

Replication 2

B 1(1, 19, 32, 48, 73, 83, 99, 120, 125);	B 2(2, 20, 33, 49, 74, 84, 100, 106, 126);
B 3(3, 21, 34, 50, 75, 85, 101, 107, 127);	B 4(4, 22, 35, 51, 61, 86, 102, 108, 128);
B 5(5, 23, 36, 52, 62, 87, 103, 109, 129);	B 6(6, 24, 37, 53, 63, 88, 104, 110, 130);
B 7(7, 25, 38, 54, 64, 89, 105, 111, 131);	B 8(8, 26, 39, 55, 65, 90, 91, 112, 132);
B 9(9, 27, 40, 56, 66, 76, 92, 113, 133);	B10(10, 28, 41, 57, 67, 77, 93, 114, 134);
B11(11, 29, 42, 58, 68, 78, 94, 115, 135);	B12(12, 30, 43, 59, 69, 79, 95, 116, 121);
B13(13, 16, 44, 60, 70, 80, 96, 117, 122);	B14(14, 17, 45, 46, 71, 81, 97, 118, 123);
B15(15, 18, 31, 47, 72, 82, 98, 119, 124).	

Replication 3

B 1(1, 17, 33, 56, 68, 89, 95, 114, 124); B 2(2, 18, 34, 57, 69, 90, 96, 115, 125);
 B 3(3, 19, 35, 58, 70, 76, 97, 116, 126); B 4(4, 20, 36, 59, 71, 77, 98, 117, 127);
 B 5(5, 21, 37, 60, 72, 78, 99, 118, 128); B 6(6, 22, 38, 46, 73, 79, 100, 119, 129);
 B 7(7, 23, 39, 47, 74, 80, 101, 120, 130); B 8(8, 24, 40, 48, 75, 81, 102, 106, 131);
 B 9(9, 25, 41, 49, 61, 82, 103, 107, 132); B10(10, 26, 42, 50, 62, 83, 104, 108, 133);
 B11(11, 27, 43, 51, 63, 84, 105, 109, 134); B12(12, 28, 44, 52, 64, 85, 91, 110, 135);
 B13(13, 29, 45, 53, 65, 86, 92, 111, 121); B14(14, 30, 31, 54, 66, 87, 93, 112, 122);
 B15(15, 16, 32, 55, 67, 88, 94, 113, 123).

Replication 4

B 1(1, 18, 34, 53, 71, 80, 92, 117, 129); B 2(2, 19, 35, 54, 72, 81, 93, 118, 130);
 B 3(3, 20, 36, 55, 73, 82, 94, 119, 131); B 4(4, 21, 37, 56, 74, 83, 95, 120, 132);
 B 5(5, 22, 38, 57, 75, 84, 96, 106, 133); B 6(6, 23, 39, 58, 61, 85, 97, 107, 134);
 B 7(7, 24, 40, 59, 62, 86, 98, 108, 135); B 8(8, 25, 41, 60, 63, 87, 99, 109, 121);
 B 9(9, 26, 42, 46, 64, 88, 100, 110, 122); B10(10, 27, 43, 47, 65, 89, 101, 111, 123);
 B11(11, 28, 44, 48, 66, 90, 102, 112, 124); B12(12, 29, 45, 49, 67, 76, 103, 113, 125);
 B13(13, 30, 31, 50, 68, 77, 104, 114, 126); B14(14, 16, 32, 51, 69, 78, 105, 115, 127);
 B15(15, 17, 33, 52, 70, 79, 91, 116, 128).

392. $v = 135, b = 75, r = 5, k = 9, AE = 0.9766, DE = 0.9888$ $\alpha(0,1,2,3)$

Replication 1

B 1(1, 16, 31, 46, 61, 76, 91, 106, 121); B 2(2, 17, 32, 47, 62, 77, 92, 107, 122);
 B 3(3, 18, 33, 48, 63, 78, 93, 108, 123); B 4(4, 19, 34, 49, 64, 79, 94, 109, 124);
 B 5(5, 20, 35, 50, 65, 80, 95, 110, 125); B 6(6, 21, 36, 51, 66, 81, 96, 111, 126);
 B 7(7, 22, 37, 52, 67, 82, 97, 112, 127); B 8(8, 23, 38, 53, 68, 83, 98, 113, 128);
 B 9(9, 24, 39, 54, 69, 84, 99, 114, 129); B10(10, 25, 40, 55, 70, 85, 100, 115, 130);
 B11(11, 26, 41, 56, 71, 86, 101, 116, 131); B12(12, 27, 42, 57, 72, 87, 102, 117, 132);
 B13(13, 28, 43, 58, 73, 88, 103, 118, 133); B14(14, 29, 44, 59, 74, 89, 104, 119, 134);
 B15(15, 30, 45, 60, 75, 90, 105, 120, 135).

Replication 2

B 1(1, 19, 32, 48, 73, 83, 99, 120, 125); B 2(2, 20, 33, 49, 74, 84, 100, 106, 126);
 B 3(3, 21, 34, 50, 75, 85, 101, 107, 127); B 4(4, 22, 35, 51, 61, 86, 102, 108, 128);
 B 5(5, 23, 36, 52, 62, 87, 103, 109, 129); B 6(6, 24, 37, 53, 63, 88, 104, 110, 130);
 B 7(7, 25, 38, 54, 64, 89, 105, 111, 131); B 8(8, 26, 39, 55, 65, 90, 91, 112, 132);
 B 9(9, 27, 40, 56, 66, 76, 92, 113, 133); B10(10, 28, 41, 57, 67, 77, 93, 114, 134);
 B11(11, 29, 42, 58, 68, 78, 94, 115, 135); B12(12, 30, 43, 59, 69, 79, 95, 116, 121);
 B13(13, 16, 44, 60, 70, 80, 96, 117, 122); B14(14, 17, 45, 46, 71, 81, 97, 118, 123);
 B15(15, 18, 31, 47, 72, 82, 98, 119, 124).

Replication 3

B 1(1, 17, 33, 56, 68, 89, 95, 114, 124); B 2(2, 18, 34, 57, 69, 90, 96, 115, 125);
 B 3(3, 19, 35, 58, 70, 76, 97, 116, 126); B 4(4, 20, 36, 59, 71, 77, 98, 117, 127);
 B 5(5, 21, 37, 60, 72, 78, 99, 118, 128); B 6(6, 22, 38, 46, 73, 79, 100, 119, 129);
 B 7(7, 23, 39, 47, 74, 80, 101, 120, 130); B 8(8, 24, 40, 48, 75, 81, 102, 106, 131);
 B 9(9, 25, 41, 49, 61, 82, 103, 107, 132); B10(10, 26, 42, 50, 62, 83, 104, 108, 133);
 B11(11, 27, 43, 51, 63, 84, 105, 109, 134); B12(12, 28, 44, 52, 64, 85, 91, 110, 135);
 B13(13, 29, 45, 53, 65, 86, 92, 111, 121); B14(14, 30, 31, 54, 66, 87, 93, 112, 122);
 B15(15, 16, 32, 55, 67, 88, 94, 113, 123).

Replication 4

B 1(1, 18, 34, 53, 71, 80, 92, 117, 129); B 2(2, 19, 35, 54, 72, 81, 93, 118, 130);
 B 3(3, 20, 36, 55, 73, 82, 94, 119, 131); B 4(4, 21, 37, 56, 74, 83, 95, 120, 132);
 B 5(5, 22, 38, 57, 75, 84, 96, 106, 133); B 6(6, 23, 39, 58, 61, 85, 97, 107, 134);
 B 7(7, 24, 40, 59, 62, 86, 98, 108, 135); B 8(8, 25, 41, 60, 63, 87, 99, 109, 121);
 B 9(9, 26, 42, 46, 64, 88, 100, 110, 122); B10(10, 27, 43, 47, 65, 89, 101, 111, 123);
 B11(11, 28, 44, 48, 66, 90, 102, 112, 124); B12(12, 29, 45, 49, 67, 76, 103, 113, 125);
 B13(13, 30, 31, 50, 68, 77, 104, 114, 126); B14(14, 16, 32, 51, 69, 78, 105, 115, 127);
 B15(15, 17, 33, 52, 70, 79, 91, 116, 128).

Replication 5

B 1(1, 21, 44, 54, 62, 86, 93, 110, 124); B 2(2, 22, 45, 55, 63, 87, 94, 111, 125);
 B 3(3, 23, 31, 56, 64, 88, 95, 112, 126); B 4(4, 24, 32, 57, 65, 89, 96, 113, 127);
 B 5(5, 25, 33, 58, 66, 90, 97, 114, 128); B 6(6, 26, 34, 59, 67, 76, 98, 115, 129);
 B 7(7, 27, 35, 60, 68, 77, 99, 116, 130); B 8(8, 28, 36, 46, 69, 78, 100, 117, 131);
 B 9(9, 29, 37, 47, 70, 79, 101, 118, 132); B10(10, 30, 38, 48, 71, 80, 102, 119, 133);
 B11(11, 16, 39, 49, 72, 81, 103, 120, 134); B12(12, 17, 40, 50, 73, 82, 104, 106, 135);
 B13(13, 18, 41, 51, 74, 83, 105, 107, 121); B14(14, 19, 42, 52, 75, 84, 91, 108, 122);
 B15(15, 20, 43, 53, 61, 85, 92, 109, 123).

BLOCK SIZE 10

393. $v = 20, b = 4, r = 2, k = 10, AE = 0.9475, DE = 0.9792$ $\alpha(0,1,2)$

Replication 1

B1(1, 3, 5, 7, 9, 11, 13, 15, 17, 19); B2(2, 4, 6, 8, 10, 12, 14, 16, 18, 20).

Replication 2

B1(1, 3, 5, 8, 10, 12, 14, 16, 17, 20); B2(2, 4, 6, 7, 9, 11, 13, 15, 18, 19).

394. $v = 20, b = 6, r = 3, k = 10, AE = 0.9744, DE = 0.9886$ $\alpha(0,1,2,3)$

Replication 1

B 1(1, 3, 5, 7, 9, 11, 13, 15, 17, 19); B 2(2, 4, 6, 8, 10, 12, 14, 16, 18, 20).

Replication 2

B 1(1, 4, 6, 8, 10, 11, 13, 16, 17, 20); B 2(2, 3, 5, 7, 9, 12, 14, 15, 18, 19).

Replication 3

B 1(1, 4, 5, 7, 9, 12, 14, 16, 18, 20); B 2(2, 3, 6, 8, 10, 11, 13, 15, 17, 19).

395. $v = 20, b = 8, r = 4, k = 10, AE = 0.9823, DE = 0.9919$ $\alpha(0,1,2,3,4)$

Replication 1

B1(1, 3, 5, 7, 9, 11, 13, 15, 17, 19); B2(2, 4, 6, 8, 10, 12, 14, 16, 18, 20).

Replication 2

B1(1, 3, 5, 8, 10, 11, 14, 16, 18, 20); B2(2, 4, 6, 7, 9, 12, 13, 15, 17, 19).

Replication 3

B1(1, 4, 6, 8, 9, 12, 13, 15, 18, 20); B2(2, 3, 5, 7, 10, 11, 14, 16, 17, 19).

Replication 4

B1(1, 3, 6, 7, 10, 12, 14, 16, 17, 19); B2(2, 4, 5, 8, 9, 11, 13, 15, 18, 20).

396. $v = 20, b = 10, r = 5, k = 10, AE = 0.9892, DE = 0.9948$ $\alpha(0,1,2,3,4)$

Replication 1

B1(1, 3, 5, 7, 9, 11, 13, 15, 17, 19); B2(2, 4, 6, 8, 10, 12, 14, 16, 18, 20).

Replication 2

B1(1, 4, 6, 8, 9, 11, 14, 15, 18, 20); B2(2, 3, 5, 7, 10, 12, 13, 16, 17, 19).

Replication 3

B1(1, 4, 5, 7, 9, 12, 14, 16, 18, 19); B2(2, 3, 6, 8, 10, 11, 13, 15, 17, 20).

Replication 4

B1(1, 3, 6, 8, 10, 12, 14, 16, 17, 19); B2(2, 4, 5, 7, 9, 11, 13, 15, 18, 20).

Replication 5

B1(1, 3, 6, 7, 10, 12, 13, 15, 18, 20); B2(2, 4, 5, 8, 9, 11, 14, 16, 17, 19).

397. $v = 30, b = 6, r = 2, k = 10, AE = 0.9344, DE = 0.9734$ $\alpha(0,1,2)$

Replication 1

B1(1, 4, 7, 10, 13, 16, 19, 22, 25, 28); B2(2, 5, 8, 11, 14, 17, 20, 23, 26, 29);
B3(3, 6, 9, 12, 15, 18, 21, 24, 27, 30).

Replication 2

B1(1, 5, 8, 11, 13, 17, 21, 24, 27, 30); B2(2, 6, 9, 12, 14, 18, 19, 22, 25, 28);
B3(3, 4, 7, 10, 15, 16, 20, 23, 26, 29).

398. $v = 30, b = 9, r = 3, k = 10, AE = 0.9683, DE = 0.9857$ $\alpha(0,1,2,3)$

Replication 1

B1(1, 4, 7, 10, 13, 16, 19, 22, 25, 28); B2(2, 5, 8, 11, 14, 17, 20, 23, 26, 29);
B3(3, 6, 9, 12, 15, 18, 21, 24, 27, 30).

Replication 2

B1(1, 6, 9, 11, 15, 17, 20, 23, 25, 30); B2(2, 4, 7, 12, 13, 18, 21, 24, 26, 28);
B3(3, 5, 8, 10, 14, 16, 19, 22, 27, 29).

Replication 3

B1(1, 5, 9, 10, 14, 18, 21, 24, 26, 29); B2(2, 6, 7, 11, 15, 16, 19, 22, 27, 30);
B3(3, 4, 8, 12, 13, 17, 20, 23, 25, 28).

399. $v = 30, b = 12, r = 4, k = 10, AE = 0.9815, DE = 0.9913$ $\alpha(0,1,2,3,4)$

Replication 1

B1(1, 4, 7, 10, 13, 16, 19, 22, 25, 28); B2(2, 5, 8, 11, 14, 17, 20, 23, 26, 29);
B3(3, 6, 9, 12, 15, 18, 21, 24, 27, 30).

Replication 2

B1(1, 4, 8, 10, 14, 18, 20, 24, 27, 30); B2(2, 5, 9, 11, 15, 16, 21, 22, 25, 28);
B3(3, 6, 7, 12, 13, 17, 19, 23, 26, 29).

Replication 3

B1(1, 6, 8, 12, 15, 16, 21, 22, 26, 29); B2(2, 4, 9, 10, 13, 17, 19, 23, 27, 30);
B3(3, 5, 7, 11, 14, 18, 20, 24, 25, 28).

Replication 4

B1(1, 5, 9, 11, 13, 18, 21, 23, 26, 30); B2(2, 6, 7, 12, 14, 16, 19, 24, 27, 28);
B3(3, 4, 8, 10, 15, 17, 20, 22, 25, 29).

400. $v = 30, b = 15, r = 5, k = 10, AE = 0.9873, DE = 0.9939$ $\alpha(0,1,2,3,5)$

Replication 1

B1(1, 4, 7, 10, 13, 16, 19, 22, 25, 28); B2(2, 5, 8, 11, 14, 17, 20, 23, 26, 29);

B3(3, 6, 9, 12, 15, 18, 21, 24, 27, 30).

Replication 2

B1(1, 6, 9, 12, 14, 17, 19, 23, 26, 28); B2(2, 4, 7, 10, 15, 18, 20, 24, 27, 29);
B3(3, 5, 8, 11, 13, 16, 21, 22, 25, 30).

Replication 3

B1(1, 5, 7, 10, 14, 18, 21, 24, 26, 30); B2(2, 6, 8, 11, 15, 16, 19, 22, 27, 28);
B3(3, 4, 9, 12, 13, 17, 20, 23, 25, 29).

Replication 4

B1(1, 5, 9, 12, 15, 16, 20, 22, 27, 29); B2(2, 6, 7, 10, 13, 17, 21, 23, 25, 30);
B3(3, 4, 8, 11, 14, 18, 19, 24, 26, 28).

Replication 5

B1(1, 4, 8, 11, 15, 17, 21, 24, 25, 29); B2(2, 5, 9, 12, 13, 18, 19, 22, 26, 30);
B3(3, 6, 7, 10, 14, 16, 20, 23, 27, 28).

401. $v = 40, b = 8, r = 2, k = 10, AE = 0.9286, DE = 0.9707$ $\alpha(0,1,2)$

Replication 1

B1(1, 5, 9, 13, 17, 21, 25, 29, 33, 37); B2(2, 6, 10, 14, 18, 22, 26, 30, 34, 38);
B3(3, 7, 11, 15, 19, 23, 27, 31, 35, 39); B4(4, 8, 12, 16, 20, 24, 28, 32, 36, 40).

Replication 2

B1(1, 6, 11, 16, 19, 22, 27, 32, 34, 40); B2(2, 7, 12, 13, 20, 23, 28, 29, 35, 37);
B3(3, 8, 9, 14, 17, 24, 25, 30, 36, 38); B4(4, 5, 10, 15, 18, 21, 26, 31, 33, 39).

402. $v = 40, b = 12, r = 3, k = 10, AE = 0.9692, DE = 0.9858$ $\alpha(0,1,2,3)$

Replication 1

B1(1, 5, 9, 13, 17, 21, 25, 29, 33, 37); B2(2, 6, 10, 14, 18, 22, 26, 30, 34, 38);
B3(3, 7, 11, 15, 19, 23, 27, 31, 35, 39); B4(4, 8, 12, 16, 20, 24, 28, 32, 36, 40).

Replication 2

B1(1, 7, 12, 16, 18, 22, 25, 31, 36, 39); B2(2, 8, 9, 13, 19, 23, 26, 32, 33, 40);
B3(3, 5, 10, 14, 20, 24, 27, 29, 34, 37); B4(4, 6, 11, 15, 17, 21, 28, 30, 35, 38).

Replication 3

B1(1, 7, 10, 13, 20, 23, 27, 30, 36, 38); B2(2, 8, 11, 14, 17, 24, 28, 31, 33, 39);
B3(3, 5, 12, 15, 18, 21, 25, 32, 34, 40); B4(4, 6, 9, 16, 19, 22, 26, 29, 35, 37).

403. $v = 40, b = 16, r = 4, k = 10, AE = 0.9762, DE = 0.9889$ $\alpha(0,1,2,4)$

Replication 1

B1(1, 5, 9, 13, 17, 21, 25, 29, 33, 37); B2(2, 6, 10, 14, 18, 22, 26, 30, 34, 38);
B3(3, 7, 11, 15, 19, 23, 27, 31, 35, 39); B4(4, 8, 12, 16, 20, 24, 28, 32, 36, 40).

Replication 2

B1(1, 6, 12, 14, 20, 23, 28, 31, 34, 39); B2(2, 7, 9, 15, 17, 24, 25, 32, 35, 40);
B3(3, 8, 10, 16, 18, 21, 26, 29, 36, 37); B4(4, 5, 11, 13, 19, 22, 27, 30, 33, 38).

Replication 3

B1(1, 8, 10, 15, 19, 22, 27, 30, 36, 40); B2(2, 5, 11, 16, 20, 23, 28, 31, 33, 37);
B3(3, 6, 12, 13, 17, 24, 25, 32, 34, 38); B4(4, 7, 9, 14, 18, 21, 26, 29, 35, 39).

Replication 4

B1(1, 7, 11, 16, 18, 24, 26, 32, 35, 38); B2(2, 8, 12, 13, 19, 21, 27, 29, 36, 39);

B3(3, 5, 9, 14, 20, 22, 28, 30, 33, 40); B4(4, 6, 10, 15, 17, 23, 25, 31, 34, 37).

404. $v = 40, b = 20, r = 5, k = 10, AE = 0.9860, DE = 0.9932$ $\alpha(0,1,2,3,4)$

Replication 1

B1(1, 5, 9, 13, 17, 21, 25, 29, 33, 37); B2(2, 6, 10, 14, 18, 22, 26, 30, 34, 38);
B3(3, 7, 11, 15, 19, 23, 27, 31, 35, 39); B4(4, 8, 12, 16, 20, 24, 28, 32, 36, 40).

Replication 2

B1(1, 7, 9, 15, 19, 22, 27, 32, 36, 38); B2(2, 8, 10, 16, 20, 23, 28, 29, 33, 39);
B3(3, 5, 11, 13, 17, 24, 25, 30, 34, 40); B4(4, 6, 12, 14, 18, 21, 26, 31, 35, 37).

Replication 3

B1(1, 5, 11, 16, 18, 24, 26, 32, 35, 39); B2(2, 6, 12, 13, 19, 21, 27, 29, 36, 40);
B3(3, 7, 9, 14, 20, 22, 28, 30, 33, 37); B4(4, 8, 10, 15, 17, 23, 25, 31, 34, 38).

Replication 4

B1(1, 6, 10, 13, 20, 22, 28, 31, 35, 40); B2(2, 7, 11, 14, 17, 23, 25, 32, 36, 37);
B3(3, 8, 12, 15, 18, 24, 26, 29, 33, 38); B4(4, 5, 9, 16, 19, 21, 27, 30, 34, 39).

Replication 5

B1(1, 8, 12, 14, 20, 23, 27, 30, 34, 37); B2(2, 5, 9, 15, 17, 24, 28, 31, 35, 38);
B3(3, 6, 10, 16, 18, 21, 25, 32, 36, 39); B4(4, 7, 11, 13, 19, 22, 26, 29, 33, 40).

405. $v = 50, b = 10, r = 2, k = 10, AE = 0.9360, DE = 0.9724$ $\alpha(0,1,2)$

Replication 1

B1(1, 6, 11, 16, 21, 26, 31, 36, 41, 46); B2(2, 7, 12, 17, 22, 27, 32, 37, 42, 47);
B3(3, 8, 13, 18, 23, 28, 33, 38, 43, 48); B4(4, 9, 14, 19, 24, 29, 34, 39, 44, 49);
B5(5, 10, 15, 20, 25, 30, 35, 40, 45, 50).

Replication 2

B1(1, 7, 13, 19, 25, 26, 34, 38, 45, 47); B2(2, 8, 14, 20, 21, 27, 35, 39, 41, 48);
B3(3, 9, 15, 16, 22, 28, 31, 40, 42, 49); B4(4, 10, 11, 17, 23, 29, 32, 36, 43, 50);
B5(5, 6, 12, 18, 24, 30, 33, 37, 44, 46).

406. $v = 50, b = 15, r = 3, k = 10, AE = 0.9661, DE = 0.9844$ $\alpha(0,1,2)$

Replication 1

B1(1, 6, 11, 16, 21, 26, 31, 36, 41, 46); B2(2, 7, 12, 17, 22, 27, 32, 37, 42, 47);
B3(3, 8, 13, 18, 23, 28, 33, 38, 43, 48); B4(4, 9, 14, 19, 24, 29, 34, 39, 44, 49);
B5(5, 10, 15, 20, 25, 30, 35, 40, 45, 50).

Replication 2

B1(1, 9, 13, 20, 23, 29, 35, 38, 42, 47); B2(2, 10, 14, 16, 24, 30, 31, 39, 43, 48);
B3(3, 6, 15, 17, 25, 26, 32, 40, 44, 49); B4(4, 7, 11, 18, 21, 27, 33, 36, 45, 50);
B5(5, 8, 12, 19, 22, 28, 34, 37, 41, 46).

Replication 3

B1(1, 10, 15, 18, 24, 27, 34, 37, 43, 49); B2(2, 6, 11, 19, 25, 28, 35, 38, 44, 50);
B3(3, 7, 12, 20, 21, 29, 31, 39, 45, 46); B4(4, 8, 13, 16, 22, 30, 32, 40, 41, 47);
B5(5, 9, 14, 17, 23, 26, 33, 36, 42, 48).

407. $v = 50, b = 20, r = 4, k = 10, AE = 0.9787, DE = 0.9899$ $\alpha(0,1,2,3)$

Replication 1

B1(1, 6, 11, 16, 21, 26, 31, 36, 41, 46); B2(2, 7, 12, 17, 22, 27, 32, 37, 42, 47);
B3(3, 8, 13, 18, 23, 28, 33, 38, 43, 48); B4(4, 9, 14, 19, 24, 29, 34, 39, 44, 49);
B5(5, 10, 15, 20, 25, 30, 35, 40, 45, 50).

Replication 2

B1(1, 7, 13, 19, 25, 27, 33, 39, 45, 50); B2(2, 8, 14, 20, 21, 28, 34, 40, 41, 46);
B3(3, 9, 15, 16, 22, 29, 35, 36, 42, 47); B4(4, 10, 11, 17, 23, 30, 31, 37, 43, 48);
B5(5, 6, 12, 18, 24, 26, 32, 38, 44, 49).

Replication 3

B1(1, 9, 12, 17, 24, 28, 35, 40, 42, 48); B2(2, 10, 13, 18, 25, 29, 31, 36, 43, 49);
B3(3, 6, 14, 19, 21, 30, 32, 37, 44, 50); B4(4, 7, 15, 20, 22, 26, 33, 38, 45, 46);
B5(5, 8, 11, 16, 23, 27, 34, 39, 41, 47).

Replication 4

B1(1, 10, 14, 20, 23, 29, 32, 38, 44, 47); B2(2, 6, 15, 16, 24, 30, 33, 39, 45, 48);
B3(3, 7, 11, 17, 25, 26, 34, 40, 41, 49); B4(4, 8, 12, 18, 21, 27, 35, 36, 42, 50);
B5(5, 9, 13, 19, 22, 28, 31, 37, 43, 46).

408. $v = 50, b = 25, r = 5, k = 10, AE = 0.9852, DE = 0.9928$ $\alpha(0,1,2,3)$

Replication 1

B1(1, 6, 11, 16, 21, 26, 31, 36, 41, 46); B2(2, 7, 12, 17, 22, 27, 32, 37, 42, 47);
B3(3, 8, 13, 18, 23, 28, 33, 38, 43, 48); B4(4, 9, 14, 19, 24, 29, 34, 39, 44, 49);
B5(5, 10, 15, 20, 25, 30, 35, 40, 45, 50).

Replication 2

B1(1, 7, 13, 19, 25, 27, 34, 37, 45, 48); B2(2, 8, 14, 20, 21, 28, 35, 38, 41, 49);
B3(3, 9, 15, 16, 22, 29, 31, 39, 42, 50); B4(4, 10, 11, 17, 23, 30, 32, 40, 43, 46);
B5(5, 6, 12, 18, 24, 26, 33, 36, 44, 47).

Replication 3

B1(1, 9, 12, 20, 24, 28, 32, 39, 43, 50); B2(2, 10, 13, 16, 25, 29, 33, 40, 44, 46);
B3(3, 6, 14, 17, 21, 30, 34, 36, 45, 47); B4(4, 7, 15, 18, 22, 26, 35, 37, 41, 48);
B5(5, 8, 11, 19, 23, 27, 31, 38, 42, 49).

Replication 4

B1(1, 8, 15, 17, 22, 30, 33, 40, 44, 49); B2(2, 9, 11, 18, 23, 26, 34, 36, 45, 50);
B3(3, 10, 12, 19, 24, 27, 35, 37, 41, 46); B4(4, 6, 13, 20, 25, 28, 31, 38, 42, 47);
B5(5, 7, 14, 16, 21, 29, 32, 39, 43, 48).

Replication 5

B1(1, 10, 14, 18, 23, 29, 35, 38, 42, 47); B2(2, 6, 15, 19, 24, 30, 31, 39, 43, 48);
B3(3, 7, 11, 20, 25, 26, 32, 40, 44, 49); B4(4, 8, 12, 16, 21, 27, 33, 36, 45, 50);
B5(5, 9, 13, 17, 22, 28, 34, 37, 41, 46).

409. $v = 60, b = 12, r = 2, k = 10, AE = 0.9298, DE = 0.9701$ $\alpha(0,1,2)$

Replication 1

B1(1, 7, 13, 19, 25, 31, 37, 43, 49, 55); B2(2, 8, 14, 20, 26, 32, 38, 44, 50, 56);
B3(3, 9, 15, 21, 27, 33, 39, 45, 51, 57); B4(4, 10, 16, 22, 28, 34, 40, 46, 52, 58);
B5(5, 11, 17, 23, 29, 35, 41, 47, 53, 59); B6(6, 12, 18, 24, 30, 36, 42, 48, 54, 60).

Replication 2

B1(1, 10, 15, 23, 29, 33, 42, 44, 50, 60); B2(2, 11, 16, 24, 30, 34, 37, 45, 51, 55);
B3(3, 12, 17, 19, 25, 35, 38, 46, 52, 56); B4(4, 7, 18, 20, 26, 36, 39, 47, 53, 57);
B5(5, 8, 13, 21, 27, 31, 40, 48, 54, 58); B6(6, 9, 14, 22, 28, 32, 41, 43, 49, 59).

410. $v = 60, b = 18, r = 3, k = 10, AE = 0.9668, DE = 0.9846$ $\alpha(0,1,2)$

Replication 1

B1(1, 7, 13, 19, 25, 31, 37, 43, 49, 55); B2(2, 8, 14, 20, 26, 32, 38, 44, 50, 56);
B3(3, 9, 15, 21, 27, 33, 39, 45, 51, 57); B4(4, 10, 16, 22, 28, 34, 40, 46, 52, 58);
B5(5, 11, 17, 23, 29, 35, 41, 47, 53, 59); B6(6, 12, 18, 24, 30, 36, 42, 48, 54, 60).

Replication 2

B1(1, 11, 17, 22, 30, 32, 40, 48, 50, 57); B2(2, 12, 18, 23, 25, 33, 41, 43, 51, 58);
B3(3, 7, 13, 24, 26, 34, 42, 44, 52, 59); B4(4, 8, 14, 19, 27, 35, 37, 45, 53, 60);
B5(5, 9, 15, 20, 28, 36, 38, 46, 54, 55); B6(6, 10, 16, 21, 29, 31, 39, 47, 49, 56).

Replication 3

B1(1, 8, 18, 21, 27, 36, 41, 46, 52, 56); B2(2, 9, 13, 22, 28, 31, 42, 47, 53, 57);
B3(3, 10, 14, 23, 29, 32, 37, 48, 54, 58); B4(4, 11, 15, 24, 30, 33, 38, 43, 49, 59);
B5(5, 12, 16, 19, 25, 34, 39, 44, 50, 60); B6(6, 7, 17, 20, 26, 35, 40, 45, 51, 55).

411. $v = 60, b = 24, r = 4, k = 10, AE = 0.9796, DE = 0.9902$ $\alpha(0,1,2,3)$

Replication 1

B1(1, 7, 13, 19, 25, 31, 37, 43, 49, 55); B2(2, 8, 14, 20, 26, 32, 38, 44, 50, 56);
B3(3, 9, 15, 21, 27, 33, 39, 45, 51, 57); B4(4, 10, 16, 22, 28, 34, 40, 46, 52, 58);
B5(5, 11, 17, 23, 29, 35, 41, 47, 53, 59); B6(6, 12, 18, 24, 30, 36, 42, 48, 54, 60).

Replication 2

B1(1, 10, 14, 23, 28, 36, 41, 48, 51, 56); B2(2, 11, 15, 24, 29, 31, 42, 43, 52, 57);
B3(3, 12, 16, 19, 30, 32, 37, 44, 53, 58); B4(4, 7, 17, 20, 25, 33, 38, 45, 54, 59);
B5(5, 8, 18, 21, 26, 34, 39, 46, 49, 60); B6(6, 9, 13, 22, 27, 35, 40, 47, 50, 55).

Replication 3

B1(1, 11, 18, 21, 29, 32, 40, 45, 54, 58); B2(2, 12, 13, 22, 30, 33, 41, 46, 49, 59);
B3(3, 7, 14, 23, 25, 34, 42, 47, 50, 60); B4(4, 8, 15, 24, 26, 35, 37, 48, 51, 55);
B5(5, 9, 16, 19, 27, 36, 38, 43, 52, 56); B6(6, 10, 17, 20, 28, 31, 39, 44, 53, 57).

Replication 4

B1(1, 9, 17, 24, 30, 34, 38, 46, 50, 57); B2(2, 10, 18, 19, 25, 35, 39, 47, 51, 58);
B3(3, 11, 13, 20, 26, 36, 40, 48, 52, 59); B4(4, 12, 14, 21, 27, 31, 41, 43, 53, 60);
B5(5, 7, 15, 22, 28, 32, 42, 44, 54, 55); B6(6, 8, 16, 23, 29, 33, 37, 45, 49, 56).

412. $v = 60, b = 30, r = 5, k = 10, AE = 0.9843, DE = 0.9924$ $\alpha(0,1,2,3,4)$

Replication 1

B1(1, 7, 13, 19, 25, 31, 37, 43, 49, 55); B2(2, 8, 14, 20, 26, 32, 38, 44, 50, 56);
B3(3, 9, 15, 21, 27, 33, 39, 45, 51, 57); B4(4, 10, 16, 22, 28, 34, 40, 46, 52, 58);
B5(5, 11, 17, 23, 29, 35, 41, 47, 53, 59); B6(6, 12, 18, 24, 30, 36, 42, 48, 54, 60).

Replication 2

B1(1, 12, 18, 21, 29, 35, 40, 48, 51, 56); B2(2, 7, 13, 22, 30, 36, 41, 43, 52, 57);
B3(3, 8, 14, 23, 25, 31, 42, 44, 53, 58); B4(4, 9, 15, 24, 26, 32, 37, 45, 54, 59);
B5(5, 10, 16, 19, 27, 33, 38, 46, 49, 60); B6(6, 11, 17, 20, 28, 34, 39, 47, 50, 55).

Replication 3

B1(1, 11, 15, 23, 26, 36, 38, 46, 50, 57); B2(2, 12, 16, 24, 27, 31, 39, 47, 51, 58);
B3(3, 7, 17, 19, 28, 32, 40, 48, 52, 59); B4(4, 8, 18, 20, 29, 33, 41, 43, 53, 60);
B5(5, 9, 13, 21, 30, 34, 42, 44, 54, 55); B6(6, 10, 14, 22, 25, 35, 37, 45, 49, 56).

Replication 4

B1(1, 8, 16, 22, 27, 34, 39, 44, 54, 59); B2(2, 9, 17, 23, 28, 35, 40, 45, 49, 60);
 B3(3, 10, 18, 24, 29, 36, 41, 46, 50, 55); B4(4, 11, 13, 19, 30, 31, 42, 47, 51, 56);
 B5(5, 12, 14, 20, 25, 32, 37, 48, 52, 57); B6(6, 7, 15, 21, 26, 33, 38, 43, 53, 58).

Replication 5

B1(1, 10, 17, 20, 30, 33, 42, 45, 52, 58); B2(2, 11, 18, 21, 25, 34, 37, 46, 53, 59);
 B3(3, 12, 13, 22, 26, 35, 38, 47, 54, 60); B4(4, 7, 14, 23, 27, 36, 39, 48, 49, 55);
 B5(5, 8, 15, 24, 28, 31, 40, 43, 50, 56); B6(6, 9, 16, 19, 29, 32, 41, 44, 51, 57).

413. $v = 70, b = 14, r = 2, k = 10, AE = 0.9272, DE = 0.9691$ $\alpha(0,1,2)$

Replication 1

B1(1, 8, 15, 22, 29, 36, 43, 50, 57, 64); B2(2, 9, 16, 23, 30, 37, 44, 51, 58, 65);
 B3(3, 10, 17, 24, 31, 38, 45, 52, 59, 66); B4(4, 11, 18, 25, 32, 39, 46, 53, 60, 67);
 B5(5, 12, 19, 26, 33, 40, 47, 54, 61, 68); B6(6, 13, 20, 27, 34, 41, 48, 55, 62, 69);
 B7(7, 14, 21, 28, 35, 42, 49, 56, 63, 70).

Replication 2

B1(1, 9, 20, 28, 32, 40, 45, 52, 62, 65); B2(2, 10, 21, 22, 33, 41, 46, 53, 63, 66);
 B3(3, 11, 15, 23, 34, 42, 47, 54, 57, 67); B4(4, 12, 16, 24, 35, 36, 48, 55, 58, 68);
 B5(5, 13, 17, 25, 29, 37, 49, 56, 59, 69); B6(6, 14, 18, 26, 30, 38, 43, 50, 60, 70);
 B7(7, 8, 19, 27, 31, 39, 44, 51, 61, 64).

414. $v = 70, b = 21, r = 3, k = 10, AE = 0.9655, DE = 0.9840$ $\alpha(0,1,2)$

Replication 1

B1(1, 8, 15, 22, 29, 36, 43, 50, 57, 64); B2(2, 9, 16, 23, 30, 37, 44, 51, 58, 65);
 B3(3, 10, 17, 24, 31, 38, 45, 52, 59, 66); B4(4, 11, 18, 25, 32, 39, 46, 53, 60, 67);
 B5(5, 12, 19, 26, 33, 40, 47, 54, 61, 68); B6(6, 13, 20, 27, 34, 41, 48, 55, 62, 69);
 B7(7, 14, 21, 28, 35, 42, 49, 56, 63, 70).

Replication 2

B1(1, 11, 19, 24, 35, 37, 46, 55, 62, 65); B2(2, 12, 20, 25, 29, 38, 47, 56, 63, 66);
 B3(3, 13, 21, 26, 30, 39, 48, 50, 57, 67); B4(4, 14, 15, 27, 31, 40, 49, 51, 58, 68);
 B5(5, 8, 16, 28, 32, 41, 43, 52, 59, 69); B6(6, 9, 17, 22, 33, 42, 44, 53, 60, 70);
 B7(7, 10, 18, 23, 34, 36, 45, 54, 61, 64).

Replication 3

B1(1, 12, 21, 27, 31, 42, 44, 52, 61, 67); B2(2, 13, 15, 28, 32, 36, 45, 53, 62, 68);
 B3(3, 14, 16, 22, 33, 37, 46, 54, 63, 69); B4(4, 8, 17, 23, 34, 38, 47, 55, 57, 70);
 B5(5, 9, 18, 24, 35, 39, 48, 56, 58, 64); B6(6, 10, 19, 25, 29, 40, 49, 50, 59, 65);
 B7(7, 11, 20, 26, 30, 41, 43, 51, 60, 66).

415. $v = 70, b = 28, r = 4, k = 10, AE = 0.9787, DE = 0.9898$ $\alpha(0,1,2,3)$

Replication 1

B1(1, 8, 15, 22, 29, 36, 43, 50, 57, 64); B2(2, 9, 16, 23, 30, 37, 44, 51, 58, 65);
 B3(3, 10, 17, 24, 31, 38, 45, 52, 59, 66); B4(4, 11, 18, 25, 32, 39, 46, 53, 60, 67);
 B5(5, 12, 19, 26, 33, 40, 47, 54, 61, 68); B6(6, 13, 20, 27, 34, 41, 48, 55, 62, 69);
 B7(7, 14, 21, 28, 35, 42, 49, 56, 63, 70).

Replication 2

B1(1, 12, 17, 27, 35, 39, 47, 56, 58, 66); B2(2, 13, 18, 28, 29, 40, 48, 50, 59, 67);
 B3(3, 14, 19, 22, 30, 41, 49, 51, 60, 68); B4(4, 8, 20, 23, 31, 42, 43, 52, 61, 69);
 B5(5, 9, 21, 24, 32, 36, 44, 53, 62, 70); B6(6, 10, 15, 25, 33, 37, 45, 54, 63, 64);

B7(7, 11, 16, 26, 34, 38, 46, 55, 57, 65).

Replication 3

B1(1, 10, 16, 28, 34, 42, 45, 53, 60, 68); B2(2, 11, 17, 22, 35, 36, 46, 54, 61, 69);
B3(3, 12, 18, 23, 29, 37, 47, 55, 62, 70); B4(4, 13, 19, 24, 30, 38, 48, 56, 63, 64);
B5(5, 14, 20, 25, 31, 39, 49, 50, 57, 65); B6(6, 8, 21, 26, 32, 40, 43, 51, 58, 66);
B7(7, 9, 15, 27, 33, 41, 44, 52, 59, 67).

Replication 4

B1(1, 9, 18, 26, 31, 41, 48, 54, 63, 65); B2(2, 10, 19, 27, 32, 42, 49, 55, 57, 66);
B3(3, 11, 20, 28, 33, 36, 43, 56, 58, 67); B4(4, 12, 21, 22, 34, 37, 44, 50, 59, 68);
B5(5, 13, 15, 23, 35, 38, 45, 51, 60, 69); B6(6, 14, 16, 24, 29, 39, 46, 52, 61, 70);
B7(7, 8, 17, 25, 30, 40, 47, 53, 62, 64).

416. $v = 70, b = 35, r = 5, k = 10, AE = 0.9851, DE = 0.9927$ $\alpha(0,1,2)$

Replication 1

B1(1, 8, 15, 22, 29, 36, 43, 50, 57, 64); B2(2, 9, 16, 23, 30, 37, 44, 51, 58, 65);
B3(3, 10, 17, 24, 31, 38, 45, 52, 59, 66); B4(4, 11, 18, 25, 32, 39, 46, 53, 60, 67);
B5(5, 12, 19, 26, 33, 40, 47, 54, 61, 68); B6(6, 13, 20, 27, 34, 41, 48, 55, 62, 69);
B7(7, 14, 21, 28, 35, 42, 49, 56, 63, 70).

Replication 2

B1(1, 14, 17, 23, 32, 41, 48, 56, 60, 68); B2(2, 8, 18, 24, 33, 42, 49, 50, 61, 69);
B3(3, 9, 19, 25, 34, 36, 43, 51, 62, 70); B4(4, 10, 20, 26, 35, 37, 44, 52, 63, 64);
B5(5, 11, 21, 27, 29, 38, 45, 53, 57, 65); B6(6, 12, 15, 28, 30, 39, 46, 54, 58, 66);
B7(7, 13, 16, 22, 31, 40, 47, 55, 59, 67).

Replication 3

B1(1, 10, 16, 27, 34, 42, 46, 51, 61, 67); B2(2, 11, 17, 28, 35, 36, 47, 52, 62, 68);
B3(3, 12, 18, 22, 29, 37, 48, 53, 63, 69); B4(4, 13, 19, 23, 30, 38, 49, 54, 57, 70);
B5(5, 14, 20, 24, 31, 39, 43, 55, 58, 64); B6(6, 8, 21, 25, 32, 40, 44, 56, 59, 65);
B7(7, 9, 15, 26, 33, 41, 45, 50, 60, 66).

Replication 4

B1(1, 12, 20, 24, 35, 40, 49, 53, 62, 66); B2(2, 13, 21, 25, 29, 41, 43, 54, 63, 67);
B3(3, 14, 15, 26, 30, 42, 44, 55, 57, 68); B4(4, 8, 16, 27, 31, 36, 45, 56, 58, 69);
B5(5, 9, 17, 28, 32, 37, 46, 50, 59, 70); B6(6, 10, 18, 22, 33, 38, 47, 51, 60, 64);
B7(7, 11, 19, 23, 34, 39, 48, 52, 61, 65).

Replication 5

B1(1, 9, 21, 26, 30, 39, 47, 52, 59, 69); B2(2, 10, 15, 27, 31, 40, 48, 53, 60, 70);
B3(3, 11, 16, 28, 32, 41, 49, 54, 61, 64); B4(4, 12, 17, 22, 33, 42, 43, 55, 62, 65);
B5(5, 13, 18, 23, 34, 36, 44, 56, 63, 66); B6(6, 14, 19, 24, 35, 37, 45, 50, 57, 67);
B7(7, 8, 20, 25, 29, 38, 46, 51, 58, 68).

417. $v = 80, b = 16, r = 2, k = 10, AE = 0.9271, DE = 0.9689$ $\alpha(0,1,2)$

Replication 1

B1(1, 9, 17, 25, 33, 41, 49, 57, 65, 73); B2(2, 10, 18, 26, 34, 42, 50, 58, 66, 74);
B3(3, 11, 19, 27, 35, 43, 51, 59, 67, 75); B4(4, 12, 20, 28, 36, 44, 52, 60, 68, 76);
B5(5, 13, 21, 29, 37, 45, 53, 61, 69, 77); B6(6, 14, 22, 30, 38, 46, 54, 62, 70, 78);
B7(7, 15, 23, 31, 39, 47, 55, 63, 71, 79); B8(8, 16, 24, 32, 40, 48, 56, 64, 72, 80).

Replication 2

B1(1, 16, 20, 27, 36, 45, 50, 58, 70, 79); B2(2, 9, 21, 28, 37, 46, 51, 59, 71, 80);
B3(3, 10, 22, 29, 38, 47, 52, 60, 72, 73); B4(4, 11, 23, 30, 39, 48, 53, 61, 65, 74);
B5(5, 12, 24, 31, 40, 41, 54, 62, 66, 75); B6(6, 13, 17, 32, 33, 42, 55, 63, 67, 76);

B7(7, 14, 18, 25, 34, 43, 56, 64, 68, 77); B8(8, 15, 19, 26, 35, 44, 49, 57, 69, 78).

418. $v = 80, b = 24, r = 3, k = 10, AE = 0.9655, DE = 0.9840$ $\alpha(0,1,2)$

Replication 1

B1(1, 9, 17, 25, 33, 41, 49, 57, 65, 73); B2(2, 10, 18, 26, 34, 42, 50, 58, 66, 74);
B3(3, 11, 19, 27, 35, 43, 51, 59, 67, 75); B4(4, 12, 20, 28, 36, 44, 52, 60, 68, 76);
B5(5, 13, 21, 29, 37, 45, 53, 61, 69, 77); B6(6, 14, 22, 30, 38, 46, 54, 62, 70, 78);
B7(7, 15, 23, 31, 39, 47, 55, 63, 71, 79); B8(8, 16, 24, 32, 40, 48, 56, 64, 72, 80).

Replication 2

B1(1, 10, 22, 29, 34, 48, 52, 59, 71, 80); B2(2, 11, 23, 30, 35, 41, 53, 60, 72, 73);
B3(3, 12, 24, 31, 36, 42, 54, 61, 65, 74); B4(4, 13, 17, 32, 37, 43, 55, 62, 66, 75);
B5(5, 14, 18, 25, 38, 44, 56, 63, 67, 76); B6(6, 15, 19, 26, 39, 45, 49, 64, 68, 77);
B7(7, 16, 20, 27, 40, 46, 50, 57, 69, 78); B8(8, 9, 21, 28, 33, 47, 51, 58, 70, 79).

Replication 3

B1(1, 15, 24, 26, 38, 44, 51, 60, 69, 75); B2(2, 16, 17, 27, 39, 45, 52, 61, 70, 76);
B3(3, 9, 18, 28, 40, 46, 53, 62, 71, 77); B4(4, 10, 19, 29, 33, 47, 54, 63, 72, 78);
B5(5, 11, 20, 30, 34, 48, 55, 64, 65, 79); B6(6, 12, 21, 31, 35, 41, 56, 57, 66, 80);
B7(7, 13, 22, 32, 36, 42, 49, 58, 67, 73); B8(8, 14, 23, 25, 37, 43, 50, 59, 68, 74).

419. $v = 80, b = 32, r = 4, k = 10, AE = 0.9788, DE = 0.9898$ $\alpha(0,1,2)$

Replication 1

B1(1, 9, 17, 25, 33, 41, 49, 57, 65, 73); B2(2, 10, 18, 26, 34, 42, 50, 58, 66, 74);
B3(3, 11, 19, 27, 35, 43, 51, 59, 67, 75); B4(4, 12, 20, 28, 36, 44, 52, 60, 68, 76);
B5(5, 13, 21, 29, 37, 45, 53, 61, 69, 77); B6(6, 14, 22, 30, 38, 46, 54, 62, 70, 78);
B7(7, 15, 23, 31, 39, 47, 55, 63, 71, 79); B8(8, 16, 24, 32, 40, 48, 56, 64, 72, 80).

Replication 2

B1(1, 11, 22, 26, 36, 44, 55, 61, 72, 79); B2(2, 12, 23, 27, 37, 45, 56, 62, 65, 80);
B3(3, 13, 24, 28, 38, 46, 49, 63, 66, 73); B4(4, 14, 17, 29, 39, 47, 50, 64, 67, 74);
B5(5, 15, 18, 30, 40, 48, 51, 57, 68, 75); B6(6, 16, 19, 31, 33, 41, 52, 58, 69, 76);
B7(7, 9, 20, 32, 34, 42, 53, 59, 70, 77); B8(8, 10, 21, 25, 35, 43, 54, 60, 71, 78).

Replication 3

B1(1, 13, 23, 28, 40, 42, 56, 58, 67, 78); B2(2, 14, 24, 29, 33, 43, 49, 59, 68, 79);
B3(3, 15, 17, 30, 34, 44, 50, 60, 69, 80); B4(4, 16, 18, 31, 35, 45, 51, 61, 70, 73);
B5(5, 9, 19, 32, 36, 46, 52, 62, 71, 74); B6(6, 10, 20, 25, 37, 47, 53, 63, 72, 75);
B7(7, 11, 21, 26, 38, 48, 54, 64, 65, 76); B8(8, 12, 22, 27, 39, 41, 55, 57, 66, 77).

Replication 4

B1(1, 14, 21, 32, 34, 47, 51, 62, 66, 76); B2(2, 15, 22, 25, 35, 48, 52, 63, 67, 77);
B3(3, 16, 23, 26, 36, 41, 53, 64, 68, 78); B4(4, 9, 24, 27, 37, 42, 54, 57, 69, 79);
B5(5, 10, 17, 28, 38, 43, 55, 58, 70, 80); B6(6, 11, 18, 29, 39, 44, 56, 59, 71, 73);
B7(7, 12, 19, 30, 40, 45, 49, 60, 72, 74); B8(8, 13, 20, 31, 33, 46, 50, 61, 65, 75).

420. $v = 80, b = 40, r = 5, k = 10, AE = 0.9848, DE = 0.9926$ $\alpha(0,1,2,3)$

Replication 1

B1(1, 9, 17, 25, 33, 41, 49, 57, 65, 73); B2(2, 10, 18, 26, 34, 42, 50, 58, 66, 74);
B3(3, 11, 19, 27, 35, 43, 51, 59, 67, 75); B4(4, 12, 20, 28, 36, 44, 52, 60, 68, 76);
B5(5, 13, 21, 29, 37, 45, 53, 61, 69, 77); B6(6, 14, 22, 30, 38, 46, 54, 62, 70, 78);

B7(7, 15, 23, 31, 39, 47, 55, 63, 71, 79); B8(8, 16, 24, 32, 40, 48, 56, 64, 72, 80).

Replication 2

B1(1, 12, 22, 30, 40, 43, 50, 58, 69, 79); B2(2, 13, 23, 31, 33, 44, 51, 59, 70, 80);
B3(3, 14, 24, 32, 34, 45, 52, 60, 71, 73); B4(4, 15, 17, 25, 35, 46, 53, 61, 72, 74);
B5(5, 16, 18, 26, 36, 47, 54, 62, 65, 75); B6(6, 9, 19, 27, 37, 48, 55, 63, 66, 76);
B7(7, 10, 20, 28, 38, 41, 56, 64, 67, 77); B8(8, 11, 21, 29, 39, 42, 49, 57, 68, 78).

Replication 3

B1(1, 11, 24, 28, 37, 46, 54, 63, 71, 80); B2(2, 12, 17, 29, 38, 47, 55, 64, 72, 73);
B3(3, 13, 18, 30, 39, 48, 56, 57, 65, 74); B4(4, 14, 19, 31, 40, 41, 49, 58, 66, 75);
B5(5, 15, 20, 32, 33, 42, 50, 59, 67, 76); B6(6, 16, 21, 25, 34, 43, 51, 60, 68, 77);
B7(7, 9, 22, 26, 35, 44, 52, 61, 69, 78); B8(8, 10, 23, 27, 36, 45, 53, 62, 70, 79).

Replication 4

B1(1, 16, 23, 27, 38, 42, 52, 60, 67, 74); B2(2, 9, 24, 28, 39, 43, 53, 61, 68, 75);
B3(3, 10, 17, 29, 40, 44, 54, 62, 69, 76); B4(4, 11, 18, 30, 33, 45, 55, 63, 70, 77);
B5(5, 12, 19, 31, 34, 46, 56, 64, 71, 78); B6(6, 13, 20, 32, 35, 47, 49, 57, 72, 79);
B7(7, 14, 21, 25, 36, 48, 50, 58, 65, 80); B8(8, 15, 22, 26, 37, 41, 51, 59, 66, 73).

Replication 5

B1(1, 15, 20, 29, 34, 48, 56, 61, 70, 75); B2(2, 16, 21, 30, 35, 41, 49, 62, 71, 76);
B3(3, 9, 22, 31, 36, 42, 50, 63, 72, 77); B4(4, 10, 23, 32, 37, 43, 51, 64, 65, 78);
B5(5, 11, 24, 25, 38, 44, 52, 57, 66, 79); B6(6, 12, 17, 26, 39, 45, 53, 58, 67, 80);
B7(7, 13, 18, 27, 40, 46, 54, 59, 68, 73); B8(8, 14, 19, 28, 33, 47, 55, 60, 69, 74).

421. $v = 90, b = 18, r = 2, k = 10, AE = 0.9285, DE = 0.9692$ $\alpha(0,1,2)$

Replication 1

B1(1, 10, 19, 28, 37, 46, 55, 64, 73, 82); B2(2, 11, 20, 29, 38, 47, 56, 65, 74, 83);
B3(3, 12, 21, 30, 39, 48, 57, 66, 75, 84); B4(4, 13, 22, 31, 40, 49, 58, 67, 76, 85);
B5(5, 14, 23, 32, 41, 50, 59, 68, 77, 86); B6(6, 15, 24, 33, 42, 51, 60, 69, 78, 87);
B7(7, 16, 25, 34, 43, 52, 61, 70, 79, 88); B8(8, 17, 26, 35, 44, 53, 62, 71, 80, 89);
B9(9, 18, 27, 36, 45, 54, 63, 72, 81, 90).

Replication 2

B1(1, 18, 25, 33, 40, 53, 59, 65, 75, 88); B2(2, 10, 26, 34, 41, 54, 60, 66, 76, 89);
B3(3, 11, 27, 35, 42, 46, 61, 67, 77, 90); B4(4, 12, 19, 36, 43, 47, 62, 68, 78, 82);
B5(5, 13, 20, 28, 44, 48, 63, 69, 79, 83); B6(6, 14, 21, 29, 45, 49, 55, 70, 80, 84);
B7(7, 15, 22, 30, 37, 50, 56, 71, 81, 85); B8(8, 16, 23, 31, 38, 51, 57, 72, 73, 86);
B9(9, 17, 24, 32, 39, 52, 58, 64, 74, 87).

422. $v = 90, b = 27, r = 3, k = 10, AE = 0.9664, DE = 0.9843$ $\alpha(0,1,2)$

Replication 1

B1(1, 10, 19, 28, 37, 46, 55, 64, 73, 82); B2(2, 11, 20, 29, 38, 47, 56, 65, 74, 83);
B3(3, 12, 21, 30, 39, 48, 57, 66, 75, 84); B4(4, 13, 22, 31, 40, 49, 58, 67, 76, 85);
B5(5, 14, 23, 32, 41, 50, 59, 68, 77, 86); B6(6, 15, 24, 33, 42, 51, 60, 69, 78, 87);
B7(7, 16, 25, 34, 43, 52, 61, 70, 79, 88); B8(8, 17, 26, 35, 44, 53, 62, 71, 80, 89);
B9(9, 18, 27, 36, 45, 54, 63, 72, 81, 90).

Replication 2

B1(1, 17, 21, 31, 41, 54, 56, 70, 78, 85); B2(2, 18, 22, 32, 42, 46, 57, 71, 79, 86);
B3(3, 10, 23, 33, 43, 47, 58, 72, 80, 87); B4(4, 11, 24, 34, 44, 48, 59, 64, 81, 88);
B5(5, 12, 25, 35, 45, 49, 60, 65, 73, 89); B6(6, 13, 26, 36, 37, 50, 61, 66, 74, 90);

B7(7, 14, 27, 28, 38, 51, 62, 67, 75, 82); B8(8, 15, 19, 29, 39, 52, 63, 68, 76, 83);
B9(9, 16, 20, 30, 40, 53, 55, 69, 77, 84).

Replication 3

B1(1, 11, 25, 33, 40, 48, 62, 68, 79, 90); B2(2, 12, 26, 34, 41, 49, 63, 69, 80, 82);
B3(3, 13, 27, 35, 42, 50, 55, 70, 81, 83); B4(4, 14, 19, 36, 43, 51, 56, 71, 73, 84);
B5(5, 15, 20, 28, 44, 52, 57, 72, 74, 85); B6(6, 16, 21, 29, 45, 53, 58, 64, 75, 86);
B7(7, 17, 22, 30, 37, 54, 59, 65, 76, 87); B8(8, 18, 23, 31, 38, 46, 60, 66, 77, 88);
B9(9, 10, 24, 32, 39, 47, 61, 67, 78, 89).

423. $v = 90, b = 36, r = 4, k = 10, AE = 0.9782, DE = 0.9895$ $\alpha(0,1,2)$

Replication 1

B1(1, 10, 19, 28, 37, 46, 55, 64, 73, 82); B2(2, 11, 20, 29, 38, 47, 56, 65, 74, 83);
B3(3, 12, 21, 30, 39, 48, 57, 66, 75, 84); B4(4, 13, 22, 31, 40, 49, 58, 67, 76, 85);
B5(5, 14, 23, 32, 41, 50, 59, 68, 77, 86); B6(6, 15, 24, 33, 42, 51, 60, 69, 78, 87);
B7(7, 16, 25, 34, 43, 52, 61, 70, 79, 88); B8(8, 17, 26, 35, 44, 53, 62, 71, 80, 89);
B9(9, 18, 27, 36, 45, 54, 63, 72, 81, 90).

Replication 2

B1(1, 15, 24, 36, 44, 49, 63, 68, 75, 88); B2(2, 16, 25, 28, 45, 50, 55, 69, 76, 89);
B3(3, 17, 26, 29, 37, 51, 56, 70, 77, 90); B4(4, 18, 27, 30, 38, 52, 57, 71, 78, 82);
B5(5, 10, 19, 31, 39, 53, 58, 72, 79, 83); B6(6, 11, 20, 32, 40, 54, 59, 64, 80, 84);
B7(7, 12, 21, 33, 41, 46, 60, 65, 81, 85); B8(8, 13, 22, 34, 42, 47, 61, 66, 73, 86);
B9(9, 14, 23, 35, 43, 48, 62, 67, 74, 87).

Replication 3

B1(1, 13, 23, 35, 39, 54, 56, 70, 78, 85); B2(2, 14, 24, 36, 40, 46, 57, 71, 79, 86);
B3(3, 15, 25, 28, 41, 47, 58, 72, 80, 87); B4(4, 16, 26, 29, 42, 48, 59, 64, 81, 88);
B5(5, 17, 27, 30, 43, 49, 60, 65, 73, 89); B6(6, 18, 19, 31, 44, 50, 61, 66, 74, 90);
B7(7, 10, 20, 32, 45, 51, 62, 67, 75, 82); B8(8, 11, 21, 33, 37, 52, 63, 68, 76, 83);
B9(9, 12, 22, 34, 38, 53, 55, 69, 77, 84).

Replication 4

B1(1, 16, 21, 32, 43, 47, 58, 71, 77, 90); B2(2, 17, 22, 33, 44, 48, 59, 72, 78, 82);
B3(3, 18, 23, 34, 45, 49, 60, 64, 79, 83); B4(4, 10, 24, 35, 37, 50, 61, 65, 80, 84);
B5(5, 11, 25, 36, 38, 51, 62, 66, 81, 85); B6(6, 12, 26, 28, 39, 52, 63, 67, 73, 86);
B7(7, 13, 27, 29, 40, 53, 55, 68, 74, 87); B8(8, 14, 19, 30, 41, 54, 56, 69, 75, 88);
B9(9, 15, 20, 31, 42, 46, 57, 70, 76, 89).

424. $v = 90, b = 45, r = 5, k = 10, AE = 0.9834, DE = 0.9920$ $\alpha(0,1,2)$

Replication 1

B1(1, 10, 19, 28, 37, 46, 55, 64, 73, 82); B2(2, 11, 20, 29, 38, 47, 56, 65, 74, 83);
B3(3, 12, 21, 30, 39, 48, 57, 66, 75, 84); B4(4, 13, 22, 31, 40, 49, 58, 67, 76, 85);
B5(5, 14, 23, 32, 41, 50, 59, 68, 77, 86); B6(6, 15, 24, 33, 42, 51, 60, 69, 78, 87);
B7(7, 16, 25, 34, 43, 52, 61, 70, 79, 88); B8(8, 17, 26, 35, 44, 53, 62, 71, 80, 89);
B9(9, 18, 27, 36, 45, 54, 63, 72, 81, 90).

Replication 2

B1(1, 12, 24, 33, 38, 52, 63, 71, 77, 90); B2(2, 13, 25, 34, 39, 53, 55, 72, 78, 82);
B3(3, 14, 26, 35, 40, 54, 56, 64, 79, 83); B4(4, 15, 27, 36, 41, 46, 57, 65, 80, 84);
B5(5, 16, 19, 28, 42, 47, 58, 66, 81, 85); B6(6, 17, 20, 29, 43, 48, 59, 67, 73, 86);

B7(7, 18, 21, 30, 44, 49, 60, 68, 74, 87); B8(8, 10, 22, 31, 45, 50, 61, 69, 75, 88);
 B9(9, 11, 23, 32, 37, 51, 62, 70, 76, 89).

Replication 3

B1(1, 11, 20, 34, 42, 49, 57, 70, 75, 86); B2(2, 12, 21, 35, 43, 50, 58, 71, 76, 87);
 B3(3, 13, 22, 36, 44, 51, 59, 72, 77, 88); B4(4, 14, 23, 28, 45, 52, 60, 64, 78, 89);
 B5(5, 15, 24, 29, 37, 53, 61, 65, 79, 90); B6(6, 16, 25, 30, 38, 54, 62, 66, 80, 82);
 B7(7, 17, 26, 31, 39, 46, 63, 67, 81, 83); B8(8, 18, 27, 32, 40, 47, 55, 68, 73, 84);
 B9(9, 10, 19, 33, 41, 48, 56, 69, 74, 85).

Replication 4

B1(1, 18, 22, 35, 39, 54, 59, 65, 78, 85); B2(2, 10, 23, 36, 40, 46, 60, 66, 79, 86);
 B3(3, 11, 24, 28, 41, 47, 61, 67, 80, 87); B4(4, 12, 25, 29, 42, 48, 62, 68, 81, 88);
 B5(5, 13, 26, 30, 43, 49, 63, 69, 73, 89); B6(6, 14, 27, 31, 44, 50, 55, 70, 74, 90);
 B7(7, 15, 19, 32, 45, 51, 56, 71, 75, 82); B8(8, 16, 20, 33, 37, 52, 57, 72, 76, 83);
 B9(9, 17, 21, 34, 38, 53, 58, 64, 77, 84).

Replication 5

B1(1, 15, 26, 32, 43, 48, 60, 72, 80, 88); B2(2, 16, 27, 33, 44, 49, 61, 64, 81, 89);
 B3(3, 17, 19, 34, 45, 50, 62, 65, 73, 90); B4(4, 18, 20, 35, 37, 51, 63, 66, 74, 82);
 B5(5, 10, 21, 36, 38, 52, 55, 67, 75, 83); B6(6, 11, 22, 28, 39, 53, 56, 68, 76, 84);
 B7(7, 12, 23, 29, 40, 54, 57, 69, 77, 85); B8(8, 13, 24, 30, 41, 46, 58, 70, 78, 86);
 B9(9, 14, 25, 31, 42, 47, 59, 71, 79, 87).

425. $v = 100, b = 20, r = 2, k = 10, AE = 0.9308, DE = 0.9698$ $\alpha(0,1)$; LS137, Square-Lattice

Replication 1

B1(1, 11, 21, 31, 41, 51, 61, 71, 81, 91); B2(2, 12, 22, 32, 42, 52, 62, 72, 82, 92);
 B3(3, 13, 23, 33, 43, 53, 63, 73, 83, 93); B4(4, 14, 24, 34, 44, 54, 64, 74, 84, 94);
 B5(5, 15, 25, 35, 45, 55, 65, 75, 85, 95); B6(6, 16, 26, 36, 46, 56, 66, 76, 86, 96);
 B7(7, 17, 27, 37, 47, 57, 67, 77, 87, 97); B8(8, 18, 28, 38, 48, 58, 68, 78, 88, 98);
 B9(9, 19, 29, 39, 49, 59, 69, 79, 89, 99); B10(10, 20, 30, 40, 50, 60, 70, 80, 90, 100).

Replication 2

B1(1, 20, 26, 38, 42, 57, 63, 79, 85, 94); B2(2, 11, 27, 39, 43, 58, 64, 80, 86, 95);
 B3(3, 12, 28, 40, 44, 59, 65, 71, 87, 96); B4(4, 13, 29, 31, 45, 60, 66, 72, 88, 97);
 B5(5, 14, 30, 32, 46, 51, 67, 73, 89, 98); B6(6, 15, 21, 33, 47, 52, 68, 74, 90, 99);
 B7(7, 16, 22, 34, 48, 53, 69, 75, 81, 100); B8(8, 17, 23, 35, 49, 54, 70, 76, 82, 91);
 B9(9, 18, 24, 36, 50, 55, 61, 77, 83, 92); B10(10, 19, 25, 37, 41, 56, 62, 78, 84, 93).

426. $v = 100, b = 30, r = 3, k = 10, AE = 0.9667, DE = 0.9843$ $\alpha(0,1,2)$;

Replication 1

B 1(1, 11, 21, 31, 41, 51, 61, 71, 81, 91); B 2(2, 12, 22, 32, 42, 52, 62, 72, 82, 92);
 B 3(3, 13, 23, 33, 43, 53, 63, 73, 83, 93); B 4(4, 14, 24, 34, 44, 54, 64, 74, 84, 94);
 B 5(5, 15, 25, 35, 45, 55, 65, 75, 85, 95); B 6(6, 16, 26, 36, 46, 56, 66, 76, 86, 96);
 B 7(7, 17, 27, 37, 47, 57, 67, 77, 87, 97); B 8(8, 18, 28, 38, 48, 58, 68, 78, 88, 98);
 B 9(9, 19, 29, 39, 49, 59, 69, 79, 89, 99); B10(10, 20, 30, 40, 50, 60, 70, 80, 90, 100).

Replication 2

B 1(1, 19, 22, 35, 50, 58, 66, 74, 87, 93); B 2(2, 20, 23, 36, 41, 59, 67, 75, 88, 94);
 B 3(3, 11, 24, 37, 42, 60, 68, 76, 89, 95); B 4(4, 12, 25, 38, 43, 51, 69, 77, 90, 96);
 B 5(5, 13, 26, 39, 44, 52, 70, 78, 81, 97); B 6(6, 14, 27, 40, 45, 53, 61, 79, 82, 98);
 B 7(7, 15, 28, 31, 46, 54, 62, 80, 83, 99); B 8(8, 16, 29, 32, 47, 55, 63, 71, 84, 100);

B 9(9, 17, 30, 33, 48, 56, 64, 72, 85, 91); B10(10, 18, 21, 34, 49, 57, 65, 73, 86, 92).

Replication 3

B 1(1, 12, 23, 34, 45, 56, 67, 78, 89, 100); B 2(2, 13, 24, 35, 46, 57, 68, 79, 90, 91);
B 3(3, 14, 25, 36, 47, 58, 69, 80, 81, 92); B 4(4, 15, 26, 37, 48, 59, 70, 71, 82, 93);
B 5(5, 16, 27, 38, 49, 60, 61, 72, 83, 94); B 6(6, 17, 28, 39, 50, 51, 62, 73, 84, 95);
B 7(7, 18, 29, 40, 41, 52, 63, 74, 85, 96); B 8(8, 19, 30, 31, 42, 53, 64, 75, 86, 97);
B 9(9, 20, 21, 32, 43, 54, 65, 76, 87, 98); B10(10, 11, 22, 33, 44, 55, 66, 77, 88, 99).

427. $v = 100, b = 40, r = 4, k = 10, AE = 0.9790, DE = 0.9898$ $\alpha(0,1,2)**;$

Replication 1

B 1(1, 11, 21, 31, 41, 51, 61, 71, 81, 91); B 2(2, 12, 22, 32, 42, 52, 62, 72, 82, 92);
B 3(3, 13, 23, 33, 43, 53, 63, 73, 83, 93); B 4(4, 14, 24, 34, 44, 54, 64, 74, 84, 94);
B 5(5, 15, 25, 35, 45, 55, 65, 75, 85, 95); B 6(6, 16, 26, 36, 46, 56, 66, 76, 86, 96);
B 7(7, 17, 27, 37, 47, 57, 67, 77, 87, 97); B 8(8, 18, 28, 38, 48, 58, 68, 78, 88, 98);
B 9(9, 19, 29, 39, 49, 59, 69, 79, 89, 99); B 10(10, 20, 30, 40, 50, 60, 70, 80, 90, 100);

Replication 2

B 1(1, 12, 24, 36, 45, 57, 68, 79, 90, 93); B 2(2, 13, 25, 37, 46, 58, 69, 80, 81, 94);
B 3(3, 14, 26, 38, 47, 59, 70, 71, 82, 95); B 4(4, 15, 27, 39, 48, 60, 61, 72, 83, 96);
B 5(5, 16, 28, 40, 49, 51, 62, 73, 84, 97); B 6(6, 17, 29, 31, 50, 52, 63, 74, 85, 98);
B 7(7, 18, 30, 32, 41, 53, 64, 75, 86, 99); B 8(8, 19, 21, 33, 42, 54, 65, 76, 87, 100);
B 9(9, 20, 22, 34, 43, 55, 66, 77, 88, 91); B10(10, 11, 23, 35, 44, 56, 67, 78, 89, 92);

Replication 3

B 1(1, 20, 27, 38, 46, 54, 63, 75, 89, 97); B 2(2, 11, 28, 39, 47, 55, 64, 76, 90, 98);
B 3(3, 12, 29, 40, 48, 56, 65, 77, 81, 99); B 4(4, 13, 30, 31, 49, 57, 66, 78, 82, 100);
B 5(5, 14, 21, 32, 50, 58, 67, 79, 83, 91); B 6(6, 15, 22, 33, 41, 59, 68, 80, 84, 92);
B 7(7, 16, 23, 34, 42, 60, 69, 71, 85, 93); B 8(8, 17, 24, 35, 43, 51, 70, 72, 86, 94);
B 9(9, 18, 25, 36, 44, 52, 61, 73, 87, 95); B10(10, 19, 26, 37, 45, 53, 62, 74, 88, 96);

Replication 4

B 1(1, 16, 30, 33, 47, 52, 65, 78, 83, 94); B 2(2, 17, 21, 34, 48, 53, 66, 79, 84, 95);
B 3(3, 18, 22, 35, 49, 54, 67, 80, 85, 96); B 4(4, 19, 23, 36, 50, 55, 68, 71, 86, 97);
B 5(5, 20, 24, 37, 41, 56, 69, 72, 87, 98); B 6(6, 11, 25, 38, 42, 57, 70, 73, 88, 99);
B 7(7, 12, 26, 39, 43, 58, 61, 74, 89, 100); B 8(8, 13, 27, 40, 44, 59, 62, 75, 90, 91);
B 9(9, 14, 28, 31, 45, 60, 63, 76, 81, 92); B10(10, 15, 29, 32, 46, 51, 64, 77, 82, 93).

428. $v = 100, b = 50, r = 5, k = 10, AE = 0.9811, DE = 0.9910$ $\alpha(0,1,2,3)$

Replication 1

B 1(1, 11, 21, 31, 41, 51, 61, 71, 81, 91); B 2(2, 12, 22, 32, 42, 52, 62, 72, 82, 92);
B 3(3, 13, 23, 33, 43, 53, 63, 73, 83, 93); B 4(4, 14, 24, 34, 44, 54, 64, 74, 84, 94);
B 5(5, 15, 25, 35, 45, 55, 65, 75, 85, 95); B 6(6, 16, 26, 36, 46, 56, 66, 76, 86, 96);
B 7(7, 17, 27, 37, 47, 57, 67, 77, 87, 97); B 8(8, 18, 28, 38, 48, 58, 68, 78, 88, 98);
B 9(9, 19, 29, 39, 49, 59, 69, 79, 89, 99); B10(10, 20, 30, 40, 50, 60, 70, 80, 90, 100).

Replication 2

B 1(1, 12, 23, 34, 45, 56, 67, 78, 89, 100); B 2(2, 13, 24, 35, 46, 57, 68, 79, 90, 91);
B 3(3, 14, 25, 36, 47, 58, 69, 80, 81, 92); B 4(4, 15, 26, 37, 48, 59, 70, 71, 82, 93);
B 5(5, 16, 27, 38, 49, 60, 61, 72, 83, 94); B 6(6, 17, 28, 39, 50, 51, 62, 73, 84, 95);
B 7(7, 18, 29, 40, 41, 52, 63, 74, 85, 96); B 8(8, 19, 30, 31, 42, 53, 64, 75, 86, 97);
B 9(9, 20, 21, 32, 43, 54, 65, 76, 87, 98); B10(10, 11, 22, 33, 44, 55, 66, 77, 88, 99).

Replication 3

B 1(1, 14, 26, 38, 50, 53, 62, 79, 85, 97); B 2(2, 15, 27, 39, 41, 54, 63, 80, 86, 98);
B 3(3, 16, 28, 40, 42, 55, 64, 71, 87, 99); B 4(4, 17, 29, 31, 43, 56, 65, 72, 88, 100);
B 5(5, 18, 30, 32, 44, 57, 66, 73, 89, 91); B 6(6, 19, 21, 33, 45, 58, 67, 74, 90, 92);
B 7(7, 20, 22, 34, 46, 59, 68, 75, 81, 93); B 8(8, 11, 23, 35, 47, 60, 69, 76, 82, 94);
B 9(9, 12, 24, 36, 48, 51, 70, 77, 83, 95); B10(10, 13, 25, 37, 49, 52, 61, 78, 84, 96).

Replication 4

B 1(1, 17, 30, 33, 48, 54, 65, 76, 82, 99); B 2(2, 18, 21, 34, 49, 55, 66, 77, 83, 100);
B 3(3, 19, 22, 35, 50, 56, 67, 78, 84, 91); B 4(4, 20, 23, 36, 41, 57, 68, 79, 85, 92);
B 5(5, 11, 24, 37, 42, 58, 69, 80, 86, 93); B 6(6, 12, 25, 38, 43, 59, 70, 71, 87, 94);
B 7(7, 13, 26, 39, 44, 60, 61, 72, 88, 95); B 8(8, 14, 27, 40, 45, 51, 62, 73, 89, 96);
B 9(9, 15, 28, 31, 46, 52, 63, 74, 90, 97); B10(10, 16, 29, 32, 47, 53, 64, 75, 81, 98).

Replication 5

B 1(1, 18, 22, 37, 46, 59, 70, 74, 83, 95); B 2(2, 19, 23, 38, 47, 60, 61, 75, 84, 96);
B 3(3, 20, 24, 39, 48, 51, 62, 76, 85, 97); B 4(4, 11, 25, 40, 49, 52, 63, 77, 86, 98);
B 5(5, 12, 26, 31, 50, 53, 64, 78, 87, 99); B 6(6, 13, 27, 32, 41, 54, 65, 79, 88, 100);
B 7(7, 14, 28, 33, 42, 55, 66, 80, 89, 91); B 8(8, 15, 29, 34, 43, 56, 67, 71, 90, 92);
B 9(9, 16, 30, 35, 44, 57, 68, 72, 81, 93); B10(10, 17, 21, 36, 45, 58, 69, 73, 82, 94).

429. $v = 110, b = 22, r = 2, k = 10, AE = 0.9274, DE = 0.9686$ $\alpha(0,1)$

Replication 1

B1(1, 12, 23, 34, 45, 56, 67, 78, 89, 100); B2(2, 13, 24, 35, 46, 57, 68, 79, 90, 101);
B3(3, 14, 25, 36, 47, 58, 69, 80, 91, 102); B4(4, 15, 26, 37, 48, 59, 70, 81, 92, 103);
B5(5, 16, 27, 38, 49, 60, 71, 82, 93, 104); B6(6, 17, 28, 39, 50, 61, 72, 83, 94, 105);
B7(7, 18, 29, 40, 51, 62, 73, 84, 95, 106); B8(8, 19, 30, 41, 52, 63, 74, 85, 96, 107);
B9(9, 20, 31, 42, 53, 64, 75, 86, 97, 108); B10(10, 21, 32, 43, 54, 65, 76, 87, 98, 109);
B11(11, 22, 33, 44, 55, 66, 77, 88, 99, 110).

Replication 2

B1(1, 22, 30, 38, 50, 65, 75, 80, 90, 106); B2(2, 12, 31, 39, 51, 66, 76, 81, 91, 107);
B3(3, 13, 32, 40, 52, 56, 77, 82, 92, 108); B4(4, 14, 33, 41, 53, 57, 67, 83, 93, 109);
B5(5, 15, 23, 42, 54, 58, 68, 84, 94, 110); B6(6, 16, 24, 43, 55, 59, 69, 85, 95, 100);
B7(7, 17, 25, 44, 45, 60, 70, 86, 96, 101); B8(8, 18, 26, 34, 46, 61, 71, 87, 97, 102);
B9(9, 19, 27, 35, 47, 62, 72, 88, 98, 103); B10(10, 20, 28, 36, 48, 63, 73, 78, 99, 104);
B11(11, 21, 29, 37, 49, 64, 74, 79, 89, 105).

430. $v = 110, b = 33, r = 3, k = 10, AE = 0.9661, DE = 0.9841$ $\alpha(0,1)$, Rect.- Lattice

Replication 1

B1(1, 12, 23, 34, 45, 56, 67, 78, 89, 100); B2(2, 13, 24, 35, 46, 57, 68, 79, 90, 101);
B3(3, 14, 25, 36, 47, 58, 69, 80, 91, 102); B4(4, 15, 26, 37, 48, 59, 70, 81, 92, 103);
B5(5, 16, 27, 38, 49, 60, 71, 82, 93, 104); B6(6, 17, 28, 39, 50, 61, 72, 83, 94, 105);
B7(7, 18, 29, 40, 51, 62, 73, 84, 95, 106); B8(8, 19, 30, 41, 52, 63, 74, 85, 96, 107);
B9(9, 20, 31, 42, 53, 64, 75, 86, 97, 108); B10(10, 21, 32, 43, 54, 65, 76, 87, 98, 109);
B11(11, 22, 33, 44, 55, 66, 77, 88, 99, 110).

Replication 2

B1(1, 13, 30, 38, 54, 66, 75, 80, 94, 106); B2(2, 14, 31, 39, 55, 56, 76, 81, 95, 107);
B3(3, 15, 32, 40, 45, 57, 77, 82, 96, 108); B4(4, 16, 33, 41, 46, 58, 67, 83, 97, 109);
B5(5, 17, 23, 42, 47, 59, 68, 84, 98, 110); B6(6, 18, 24, 43, 48, 60, 69, 85, 99, 100);
B7(7, 19, 25, 44, 49, 61, 70, 86, 89, 101); B8(8, 20, 26, 34, 50, 62, 71, 87, 90, 102);

B9(9, 21, 27, 35, 51, 63, 72, 88, 91, 103); B10(10, 22, 28, 36, 52, 64, 73, 78, 92, 104);
B11(11, 12, 29, 37, 53, 65, 74, 79, 93, 105).

Replication 3

B1(1, 15, 28, 35, 47, 60, 74, 86, 95, 109); B2(2, 16, 29, 36, 48, 61, 75, 87, 96, 110);
B3(3, 17, 30, 37, 49, 62, 76, 88, 97, 100); B4(4, 18, 31, 38, 50, 63, 77, 78, 98, 101);
B5(5, 19, 32, 39, 51, 64, 67, 79, 99, 102); B6(6, 20, 33, 40, 52, 65, 68, 80, 89, 103);
B7(7, 21, 23, 41, 53, 66, 69, 81, 90, 104); B8(8, 22, 24, 42, 54, 56, 70, 82, 91, 105);
B9(9, 12, 25, 43, 55, 57, 71, 83, 92, 106); B10(10, 13, 26, 44, 45, 58, 72, 84, 93, 107);
B11(11, 14, 27, 34, 46, 59, 73, 85, 94, 108).

431. $v = 110, b = 44, r = 4, k = 10, AE = 0.9780, DE = 0.9894$ $\alpha(0,1,2)$

Replication 1

B1(1, 12, 23, 34, 45, 56, 67, 78, 89, 100); B2(2, 13, 24, 35, 46, 57, 68, 79, 90, 101);
B3(3, 14, 25, 36, 47, 58, 69, 80, 91, 102); B4(4, 15, 26, 37, 48, 59, 70, 81, 92, 103);
B5(5, 16, 27, 38, 49, 60, 71, 82, 93, 104); B6(6, 17, 28, 39, 50, 61, 72, 83, 94, 105);
B7(7, 18, 29, 40, 51, 62, 73, 84, 95, 106); B8(8, 19, 30, 41, 52, 63, 74, 85, 96, 107);
B9(9, 20, 31, 42, 53, 64, 75, 86, 97, 108); B10(10, 21, 32, 43, 54, 65, 76, 87, 98, 109);
B11(11, 22, 33, 44, 55, 66, 77, 88, 99, 110).

Replication 2

B1(1, 17, 25, 43, 55, 64, 73, 79, 96, 103); B2(2, 18, 26, 44, 45, 65, 74, 80, 97, 104);
B3(3, 19, 27, 34, 46, 66, 75, 81, 98, 105); B4(4, 20, 28, 35, 47, 56, 76, 82, 99, 106);
B5(5, 21, 29, 36, 48, 57, 77, 83, 89, 107); B6(6, 22, 30, 37, 49, 58, 67, 84, 90, 108);
B7(7, 12, 31, 38, 50, 59, 68, 85, 91, 109); B8(8, 13, 32, 39, 51, 60, 69, 86, 92, 110);
B9(9, 14, 33, 40, 52, 61, 70, 87, 93, 100); B10(10, 15, 23, 41, 53, 62, 71, 88, 94, 101);
B11(11, 16, 24, 42, 54, 63, 72, 78, 95, 102).

Replication 3

B1(1, 13, 26, 44, 53, 58, 75, 82, 95, 107); B2(2, 14, 27, 34, 54, 59, 76, 83, 96, 108);
B3(3, 15, 28, 35, 55, 60, 77, 84, 97, 109); B4(4, 16, 29, 36, 45, 61, 67, 85, 98, 110);
B5(5, 17, 30, 37, 46, 62, 68, 86, 99, 100); B6(6, 18, 31, 38, 47, 63, 69, 87, 89, 101);
B7(7, 19, 32, 39, 48, 64, 70, 88, 90, 102); B8(8, 20, 33, 40, 49, 65, 71, 78, 91, 103);
B9(9, 21, 23, 41, 50, 66, 72, 79, 92, 104); B10(10, 22, 24, 42, 51, 56, 73, 80, 93, 105);
B11(11, 12, 25, 43, 52, 57, 74, 81, 94, 106).

Replication 4

B1(1, 16, 30, 35, 51, 66, 70, 83, 91, 101); B2(2, 17, 31, 36, 52, 56, 71, 84, 92, 102);
B3(3, 18, 32, 37, 53, 57, 72, 85, 93, 103); B4(4, 19, 33, 38, 54, 58, 73, 86, 94, 104);
B5(5, 20, 23, 39, 55, 59, 74, 87, 95, 105); B6(6, 21, 24, 40, 45, 60, 75, 88, 96, 106);
B7(7, 22, 25, 41, 46, 61, 76, 78, 97, 107); B8(8, 12, 26, 42, 47, 62, 77, 79, 98, 108);
B9(9, 13, 27, 43, 48, 63, 67, 80, 99, 109); B10(10, 14, 28, 44, 49, 64, 68, 81, 89, 110);
B11(11, 15, 29, 34, 50, 65, 69, 82, 90, 100).

432. $v = 110, b = 55, r = 5, k = 10, AE = 0.9786, DE = 0.9899$ $\alpha(0,1,2,3)$

Replication 1

B 1(1, 12, 23, 34, 45, 56, 67, 78, 89, 100); B 2(2, 13, 24, 35, 46, 57, 68, 79, 90, 101);
B 3(3, 14, 25, 36, 47, 58, 69, 80, 91, 102); B 4(4, 15, 26, 37, 48, 59, 70, 81, 92, 103);
B 5(5, 16, 27, 38, 49, 60, 71, 82, 93, 104); B 6(6, 17, 28, 39, 50, 61, 72, 83, 94, 105);
B 7(7, 18, 29, 40, 51, 62, 73, 84, 95, 106); B 8(8, 19, 30, 41, 52, 63, 74, 85, 96, 107);

B 9(9, 20, 31, 42, 53, 64, 75, 86, 97, 108); B10(10, 21, 32, 43, 54, 65, 76, 87, 98, 109);
B11(11, 22, 33, 44, 55, 66, 77, 88, 99, 110).

Replication 2

B 1(1, 13, 25, 37, 49, 61, 73, 85, 97, 109); B 2(2, 14, 26, 38, 50, 62, 74, 86, 98, 110);
B 3(3, 15, 27, 39, 51, 63, 75, 87, 99, 100); B 4(4, 16, 28, 40, 52, 64, 76, 88, 89, 101);
B 5(5, 17, 29, 41, 53, 65, 77, 78, 90, 102); B 6(6, 18, 30, 42, 54, 66, 67, 79, 91, 103);
B 7(7, 19, 31, 43, 55, 56, 68, 80, 92, 104); B 8(8, 20, 32, 44, 45, 57, 69, 81, 93, 105);
B 9(9, 21, 33, 34, 46, 58, 70, 82, 94, 106); B10(10, 22, 23, 35, 47, 59, 71, 83, 95, 107);
B11(11, 12, 24, 36, 48, 60, 72, 84, 96, 108).

Replication 3

B 1(1, 15, 28, 41, 55, 58, 68, 86, 93, 106); B 2(2, 16, 29, 42, 45, 59, 69, 87, 94, 107);
B 3(3, 17, 30, 43, 46, 60, 70, 88, 95, 108); B 4(4, 18, 31, 44, 47, 61, 71, 78, 96, 109);
B 5(5, 19, 32, 34, 48, 62, 72, 79, 97, 110); B 6(6, 20, 33, 35, 49, 63, 73, 80, 98, 100);
B 7(7, 21, 23, 36, 50, 64, 74, 81, 99, 101); B 8(8, 22, 24, 37, 51, 65, 75, 82, 89, 102);
B 9(9, 12, 25, 38, 52, 66, 76, 83, 90, 103); B10(10, 13, 26, 39, 53, 56, 77, 84, 91, 104);
B11(11, 14, 27, 40, 54, 57, 67, 85, 92, 105).

Replication 4

B 1(1, 18, 32, 36, 52, 59, 71, 83, 99, 108); B 2(2, 19, 33, 37, 53, 60, 72, 84, 89, 109);
B 3(3, 20, 23, 38, 54, 61, 73, 85, 90, 110); B 4(4, 21, 24, 39, 55, 62, 74, 86, 91, 100);
B 5(5, 22, 25, 40, 45, 63, 75, 87, 92, 101); B 6(6, 12, 26, 41, 46, 64, 76, 88, 93, 102);
B 7(7, 13, 27, 42, 47, 65, 77, 78, 94, 103); B 8(8, 14, 28, 43, 48, 66, 67, 79, 95, 104);
B 9(9, 15, 29, 44, 49, 56, 68, 80, 96, 105); B10(10, 16, 30, 34, 50, 57, 69, 81, 97, 106);
B11(11, 17, 31, 35, 51, 58, 70, 82, 98, 107).

Replication 5

B 1(1, 19, 33, 40, 50, 64, 76, 81, 91, 101); B 2(2, 20, 23, 41, 51, 65, 77, 82, 92, 102);
B 3(3, 21, 24, 42, 52, 66, 67, 83, 93, 103); B 4(4, 22, 25, 43, 53, 56, 68, 84, 94, 104);
B 5(5, 12, 26, 44, 54, 57, 69, 85, 95, 105); B 6(6, 13, 27, 34, 55, 58, 70, 86, 96, 106);
B 7(7, 14, 28, 35, 45, 59, 71, 87, 97, 107); B 8(8, 15, 29, 36, 46, 60, 72, 88, 98, 108);
B 9(9, 16, 30, 37, 47, 61, 73, 78, 99, 109); B10(10, 17, 31, 38, 48, 62, 74, 79, 89, 110);
B11(11, 18, 32, 39, 49, 63, 75, 80, 90, 100).

433. $v = 120, b = 24, r = 2, k = 10, AE = 0.9245, DE = 0.9677$ $\alpha(0,1)$

Replication 1

B1(1, 13, 25, 37, 49, 61, 73, 85, 97, 109); B2(2, 14, 26, 38, 50, 62, 74, 86, 98, 110);
B3(3, 15, 27, 39, 51, 63, 75, 87, 99, 111); B4(4, 16, 28, 40, 52, 64, 76, 88, 100, 112);
B5(5, 17, 29, 41, 53, 65, 77, 89, 101, 113); B6(6, 18, 30, 42, 54, 66, 78, 90, 102, 114);
B7(7, 19, 31, 43, 55, 67, 79, 91, 103, 115); B8(8, 20, 32, 44, 56, 68, 80, 92, 104, 116);
B9(9, 21, 33, 45, 57, 69, 81, 93, 105, 117); B10(10, 22, 34, 46, 58, 70, 82, 94, 106, 118);
B11(11, 23, 35, 47, 59, 71, 83, 95, 107, 119); B12(12, 24, 36, 48, 60, 72, 84, 96, 108, 120).

Replication 2

B1(1, 24, 34, 38, 56, 64, 78, 95, 103, 111); B2(2, 13, 35, 39, 57, 65, 79, 96, 104, 112);
B3(3, 14, 36, 40, 58, 66, 80, 85, 105, 113); B4(4, 15, 25, 41, 59, 67, 81, 86, 106, 114);
B5(5, 16, 26, 42, 60, 68, 82, 87, 107, 115); B6(6, 17, 27, 43, 49, 69, 83, 88, 108, 116);
B7(7, 18, 28, 44, 50, 70, 84, 89, 97, 117); B8(8, 19, 29, 45, 51, 71, 73, 90, 98, 118);

B9(9, 20, 30, 46, 52, 72, 74, 91, 99, 119); B10(10, 21, 31, 47, 53, 61, 75, 92, 100, 120);
B11(11, 22, 32, 48, 54, 62, 76, 93, 101, 109); B12(12, 23, 33, 37, 55, 63, 77, 94, 102, 110).

434. $v = 120, b = 36, r = 3, k = 10, AE = 0.9645, DE = 0.9834$ $\alpha(0,1)$

Replication 1

B1(1, 13, 25, 37, 49, 61, 73, 85, 97, 109); B2(2, 14, 26, 38, 50, 62, 74, 86, 98, 110);
B3(3, 15, 27, 39, 51, 63, 75, 87, 99, 111); B4(4, 16, 28, 40, 52, 64, 76, 88, 100, 112);
B5(5, 17, 29, 41, 53, 65, 77, 89, 101, 113); B6(6, 18, 30, 42, 54, 66, 78, 90, 102, 114);
B7(7, 19, 31, 43, 55, 67, 79, 91, 103, 115); B8(8, 20, 32, 44, 56, 68, 80, 92, 104, 116);
B9(9, 21, 33, 45, 57, 69, 81, 93, 105, 117); B10(10, 22, 34, 46, 58, 70, 82, 94, 106, 118);
B11(11, 23, 35, 47, 59, 71, 83, 95, 107, 119); B12(12, 24, 36, 48, 60, 72, 84, 96, 108, 120).

Replication 2

B1(1, 16, 35, 44, 58, 69, 79, 87, 98, 120); B2(2, 17, 36, 45, 59, 70, 80, 88, 99, 109);
B3(3, 18, 25, 46, 60, 71, 81, 89, 100, 110); B4(4, 19, 26, 47, 49, 72, 82, 90, 101, 111);
B5(5, 20, 27, 48, 50, 61, 83, 91, 102, 112); B6(6, 21, 28, 37, 51, 62, 84, 92, 103, 113);
B7(7, 22, 29, 38, 52, 63, 73, 93, 104, 114); B8(8, 23, 30, 39, 53, 64, 74, 94, 105, 115);
B9(9, 24, 31, 40, 54, 65, 75, 95, 106, 116); B10(10, 13, 32, 41, 55, 66, 76, 96, 107, 117);
B11(11, 14, 33, 42, 56, 67, 77, 85, 108, 118); B12(12, 15, 34, 43, 57, 68, 78, 86, 97, 119).

Replication 3

B1(1, 22, 30, 47, 50, 68, 75, 89, 103, 117); B2(2, 23, 31, 48, 51, 69, 76, 90, 104, 118);
B3(3, 24, 32, 37, 52, 70, 77, 91, 105, 119); B4(4, 13, 33, 38, 53, 71, 78, 92, 106, 120);
B5(5, 14, 34, 39, 54, 72, 79, 93, 107, 109); B6(6, 15, 35, 40, 55, 61, 80, 94, 108, 110);
B7(7, 16, 36, 41, 56, 62, 81, 95, 97, 111); B8(8, 17, 25, 42, 57, 63, 82, 96, 98, 112);
B9(9, 18, 26, 43, 58, 64, 83, 85, 99, 113); B10(10, 19, 27, 44, 59, 65, 84, 86, 100, 114);
B11(11, 20, 28, 45, 60, 66, 73, 87, 101, 115); B12(12, 21, 29, 46, 49, 67, 74, 88, 102, 116).

435. $v = 120, b = 48, r = 4, k = 10, AE = 0.9783, DE = 0.9895$ $\alpha(0,1)$

Replication 1

B1(1, 13, 25, 37, 49, 61, 73, 85, 97, 109); B2(2, 14, 26, 38, 50, 62, 74, 86, 98, 110);
B3(3, 15, 27, 39, 51, 63, 75, 87, 99, 111); B4(4, 16, 28, 40, 52, 64, 76, 88, 100, 112);
B5(5, 17, 29, 41, 53, 65, 77, 89, 101, 113); B6(6, 18, 30, 42, 54, 66, 78, 90, 102, 114);
B7(7, 19, 31, 43, 55, 67, 79, 91, 103, 115); B8(8, 20, 32, 44, 56, 68, 80, 92, 104, 116);
B9(9, 21, 33, 45, 57, 69, 81, 93, 105, 117); B10(10, 22, 34, 46, 58, 70, 82, 94, 106, 118);
B11(11, 23, 35, 47, 59, 71, 83, 95, 107, 119); B12(12, 24, 36, 48, 60, 72, 84, 96, 108, 120).

Replication 2

B1(1, 16, 35, 42, 55, 69, 77, 96, 106, 111); B2(2, 17, 36, 43, 56, 70, 78, 85, 107, 112);
B3(3, 18, 25, 44, 57, 71, 79, 86, 108, 113); B4(4, 19, 26, 45, 58, 72, 80, 87, 97, 114);
B5(5, 20, 27, 46, 59, 61, 81, 88, 98, 115); B6(6, 21, 28, 47, 60, 62, 82, 89, 99, 116);
B7(7, 22, 29, 48, 49, 63, 83, 90, 100, 117); B8(8, 23, 30, 37, 50, 64, 84, 91, 101, 118);
B9(9, 24, 31, 38, 51, 65, 73, 92, 102, 119); B10(10, 13, 32, 39, 52, 66, 74, 93, 103, 120);
B11(11, 14, 33, 40, 53, 67, 75, 94, 104, 109); B12(12, 15, 34, 41, 54, 68, 76, 95, 105, 110).

Replication 3

B1(1, 21, 27, 44, 53, 72, 83, 91, 102, 112); B2(2, 22, 28, 45, 54, 61, 84, 92, 103, 113);
B3(3, 23, 29, 46, 55, 62, 73, 93, 104, 114); B4(4, 24, 30, 47, 56, 63, 74, 94, 105, 115);
B5(5, 13, 31, 48, 57, 64, 75, 95, 106, 116); B6(6, 14, 32, 37, 58, 65, 76, 96, 107, 117);
B7(7, 15, 33, 38, 59, 66, 77, 85, 108, 118); B8(8, 16, 34, 39, 60, 67, 78, 86, 97, 119);
B9(9, 17, 35, 40, 49, 68, 79, 87, 98, 120); B10(10, 18, 36, 41, 50, 69, 80, 88, 99, 109);
B11(11, 19, 25, 42, 51, 70, 81, 89, 100, 110); B12(12, 20, 26, 43, 52, 71, 82, 90, 101, 111).

Replication 4

B1(1, 18, 28, 38, 56, 67, 81, 95, 101, 120); B2(2, 19, 29, 39, 57, 68, 82, 96, 102, 109);
B3(3, 20, 30, 40, 58, 69, 83, 85, 103, 110); B4(4, 21, 31, 41, 59, 70, 84, 86, 104, 111);
B5(5, 22, 32, 42, 60, 71, 73, 87, 105, 112); B6(6, 23, 33, 43, 49, 72, 74, 88, 106, 113);
B7(7, 24, 34, 44, 50, 61, 75, 89, 107, 114); B8(8, 13, 35, 45, 51, 62, 76, 90, 108, 115);
B9(9, 14, 36, 46, 52, 63, 77, 91, 97, 116); B10(10, 15, 25, 47, 53, 64, 78, 92, 98, 117);
B11(11, 16, 26, 48, 54, 65, 79, 93, 99, 118); B12(12, 17, 27, 37, 55, 66, 80, 94, 100, 119).

436. $v = 120, b = 60, r = 5, k = 10, AE = 0.9837, DE = 0.9921$ $\alpha(0,1,2)$

Replication 1

B 1(1, 13, 25, 37, 49, 61, 73, 85, 97, 109); B 2(2, 14, 26, 38, 50, 62, 74, 86, 98, 110);
B 3(3, 15, 27, 39, 51, 63, 75, 87, 99, 111); B 4(4, 16, 28, 40, 52, 64, 76, 88, 100, 112);
B 5(5, 17, 29, 41, 53, 65, 77, 89, 101, 113); B 6(6, 18, 30, 42, 54, 66, 78, 90, 102, 114);
B 7(7, 19, 31, 43, 55, 67, 79, 91, 103, 115); B 8(8, 20, 32, 44, 56, 68, 80, 92, 104, 116);
B 9(9, 21, 33, 45, 57, 69, 81, 93, 105, 117); B10(10, 22, 34, 46, 58, 70, 82, 94, 106, 118);
B11(11, 23, 35, 47, 59, 71, 83, 95, 107, 119); B12(12, 24, 36, 48, 60, 72, 84, 96, 108, 120).

Replication 2

B 1(1, 19, 36, 47, 59, 70, 76, 89, 104, 118); B 2(2, 20, 25, 48, 60, 71, 77, 90, 105, 119);
B 3(3, 21, 26, 37, 49, 72, 78, 91, 106, 120); B 4(4, 22, 27, 38, 50, 61, 79, 92, 107, 109);
B 5(5, 23, 28, 39, 51, 62, 80, 93, 108, 110); B 6(6, 24, 29, 40, 52, 63, 81, 94, 97, 111);
B 7(7, 13, 30, 41, 53, 64, 82, 95, 98, 112); B 8(8, 14, 31, 42, 54, 65, 83, 96, 99, 113);
B 9(9, 15, 32, 43, 55, 66, 84, 85, 100, 114); B10(10, 16, 33, 44, 56, 67, 73, 86, 101, 115);
B11(11, 17, 34, 45, 57, 68, 74, 87, 102, 116); B12(12, 18, 35, 46, 58, 69, 75, 88, 103, 117).

Replication 3

B 1(1, 14, 28, 48, 58, 64, 78, 87, 107, 114); B 2(2, 15, 29, 37, 59, 65, 79, 88, 108, 115);
B 3(3, 16, 30, 38, 60, 66, 80, 89, 97, 116); B 4(4, 17, 31, 39, 49, 67, 81, 90, 98, 117);
B 5(5, 18, 32, 40, 50, 68, 82, 91, 99, 118); B 6(6, 19, 33, 41, 51, 69, 83, 92, 100, 119);
B 7(7, 20, 34, 42, 52, 70, 84, 93, 101, 120); B 8(8, 21, 35, 43, 53, 71, 73, 94, 102, 109);
B 9(9, 22, 36, 44, 54, 72, 74, 95, 103, 110); B10(10, 23, 25, 45, 55, 61, 75, 96, 104, 111);
B11(11, 24, 26, 46, 56, 62, 76, 85, 105, 112); B12(12, 13, 27, 47, 57, 63, 77, 86, 106, 113).

Replication 4

B 1(1, 24, 30, 39, 55, 71, 74, 88, 101, 113); B 2(2, 13, 31, 40, 56, 72, 75, 89, 102, 114);
B 3(3, 14, 32, 41, 57, 61, 76, 90, 103, 115); B 4(4, 15, 33, 42, 58, 62, 77, 91, 104, 116);
B 5(5, 16, 34, 43, 59, 63, 78, 92, 105, 117); B 6(6, 17, 35, 44, 60, 64, 79, 93, 106, 118);
B 7(7, 18, 36, 45, 49, 65, 80, 94, 107, 119); B 8(8, 19, 25, 46, 50, 66, 81, 95, 108, 120);
B 9(9, 20, 26, 47, 51, 67, 82, 96, 97, 109); B10(10, 21, 27, 48, 52, 68, 83, 85, 98, 110);
B11(11, 22, 28, 37, 53, 69, 84, 86, 99, 111); B12(12, 23, 29, 38, 54, 70, 73, 87, 100, 112).

Replication 5

B 1(1, 18, 27, 44, 53, 62, 81, 96, 100, 115); B 2(2, 19, 28, 45, 54, 63, 82, 85, 101, 116);
B 3(3, 20, 29, 46, 55, 64, 83, 86, 102, 117); B 4(4, 21, 30, 47, 56, 65, 84, 87, 103, 118);
B 5(5, 22, 31, 48, 57, 66, 73, 88, 104, 119); B 6(6, 23, 32, 37, 58, 67, 74, 89, 105, 120);
B 7(7, 24, 33, 38, 59, 68, 75, 90, 106, 109); B 8(8, 13, 34, 39, 60, 69, 76, 91, 107, 110);
B 9(9, 14, 35, 40, 49, 70, 77, 92, 108, 111); B10(10, 15, 36, 41, 50, 71, 78, 93, 97, 112);
B11(11, 16, 25, 42, 51, 72, 79, 94, 98, 113); B12(12, 17, 26, 43, 52, 61, 80, 95, 99, 114).

437. $v = 130, b = 26, r = 2, k = 10, AE = 0.9220, DE = 0.9668$ $\alpha(0,1)$

Replication 1

B 1(1, 14, 27, 40, 53, 66, 79, 92, 105, 118); B 2(2, 15, 28, 41, 54, 67, 80, 93, 106, 119);
B 3(3, 16, 29, 42, 55, 68, 81, 94, 107, 120); B 4(4, 17, 30, 43, 56, 69, 82, 95, 108, 121);
B 5(5, 18, 31, 44, 57, 70, 83, 96, 109, 122); B 6(6, 19, 32, 45, 58, 71, 84, 97, 110, 123);

B 7(7, 20, 33, 46, 59, 72, 85, 98, 111, 124);
B 9(9, 22, 35, 48, 61, 74, 87, 100, 113, 126);
B11(11, 24, 37, 50, 63, 76, 89, 102, 115, 128);
B13(13, 26, 39, 52, 65, 78, 91, 104, 117, 130).

B 8(8, 21, 34, 47, 60, 73, 86, 99, 112, 125);
B10(10, 23, 36, 49, 62, 75, 88, 101, 114, 127);
B12(12, 25, 38, 51, 64, 77, 90, 103, 116, 129);

Replication 2

B 1(1, 20, 38, 52, 54, 75, 82, 96, 112, 126);
B 3(3, 22, 27, 41, 56, 77, 84, 98, 114, 128);
B 5(5, 24, 29, 43, 58, 66, 86, 100, 116, 130);
B 7(7, 26, 31, 45, 60, 68, 88, 102, 105, 119);
B 9(9, 15, 33, 47, 62, 70, 90, 104, 107, 121);
B11(11, 17, 35, 49, 64, 72, 79, 93, 109, 123);
B13(13, 19, 37, 51, 53, 74, 81, 95, 111, 125).

B 2(2, 21, 39, 40, 55, 76, 83, 97, 113, 127);
B 4(4, 23, 28, 42, 57, 78, 85, 99, 115, 129);
B 6(6, 25, 30, 44, 59, 67, 87, 101, 117, 118);
B 8(8, 14, 32, 46, 61, 69, 89, 103, 106, 120);
B10(10, 16, 34, 48, 63, 71, 91, 92, 108, 122);
B12(12, 18, 36, 50, 65, 73, 80, 94, 110, 124);

438. $v = 130, b = 39, r = 3, k = 10, AE = 0.9632, DE = 0.9829$ $\alpha(0,1)$

Replication 1

B1(1, 14, 27, 40, 53, 66, 79, 92, 105, 118);
B3(3, 16, 29, 42, 55, 68, 81, 94, 107, 120);
B5(5, 18, 31, 44, 57, 70, 83, 96, 109, 122);
B7(7, 20, 33, 46, 59, 72, 85, 98, 111, 124);
B9(9, 22, 35, 48, 61, 74, 87, 100, 113, 126);
B11(11, 24, 37, 50, 63, 76, 89, 102, 115, 128);
B13(13, 26, 39, 52, 65, 78, 91, 104, 117, 130).

B2(2, 15, 28, 41, 54, 67, 80, 93, 106, 119);
B4(4, 17, 30, 43, 56, 69, 82, 95, 108, 121);
B6(6, 19, 32, 45, 58, 71, 84, 97, 110, 123);
B8(8, 21, 34, 47, 60, 73, 86, 99, 112, 125);
B10(10, 23, 36, 49, 62, 75, 88, 101, 114, 127);
B12(12, 25, 38, 51, 64, 77, 90, 103, 116, 129);

Replication 2

B1(1, 26, 31, 45, 55, 73, 85, 93, 116, 126);
B3(3, 15, 33, 47, 57, 75, 87, 95, 105, 128);
B5(5, 17, 35, 49, 59, 77, 89, 97, 107, 130);
B7(7, 19, 37, 51, 61, 66, 91, 99, 109, 119);
B9(9, 21, 39, 40, 63, 68, 80, 101, 111, 121);
B11(11, 23, 28, 42, 65, 70, 82, 103, 113, 123);
B13(13, 25, 30, 44, 54, 72, 84, 92, 115, 125).

B2(2, 14, 32, 46, 56, 74, 86, 94, 117, 127);
B4(4, 16, 34, 48, 58, 76, 88, 96, 106, 129);
B6(6, 18, 36, 50, 60, 78, 90, 98, 108, 118);
B8(8, 20, 38, 52, 62, 67, 79, 100, 110, 120);
B10(10, 22, 27, 41, 64, 69, 81, 102, 112, 122);
B12(12, 24, 29, 43, 53, 71, 83, 104, 114, 124);

Replication 3

B1(1, 24, 32, 42, 59, 69, 88, 100, 109, 125);
B3(3, 26, 34, 44, 61, 71, 90, 102, 111, 127);
B5(5, 15, 36, 46, 63, 73, 79, 104, 113, 129);
B7(7, 17, 38, 48, 65, 75, 81, 93, 115, 118);
B9(9, 19, 27, 50, 54, 77, 83, 95, 117, 120);
B11(11, 21, 29, 52, 56, 66, 85, 97, 106, 122);
B13(13, 23, 31, 41, 58, 68, 87, 99, 108, 124).

B2(2, 25, 33, 43, 60, 70, 89, 101, 110, 126);
B4(4, 14, 35, 45, 62, 72, 91, 103, 112, 128);
B6(6, 16, 37, 47, 64, 74, 80, 92, 114, 130);
B8(8, 18, 39, 49, 53, 76, 82, 94, 116, 119);
B10(10, 20, 28, 51, 55, 78, 84, 96, 105, 121);
B12(12, 22, 30, 40, 57, 67, 86, 98, 107, 123);

439. $v = 130, b = 52, r = 4, k = 10, AE = 0.9744, DE = 0.9879$ $\alpha(0,1,2)$

Replication 1

B 1(1, 14, 27, 40, 53, 66, 79, 92, 105, 118);
B 3(3, 16, 29, 42, 55, 68, 81, 94, 107, 120);
B 5(5, 18, 31, 44, 57, 70, 83, 96, 109, 122);
B 7(7, 20, 33, 46, 59, 72, 85, 98, 111, 124);
B 9(9, 22, 35, 48, 61, 74, 87, 100, 113, 126);
B11(11, 24, 37, 50, 63, 76, 89, 102, 115, 128);
B13(13, 26, 39, 52, 65, 78, 91, 104, 117, 130).

B 2(2, 15, 28, 41, 54, 67, 80, 93, 106, 119);
B 4(4, 17, 30, 43, 56, 69, 82, 95, 108, 121);
B 6(6, 19, 32, 45, 58, 71, 84, 97, 110, 123);
B 8(8, 21, 34, 47, 60, 73, 86, 99, 112, 125);
B10(10, 23, 36, 49, 62, 75, 88, 101, 114, 127);
B12(12, 25, 38, 51, 64, 77, 90, 103, 116, 129);

Replication 2

B 1(1, 20, 38, 52, 54, 75, 82, 96, 112, 126);
B 3(3, 22, 27, 41, 56, 77, 84, 98, 114, 128);
B 5(5, 24, 29, 43, 58, 66, 86, 100, 116, 130);

B 2(2, 21, 39, 40, 55, 76, 83, 97, 113, 127);
B 4(4, 23, 28, 42, 57, 78, 85, 99, 115, 129);
B 6(6, 25, 30, 44, 59, 67, 87, 101, 117, 118);

B 7(7, 26, 31, 45, 60, 68, 88, 102, 105, 119);
B 9(9, 15, 33, 47, 62, 70, 90, 104, 107, 121);
B11(11, 17, 35, 49, 64, 72, 79, 93, 109, 123);
B13(13, 19, 37, 51, 53, 74, 81, 95, 111, 125).

B 8(8, 14, 32, 46, 61, 69, 89, 103, 106, 120);
B10(10, 16, 34, 48, 63, 71, 91, 92, 108, 122);
B12(12, 18, 36, 50, 65, 73, 80, 94, 110, 124);

Replication 3

B 1(1, 25, 32, 42, 59, 76, 80, 95, 113, 122);
B 3(3, 14, 34, 44, 61, 78, 82, 97, 115, 124);
B 5(5, 16, 36, 46, 63, 67, 84, 99, 117, 126);
B 7(7, 18, 38, 48, 65, 69, 86, 101, 106, 128);
B 9(9, 20, 27, 50, 54, 71, 88, 103, 108, 130);
B11(11, 22, 29, 52, 56, 73, 90, 92, 110, 119);
B13(13, 24, 31, 41, 58, 75, 79, 94, 112, 121).

B 2(2, 26, 33, 43, 60, 77, 81, 96, 114, 123);
B 4(4, 15, 35, 45, 62, 66, 83, 98, 116, 125);
B 6(6, 17, 37, 47, 64, 68, 85, 100, 105, 127);
B 8(8, 19, 39, 49, 53, 70, 87, 102, 107, 129);
B10(10, 21, 28, 51, 55, 72, 89, 104, 109, 118);
B12(12, 23, 30, 40, 57, 74, 91, 93, 111, 120);

Replication 4

B 1(1, 19, 29, 47, 57, 67, 87, 103, 108, 124);
B 3(3, 21, 31, 49, 59, 69, 89, 92, 110, 126);
B 5(5, 23, 33, 51, 61, 71, 91, 94, 112, 128);
B 7(7, 25, 35, 40, 63, 73, 80, 96, 114, 130);
B 9(9, 14, 37, 42, 65, 75, 82, 98, 116, 119);
B11(11, 16, 39, 44, 54, 77, 84, 100, 105, 121);
B13(13, 18, 28, 46, 56, 66, 86, 102, 107, 123).

B 2(2, 20, 30, 48, 58, 68, 88, 104, 109, 125);
B 4(4, 22, 32, 50, 60, 70, 90, 93, 111, 127);
B 6(6, 24, 34, 52, 62, 72, 79, 95, 113, 129);
B 8(8, 26, 36, 41, 64, 74, 81, 97, 115, 118);
B10(10, 15, 38, 43, 53, 76, 83, 99, 117, 120);
B12(12, 17, 27, 45, 55, 78, 85, 101, 106, 122);

440. $v = 130, b = 65, r = 5, k = 10, AE = 0.9807, DE = 0.9907$

$\alpha(0,1,2,3)$

Replication 1

B 1(1, 14, 27, 40, 53, 66, 79, 92, 105, 118);
B 3(3, 16, 29, 42, 55, 68, 81, 94, 107, 120);
B 5(5, 18, 31, 44, 57, 70, 83, 96, 109, 122);
B 7(7, 20, 33, 46, 59, 72, 85, 98, 111, 124);
B 9(9, 22, 35, 48, 61, 74, 87, 100, 113, 126);
B11(11, 24, 37, 50, 63, 76, 89, 102, 115, 128);
B13(13, 26, 39, 52, 65, 78, 91, 104, 117, 130).

B 2(2, 15, 28, 41, 54, 67, 80, 93, 106, 119);
B 4(4, 17, 30, 43, 56, 69, 82, 95, 108, 121);
B 6(6, 19, 32, 45, 58, 71, 84, 97, 110, 123);
B 8(8, 21, 34, 47, 60, 73, 86, 99, 112, 125);
B10(10, 23, 36, 49, 62, 75, 88, 101, 114, 127);
B12(12, 25, 38, 51, 64, 77, 90, 103, 116, 129);

Replication 2

B 1(1, 20, 38, 52, 54, 75, 82, 96, 112, 126);
B 3(3, 22, 27, 41, 56, 77, 84, 98, 114, 128);
B 5(5, 24, 29, 43, 58, 66, 86, 100, 116, 130);
B 7(7, 26, 31, 45, 60, 68, 88, 102, 105, 119);
B 9(9, 15, 33, 47, 62, 70, 90, 104, 107, 121);
B11(11, 17, 35, 49, 64, 72, 79, 93, 109, 123);
B13(13, 19, 37, 51, 53, 74, 81, 95, 111, 125).

B 2(2, 21, 39, 40, 55, 76, 83, 97, 113, 127);
B 4(4, 23, 28, 42, 57, 78, 85, 99, 115, 129);
B 6(6, 25, 30, 44, 59, 67, 87, 101, 117, 118);
B 8(8, 14, 32, 46, 61, 69, 89, 103, 106, 120);
B10(10, 16, 34, 48, 63, 71, 91, 92, 108, 122);
B12(12, 18, 36, 50, 65, 73, 80, 94, 110, 124);

Replication 3

B 1(1, 15, 30, 51, 62, 69, 84, 94, 117, 123);
B 3(3, 17, 32, 40, 64, 71, 86, 96, 106, 125);
B 5(5, 19, 34, 42, 53, 73, 88, 98, 108, 127);
B 7(7, 21, 36, 44, 55, 75, 90, 100, 110, 129);
B 9(9, 23, 38, 46, 57, 77, 79, 102, 112, 118);
B11(11, 25, 27, 48, 59, 66, 81, 104, 114, 120);
B13(13, 14, 29, 50, 61, 68, 83, 93, 116, 122).

B 2(2, 16, 31, 52, 63, 70, 85, 95, 105, 124);
B 4(4, 18, 33, 41, 65, 72, 87, 97, 107, 126);
B 6(6, 20, 35, 43, 54, 74, 89, 99, 109, 128);
B 8(8, 22, 37, 45, 56, 76, 91, 101, 111, 130);
B10(10, 24, 39, 47, 58, 78, 80, 103, 113, 119);
B12(12, 26, 28, 49, 60, 67, 82, 92, 115, 121);

Replication 4

B 1(1, 25, 32, 42, 59, 76, 80, 95, 113, 122); B 2(2, 26, 33, 43, 60, 77, 81, 96, 114, 123);
B 3(3, 14, 34, 44, 61, 78, 82, 97, 115, 124); B 4(4, 15, 35, 45, 62, 66, 83, 98, 116, 125);
B 5(5, 16, 36, 46, 63, 67, 84, 99, 117, 126); B 6(6, 17, 37, 47, 64, 68, 85, 100, 105, 127);
B 7(7, 18, 38, 48, 65, 69, 86, 101, 106, 128);

B 8(8, 19, 39, 49, 53, 70, 87, 102, 107, 129);

B 9(9, 20, 27, 50, 54, 71, 88, 103, 108, 130); B10(10, 21, 28, 51, 55, 72, 89, 104, 109, 118);
 B11(11, 22, 29, 52, 56, 73, 90, 92, 110, 119); B12(12, 23, 30, 40, 57, 74, 91, 93, 111, 120);
 B13(13, 24, 31, 41, 58, 75, 79, 94, 112, 121).

Replication 5

B 1(1, 19, 29, 47, 57, 67, 87, 103, 108, 124); B 2(2, 20, 30, 48, 58, 68, 88, 104, 109, 125);
 B 3(3, 21, 31, 49, 59, 69, 89, 92, 110, 126); B 4(4, 22, 32, 50, 60, 70, 90, 93, 111, 127);
 B 5(5, 23, 33, 51, 61, 71, 91, 94, 112, 128); B 6(6, 24, 34, 52, 62, 72, 79, 95, 113, 129);
 B 7(7, 25, 35, 40, 63, 73, 80, 96, 114, 130); B 8(8, 26, 36, 41, 64, 74, 81, 97, 115, 118);
 B 9(9, 14, 37, 42, 65, 75, 82, 98, 116, 119); B10(10, 15, 38, 43, 53, 76, 83, 99, 117, 120);
 B11(11, 16, 39, 44, 54, 77, 84, 100, 105, 121); B12(12, 17, 27, 45, 55, 78, 85, 101, 106, 122);
 B13(13, 18, 28, 46, 56, 66, 86, 102, 107, 123).

441. $v = 140, b = 28, r = 2, k = 10, AE = 0.9195, DE = 0.9661$ $\alpha(0,1)$

Replication 1

B 1(1, 15, 29, 43, 57, 71, 85, 99, 113, 127); B 2(2, 16, 30, 44, 58, 72, 86, 100, 114, 128);
 B 3(3, 17, 31, 45, 59, 73, 87, 101, 115, 129); B 4(4, 18, 32, 46, 60, 74, 88, 102, 116, 130);
 B 5(5, 19, 33, 47, 61, 75, 89, 103, 117, 131); B 6(6, 20, 34, 48, 62, 76, 90, 104, 118, 132);
 B 7(7, 21, 35, 49, 63, 77, 91, 105, 119, 133); B 8(8, 22, 36, 50, 64, 78, 92, 106, 120, 134);
 B 9(9, 23, 37, 51, 65, 79, 93, 107, 121, 135); B10(10, 24, 38, 52, 66, 80, 94, 108, 122, 136);
 B11(11, 25, 39, 53, 67, 81, 95, 109, 123, 137); B12(12, 26, 40, 54, 68, 82, 96, 110, 124, 138);
 B13(13, 27, 41, 55, 69, 83, 97, 111, 125, 139); B14(14, 28, 42, 56, 70, 84, 98, 112, 126, 140).

Replication 2

B 1(1, 16, 31, 46, 61, 76, 91, 106, 121, 136); B 2(2, 17, 32, 47, 62, 77, 92, 107, 122, 137);
 B 3(3, 18, 33, 48, 63, 78, 93, 108, 123, 138); B 4(4, 19, 34, 49, 64, 79, 94, 109, 124, 139);
 B 5(5, 20, 35, 50, 65, 80, 95, 110, 125, 140); B 6(6, 21, 36, 51, 66, 81, 96, 111, 126, 127);
 B 7(7, 22, 37, 52, 67, 82, 97, 112, 113, 128); B 8(8, 23, 38, 53, 68, 83, 98, 99, 114, 129);
 B 9(9, 24, 39, 54, 69, 84, 85, 100, 115, 130); B10(10, 25, 40, 55, 70, 71, 86, 101, 116, 131);
 B11(11, 26, 41, 56, 57, 72, 87, 102, 117, 132); B12(12, 27, 42, 43, 58, 73, 88, 103, 118, 133);
 B13(13, 28, 29, 44, 59, 74, 89, 104, 119, 134); B14(14, 15, 30, 45, 60, 75, 90, 105, 120, 135).

442. $v = 140, b = 42, r = 3, k = 10, AE = 0.9619, DE = 0.9824$ $\alpha(0,1)$

Replication 1

B1(1, 15, 29, 43, 57, 71, 85, 99, 113, 127); B2(2, 16, 30, 44, 58, 72, 86, 100, 114, 128);
 B3(3, 17, 31, 45, 59, 73, 87, 101, 115, 129); B4(4, 18, 32, 46, 60, 74, 88, 102, 116, 130);
 B5(5, 19, 33, 47, 61, 75, 89, 103, 117, 131); B6(6, 20, 34, 48, 62, 76, 90, 104, 118, 132);
 B7(7, 21, 35, 49, 63, 77, 91, 105, 119, 133); B8(8, 22, 36, 50, 64, 78, 92, 106, 120, 134);
 B9(9, 23, 37, 51, 65, 79, 93, 107, 121, 135); B10(10, 24, 38, 52, 66, 80, 94, 108, 122, 136);
 B11(11, 25, 39, 53, 67, 81, 95, 109, 123, 137); B12(12, 26, 40, 54, 68, 82, 96, 110, 124, 138);
 B13(13, 27, 41, 55, 69, 83, 97, 111, 125, 139); B14(14, 28, 42, 56, 70, 84, 98, 112, 126, 140).

Replication 2

B1(1, 24, 31, 54, 69, 76, 89, 102, 126, 134); B2(2, 25, 32, 55, 70, 77, 90, 103, 113, 135);
 B3(3, 26, 33, 56, 57, 78, 91, 104, 114, 136); B4(4, 27, 34, 43, 58, 79, 92, 105, 115, 137);
 B5(5, 28, 35, 44, 59, 80, 93, 106, 116, 138); B6(6, 15, 36, 45, 60, 81, 94, 107, 117, 139);
 B7(7, 16, 37, 46, 61, 82, 95, 108, 118, 140); B8(8, 17, 38, 47, 62, 83, 96, 109, 119, 127);
 B9(9, 18, 39, 48, 63, 84, 97, 110, 120, 128); B10(10, 19, 40, 49, 64, 71, 98, 111, 121, 129);
 B11(11, 20, 41, 50, 65, 72, 85, 112, 122, 130); B12(12, 21, 42, 51, 66, 73, 86, 99, 123, 131);
 B13(13, 22, 29, 52, 67, 74, 87, 100, 124, 132); B14(14, 23, 30, 53, 68, 75, 88, 101, 125, 133).

Replication 3

B1(1, 27, 40, 50, 63, 81, 93, 101, 114, 140); B2(2, 28, 41, 51, 64, 82, 94, 102, 115, 127);
 B3(3, 15, 42, 52, 65, 83, 95, 103, 116, 128); B4(4, 16, 29, 53, 66, 84, 96, 104, 117, 129);
 B5(5, 17, 30, 54, 67, 71, 97, 105, 118, 130); B6(6, 18, 31, 55, 68, 72, 98, 106, 119, 131);
 B7(7, 19, 32, 56, 69, 73, 85, 107, 120, 132); B8(8, 20, 33, 43, 70, 74, 86, 108, 121, 133);

B9(9, 21, 34, 44, 57, 75, 87, 109, 122, 134);
B11(11, 23, 36, 46, 59, 77, 89, 111, 124, 136);
B13(13, 25, 38, 48, 61, 79, 91, 99, 126, 138);

B10(10, 22, 35, 45, 58, 76, 88, 110, 123, 135);
B12(12, 24, 37, 47, 60, 78, 90, 112, 125, 137);
B14(14, 26, 39, 49, 62, 80, 92, 100, 113, 139).

443. $v = 140, b = 56, r = 4, k = 10, AE = 0.9721, DE = 0.9870$

$\alpha(0,1,2)$

Replication 1

B 1(1, 15, 29, 43, 57, 71, 85, 99, 113, 127);
B 3(3, 17, 31, 45, 59, 73, 87, 101, 115, 129);
B 5(5, 19, 33, 47, 61, 75, 89, 103, 117, 131);
B 7(7, 21, 35, 49, 63, 77, 91, 105, 119, 133);
B 9(9, 23, 37, 51, 65, 79, 93, 107, 121, 135);
B11(11, 25, 39, 53, 67, 81, 95, 109, 123, 137);
B13(13, 27, 41, 55, 69, 83, 97, 111, 125, 139);

B 2(2, 16, 30, 44, 58, 72, 86, 100, 114, 128);
B 4(4, 18, 32, 46, 60, 74, 88, 102, 116, 130);
B 6(6, 20, 34, 48, 62, 76, 90, 104, 118, 132);
B 8(8, 22, 36, 50, 64, 78, 92, 106, 120, 134);
B10(10, 24, 38, 52, 66, 80, 94, 108, 122, 136);
B12(12, 26, 40, 54, 68, 82, 96, 110, 124, 138);
B14(14, 28, 42, 56, 70, 84, 98, 112, 126, 140).

Replication 2

B 1(1, 16, 31, 46, 61, 76, 91, 106, 121, 136);
B 3(3, 18, 33, 48, 63, 78, 93, 108, 123, 138);
B 5(5, 20, 35, 50, 65, 80, 95, 110, 125, 140);
B 7(7, 22, 37, 52, 67, 82, 97, 112, 113, 128);
B 9(9, 24, 39, 54, 69, 84, 85, 100, 115, 130);
B11(11, 26, 41, 56, 57, 72, 87, 102, 117, 132);
B13(13, 28, 29, 44, 59, 74, 89, 104, 119, 134);

B 2(2, 17, 32, 47, 62, 77, 92, 107, 122, 137);
B 4(4, 19, 34, 49, 64, 79, 94, 109, 124, 139);
B 6(6, 21, 36, 51, 66, 81, 96, 111, 126, 127);
B 8(8, 23, 38, 53, 68, 83, 98, 99, 114, 129);
B10(10, 25, 40, 55, 70, 71, 86, 101, 116, 131);
B12(12, 27, 42, 43, 58, 73, 88, 103, 118, 133);
B14(14, 15, 30, 45, 60, 75, 90, 105, 120, 135).

Replication 3

B 1(1, 18, 34, 50, 66, 83, 98, 107, 123, 133);
B 3(3, 20, 36, 52, 68, 71, 86, 109, 125, 135);
B 5(5, 22, 38, 54, 70, 73, 88, 111, 113, 137);
B 7(7, 24, 40, 56, 58, 75, 90, 99, 115, 139);
B 9(9, 26, 42, 44, 60, 77, 92, 101, 117, 127);
B11(11, 28, 30, 46, 62, 79, 94, 103, 119, 129);
B13(13, 16, 32, 48, 64, 81, 96, 105, 121, 131);

B 2(2, 19, 35, 51, 67, 84, 85, 108, 124, 134);
B 4(4, 21, 37, 53, 69, 72, 87, 110, 126, 136);
B 6(6, 23, 39, 55, 57, 74, 89, 112, 114, 138);
B 8(8, 25, 41, 43, 59, 76, 91, 100, 116, 140);
B10(10, 27, 29, 45, 61, 78, 93, 102, 118, 128);
B12(12, 15, 31, 47, 63, 80, 95, 104, 120, 130);
B14(14, 17, 33, 49, 65, 82, 97, 106, 122, 132).

Replication 4

B 1(1, 20, 30, 49, 64, 84, 93, 109, 116, 129);
B 3(3, 22, 32, 51, 66, 72, 95, 111, 118, 131);
B 5(5, 24, 34, 53, 68, 74, 97, 99, 120, 133);
B 7(7, 26, 36, 55, 70, 76, 85, 101, 122, 135);
B 9(9, 28, 38, 43, 58, 78, 87, 103, 124, 137);
B11(11, 16, 40, 45, 60, 80, 89, 105, 126, 139);
B13(13, 18, 42, 47, 62, 82, 91, 107, 114, 127);

B 2(2, 21, 31, 50, 65, 71, 94, 110, 117, 130);
B 4(4, 23, 33, 52, 67, 73, 96, 112, 119, 132);
B 6(6, 25, 35, 54, 69, 75, 98, 100, 121, 134);
B 8(8, 27, 37, 56, 57, 77, 86, 102, 123, 136);
B10(10, 15, 39, 44, 59, 79, 88, 104, 125, 138);
B12(12, 17, 41, 46, 61, 81, 90, 106, 113, 140);
B14(14, 19, 29, 48, 63, 83, 92, 108, 115, 128).

444. $v = 140, b = 70, r = 5, k = 10, AE = 0.9787, DE = 0.9899$

$\alpha(0,1,2)$

Replication 1

B 1(1, 15, 29, 43, 57, 71, 85, 99, 113, 127);
B 3(3, 17, 31, 45, 59, 73, 87, 101, 115, 129);
B 5(5, 19, 33, 47, 61, 75, 89, 103, 117, 131);
B 7(7, 21, 35, 49, 63, 77, 91, 105, 119, 133);
B 9(9, 23, 37, 51, 65, 79, 93, 107, 121, 135);
B11(11, 25, 39, 53, 67, 81, 95, 109, 123, 137);
B13(13, 27, 41, 55, 69, 83, 97, 111, 125, 139);

B 2(2, 16, 30, 44, 58, 72, 86, 100, 114, 128);
B 4(4, 18, 32, 46, 60, 74, 88, 102, 116, 130);
B 6(6, 20, 34, 48, 62, 76, 90, 104, 118, 132);
B 8(8, 22, 36, 50, 64, 78, 92, 106, 120, 134);
B10(10, 24, 38, 52, 66, 80, 94, 108, 122, 136);
B12(12, 26, 40, 54, 68, 82, 96, 110, 124, 138);
B14(14, 28, 42, 56, 70, 84, 98, 112, 126, 140).

Replication 2

B 1(1, 16, 31, 46, 61, 76, 91, 106, 121, 136);
B 3(3, 18, 33, 48, 63, 78, 93, 108, 123, 138);
B 5(5, 20, 35, 50, 65, 80, 95, 110, 125, 140);

B 2(2, 17, 32, 47, 62, 77, 92, 107, 122, 137);
B 4(4, 19, 34, 49, 64, 79, 94, 109, 124, 139);
B 6(6, 21, 36, 51, 66, 81, 96, 111, 126, 127);

B 7(7, 22, 37, 52, 67, 82, 97, 112, 113, 128);
B 9(9, 24, 39, 54, 69, 84, 85, 100, 115, 130);
B11(11, 26, 41, 56, 57, 72, 87, 102, 117, 132);
B13(13, 28, 29, 44, 59, 74, 89, 104, 119, 134);

B 8(8, 23, 38, 53, 68, 83, 98, 99, 114, 129);
B10(10, 25, 40, 55, 70, 71, 86, 101, 116, 131);
B12(12, 27, 42, 43, 58, 73, 88, 103, 118, 133);
B14(14, 15, 30, 45, 60, 75, 90, 105, 120, 135).

Replication 3

B 1(1, 18, 34, 50, 66, 83, 98, 107, 123, 133);
B 3(3, 20, 36, 52, 68, 71, 86, 109, 125, 135);
B 5(5, 22, 38, 54, 70, 73, 88, 111, 113, 137);
B 7(7, 24, 40, 56, 58, 75, 90, 99, 115, 139);
B 9(9, 26, 42, 44, 60, 77, 92, 101, 117, 127);
B11(11, 28, 30, 46, 62, 79, 94, 103, 119, 129);
B13(13, 16, 32, 48, 64, 81, 96, 105, 121, 131);

B 2(2, 19, 35, 51, 67, 84, 85, 108, 124, 134);
B 4(4, 21, 37, 53, 69, 72, 87, 110, 126, 136);
B 6(6, 23, 39, 55, 57, 74, 89, 112, 114, 138);
B 8(8, 25, 41, 43, 59, 76, 91, 100, 116, 140);
B10(10, 27, 29, 45, 61, 78, 93, 102, 118, 128);
B12(12, 15, 31, 47, 63, 80, 95, 104, 120, 130);
B14(14, 17, 33, 49, 65, 82, 97, 106, 122, 132).

Replication 4

B 1(1, 20, 30, 49, 64, 84, 93, 109, 116, 129);
B 3(3, 22, 32, 51, 66, 72, 95, 111, 118, 131);
B 5(5, 24, 34, 53, 68, 74, 97, 99, 120, 133);
B 7(7, 26, 36, 55, 70, 76, 85, 101, 122, 135);
B 9(9, 28, 38, 43, 58, 78, 87, 103, 124, 137);
B11(11, 16, 40, 45, 60, 80, 89, 105, 126, 139);
B13(13, 18, 42, 47, 62, 82, 91, 107, 114, 127);

B 2(2, 21, 31, 50, 65, 71, 94, 110, 117, 130);
B 4(4, 23, 33, 52, 67, 73, 96, 112, 119, 132);
B 6(6, 25, 35, 54, 69, 75, 98, 100, 121, 134);
B 8(8, 27, 37, 56, 57, 77, 86, 102, 123, 136);
B10(10, 15, 39, 44, 59, 79, 88, 104, 125, 138);
B12(12, 17, 41, 46, 61, 81, 90, 106, 113, 140);
B14(14, 19, 29, 48, 63, 83, 92, 108, 115, 128).

Replication 5

B 1(1, 17, 38, 47, 63, 76, 95, 112, 114, 135);
B 3(3, 19, 40, 49, 65, 78, 97, 100, 116, 137);
B 5(5, 21, 42, 51, 67, 80, 85, 102, 118, 139);
B 7(7, 23, 30, 53, 69, 82, 87, 104, 120, 127);
B 9(9, 25, 32, 55, 57, 84, 89, 106, 122, 129);
B11(11, 27, 34, 43, 59, 72, 91, 108, 124, 131);
B13(13, 15, 36, 45, 61, 74, 93, 110, 126, 133);

B 2(2, 18, 39, 48, 64, 77, 96, 99, 115, 136);
B 4(4, 20, 41, 50, 66, 79, 98, 101, 117, 138);
B 6(6, 22, 29, 52, 68, 81, 86, 103, 119, 140);
B 8(8, 24, 31, 54, 70, 83, 88, 105, 121, 128);
B10(10, 26, 33, 56, 58, 71, 90, 107, 123, 130);
B12(12, 28, 35, 44, 60, 73, 92, 109, 125, 132);
B14(14, 16, 37, 46, 62, 75, 94, 111, 113, 134).

445. $v = 150, b = 30, r = 2, k = 10, AE = 0.9109, DE = 0.9635$ $\alpha(0,1,2)$

Replication 1

B 1(1, 16, 31, 46, 61, 76, 91, 106, 121, 136);
B 3(3, 18, 33, 48, 63, 78, 93, 108, 123, 138);
B 5(5, 20, 35, 50, 65, 80, 95, 110, 125, 140);
B 7(7, 22, 37, 52, 67, 82, 97, 112, 127, 142);
B 9(9, 24, 39, 54, 69, 84, 99, 114, 129, 144);
B11(11, 26, 41, 56, 71, 86, 101, 116, 131, 146);
B13(13, 28, 43, 58, 73, 88, 103, 118, 133, 148);
B15(15, 30, 45, 60, 75, 90, 105, 120, 135, 150).

B 2(2, 17, 32, 47, 62, 77, 92, 107, 122, 137);
B 4(4, 19, 34, 49, 64, 79, 94, 109, 124, 139);
B 6(6, 21, 36, 51, 66, 81, 96, 111, 126, 141);
B 8(8, 23, 38, 53, 68, 83, 98, 113, 128, 143);
B10(10, 25, 40, 55, 70, 85, 100, 115, 130, 145);
B12(12, 27, 42, 57, 72, 87, 102, 117, 132, 147);
B14(14, 29, 44, 59, 74, 89, 104, 119, 134, 149);

Replication 2

B 1(1, 19, 36, 52, 70, 88, 92, 114, 131, 142);
B 3(3, 21, 38, 54, 72, 90, 94, 116, 133, 144);
B 5(5, 23, 40, 56, 74, 77, 96, 118, 135, 146);
B 7(7, 25, 42, 58, 61, 79, 98, 120, 122, 148);
B 9(9, 27, 44, 60, 63, 81, 100, 107, 124, 150);
B11(11, 29, 31, 47, 65, 83, 102, 109, 126, 137);
B13(13, 16, 33, 49, 67, 85, 104, 111, 128, 139);
B15(15, 18, 35, 51, 69, 87, 91, 113, 130, 141).

B 2(2, 20, 37, 53, 71, 89, 93, 115, 132, 143);
B 4(4, 22, 39, 55, 73, 76, 95, 117, 134, 145);
B 6(6, 24, 41, 57, 75, 78, 97, 119, 121, 147);
B 8(8, 26, 43, 59, 62, 80, 99, 106, 123, 149);
B10(10, 28, 45, 46, 64, 82, 101, 108, 125, 136);
B12(12, 30, 32, 48, 66, 84, 103, 110, 127, 138);
B14(14, 17, 34, 50, 68, 86, 105, 112, 129, 140);

446. $v = 150, b = 45, r = 3, k = 10, AE = 0.9612, DE = 0.9821$ $\alpha(0,1)$

Replication 1

B1(1, 16, 31, 46, 61, 76, 91, 106, 121, 136);

B2(2, 17, 32, 47, 62, 77, 92, 107, 122, 137);

B3(3, 18, 33, 48, 63, 78, 93, 108, 123, 138);
B5(5, 20, 35, 50, 65, 80, 95, 110, 125, 140);
B7(7, 22, 37, 52, 67, 82, 97, 112, 127, 142);
B9(9, 24, 39, 54, 69, 84, 99, 114, 129, 144);
B11(11, 26, 41, 56, 71, 86, 101, 116, 131, 146);
B13(13, 28, 43, 58, 73, 88, 103, 118, 133, 148);
B15(15, 30, 45, 60, 75, 90, 105, 120, 135, 150).

Replication 2

B1(1, 27, 45, 58, 71, 83, 104, 109, 129, 137);
B3(3, 29, 32, 60, 73, 85, 91, 111, 131, 139);
B5(5, 16, 34, 47, 75, 87, 93, 113, 133, 141);
B7(7, 18, 36, 49, 62, 89, 95, 115, 135, 143);
B9(9, 20, 38, 51, 64, 76, 97, 117, 122, 145);
B11(11, 22, 40, 53, 66, 78, 99, 119, 124, 147);
B13(13, 24, 42, 55, 68, 80, 101, 106, 126, 149);
B15(15, 26, 44, 57, 70, 82, 103, 108, 128, 136).

Replication 3

B1(1, 22, 33, 50, 73, 77, 100, 117, 126, 150);
B3(3, 24, 35, 52, 75, 79, 102, 119, 128, 137);
B5(5, 26, 37, 54, 62, 81, 104, 106, 130, 139);
B7(7, 28, 39, 56, 64, 83, 91, 108, 132, 141);
B9(9, 30, 41, 58, 66, 85, 93, 110, 134, 143);
B11(11, 17, 43, 60, 68, 87, 95, 112, 121, 145);
B13(13, 19, 45, 47, 70, 89, 97, 114, 123, 147);
B15(15, 21, 32, 49, 72, 76, 99, 116, 125, 149).

447. $v = 150, b = 60, r = 4, k = 10, AE = 0.9714, DE = 0.9867 \quad \alpha(0,1,2)$

Replication 1

B 1(1, 16, 31, 46, 61, 76, 91, 106, 121, 136);
B 3(3, 18, 33, 48, 63, 78, 93, 108, 123, 138);
B 5(5, 20, 35, 50, 65, 80, 95, 110, 125, 140);
B 7(7, 22, 37, 52, 67, 82, 97, 112, 127, 142);
B 9(9, 24, 39, 54, 69, 84, 99, 114, 129, 144);
B11(11, 26, 41, 56, 71, 86, 101, 116, 131, 146);
B13(13, 28, 43, 58, 73, 88, 103, 118, 133, 148);
B15(15, 30, 45, 60, 75, 90, 105, 120, 135, 150).

Replication 2

B 1(1, 19, 36, 52, 70, 88, 92, 114, 131, 142);
B 3(3, 21, 38, 54, 72, 90, 94, 116, 133, 144);
B 5(5, 23, 40, 56, 74, 77, 96, 118, 135, 146);
B 7(7, 25, 42, 58, 61, 79, 98, 120, 122, 148);
B 9(9, 27, 44, 60, 63, 81, 100, 107, 124, 150);
B11(11, 29, 31, 47, 65, 83, 102, 109, 126, 137);
B13(13, 16, 33, 49, 67, 85, 104, 111, 128, 139);
B15(15, 18, 35, 51, 69, 87, 91, 113, 130, 141).

Replication 3

B 1(1, 30, 39, 48, 72, 77, 94, 119, 126, 140);
B 3(3, 17, 41, 50, 74, 79, 96, 106, 128, 142);
B 5(5, 19, 43, 52, 61, 81, 98, 108, 130, 144);

B4(4, 19, 34, 49, 64, 79, 94, 109, 124, 139);
B6(6, 21, 36, 51, 66, 81, 96, 111, 126, 141);
B8(8, 23, 38, 53, 68, 83, 98, 113, 128, 143);
B10(10, 25, 40, 55, 70, 85, 100, 115, 130, 145);
B12(12, 27, 42, 57, 72, 87, 102, 117, 132, 147);
B14(14, 29, 44, 59, 74, 89, 104, 119, 134, 149);

B2(2, 28, 31, 59, 72, 84, 105, 110, 130, 138);
B4(4, 30, 33, 46, 74, 86, 92, 112, 132, 140);
B6(6, 17, 35, 48, 61, 88, 94, 114, 134, 142);
B8(8, 19, 37, 50, 63, 90, 96, 116, 121, 144);
B10(10, 21, 39, 52, 65, 77, 98, 118, 123, 146);
B12(12, 23, 41, 54, 67, 79, 100, 120, 125, 148);
B14(14, 25, 43, 56, 69, 81, 102, 107, 127, 150);

B2(2, 23, 34, 51, 74, 78, 101, 118, 127, 136);
B4(4, 25, 36, 53, 61, 80, 103, 120, 129, 138);
B6(6, 27, 38, 55, 63, 82, 105, 107, 131, 140);
B8(8, 29, 40, 57, 65, 84, 92, 109, 133, 142);
B10(10, 16, 42, 59, 67, 86, 94, 111, 135, 144);
B12(12, 18, 44, 46, 69, 88, 96, 113, 122, 146);
B14(14, 20, 31, 48, 71, 90, 98, 115, 124, 148);

B 2(2, 17, 32, 47, 62, 77, 92, 107, 122, 137);
B 4(4, 19, 34, 49, 64, 79, 94, 109, 124, 139);
B 6(6, 21, 36, 51, 66, 81, 96, 111, 126, 141);
B 8(8, 23, 38, 53, 68, 83, 98, 113, 128, 143);
B10(10, 25, 40, 55, 70, 85, 100, 115, 130, 145);
B12(12, 27, 42, 57, 72, 87, 102, 117, 132, 147);
B14(14, 29, 44, 59, 74, 89, 104, 119, 134, 149);

B 2(2, 20, 37, 53, 71, 89, 93, 115, 132, 143);
B 4(4, 22, 39, 55, 73, 76, 95, 117, 134, 145);
B 6(6, 24, 41, 57, 75, 78, 97, 119, 121, 147);
B 8(8, 26, 43, 59, 62, 80, 99, 106, 123, 149);
B10(10, 28, 45, 46, 64, 82, 101, 108, 125, 136);
B12(12, 30, 32, 48, 66, 84, 103, 110, 127, 138);
B14(14, 17, 34, 50, 68, 86, 105, 112, 129, 140);

B 2(2, 16, 40, 49, 73, 78, 95, 120, 127, 141);
B 4(4, 18, 42, 51, 75, 80, 97, 107, 129, 143);
B 6(6, 20, 44, 53, 62, 82, 99, 109, 131, 145);

B 7(7, 21, 45, 54, 63, 83, 100, 110, 132, 146);
B 9(9, 23, 32, 56, 65, 85, 102, 112, 134, 148);
B11(11, 25, 34, 58, 67, 87, 104, 114, 121, 150);
B13(13, 27, 36, 60, 69, 89, 91, 116, 123, 137);
B15(15, 29, 38, 47, 71, 76, 93, 118, 125, 139).

B 8(8, 22, 31, 55, 64, 84, 101, 111, 133, 147);
B10(10, 24, 33, 57, 66, 86, 103, 113, 135, 149);
B12(12, 26, 35, 59, 68, 88, 105, 115, 122, 136);
B14(14, 28, 37, 46, 70, 90, 92, 117, 124, 138);

Replication 4

B 1(1, 21, 32, 55, 68, 89, 99, 116, 128, 138);
B 3(3, 23, 34, 57, 70, 76, 101, 118, 130, 140);
B 5(5, 25, 36, 59, 72, 78, 103, 120, 132, 142);
B 7(7, 27, 38, 46, 74, 80, 105, 107, 134, 144);
B 9(9, 29, 40, 48, 61, 82, 92, 109, 121, 146);
B11(11, 16, 42, 50, 63, 84, 94, 111, 123, 148);
B13(13, 18, 44, 52, 65, 86, 96, 113, 125, 150);
B15(15, 20, 31, 54, 67, 88, 98, 115, 127, 137).

B 2(2, 22, 33, 56, 69, 90, 100, 117, 129, 139);
B 4(4, 24, 35, 58, 71, 77, 102, 119, 131, 141);
B 6(6, 26, 37, 60, 73, 79, 104, 106, 133, 143);
B 8(8, 28, 39, 47, 75, 81, 91, 108, 135, 145);
B10(10, 30, 41, 49, 62, 83, 93, 110, 122, 147);
B12(12, 17, 43, 51, 64, 85, 95, 112, 124, 149);
B14(14, 19, 45, 53, 66, 87, 97, 114, 126, 136);

448. $v = 150, b = 75, r = 5, k = 10, AE = 0.9782, DE = 0.9897$

$\alpha(0,1,2)$

Replication 1

B 1(1, 16, 31, 46, 61, 76, 91, 106, 121, 136);
B 3(3, 18, 33, 48, 63, 78, 93, 108, 123, 138);
B 5(5, 20, 35, 50, 65, 80, 95, 110, 125, 140);
B 7(7, 22, 37, 52, 67, 82, 97, 112, 127, 142);
B 9(9, 24, 39, 54, 69, 84, 99, 114, 129, 144);
B11(11, 26, 41, 56, 71, 86, 101, 116, 131, 146);
B13(13, 28, 43, 58, 73, 88, 103, 118, 133, 148);
B15(15, 30, 45, 60, 75, 90, 105, 120, 135, 150).

B 2(2, 17, 32, 47, 62, 77, 92, 107, 122, 137);
B 4(4, 19, 34, 49, 64, 79, 94, 109, 124, 139);
B 6(6, 21, 36, 51, 66, 81, 96, 111, 126, 141);
B 8(8, 23, 38, 53, 68, 83, 98, 113, 128, 143);
B10(10, 25, 40, 55, 70, 85, 100, 115, 130, 145);
B12(12, 27, 42, 57, 72, 87, 102, 117, 132, 147);
B14(14, 29, 44, 59, 74, 89, 104, 119, 134, 149);

Replication 2

B 1(1, 17, 33, 49, 65, 81, 105, 113, 129, 145);
B 3(3, 19, 35, 51, 67, 83, 92, 115, 131, 147);
B 5(5, 21, 37, 53, 69, 85, 94, 117, 133, 149);
B 7(7, 23, 39, 55, 71, 87, 96, 119, 135, 136);
B 9(9, 25, 41, 57, 73, 89, 98, 106, 122, 138);
B11(11, 27, 43, 59, 75, 76, 100, 108, 124, 140);
B13(13, 29, 45, 46, 62, 78, 102, 110, 126, 142);
B15(15, 16, 32, 48, 64, 80, 104, 112, 128, 144).

B 2(2, 18, 34, 50, 66, 82, 91, 114, 130, 146);
B 4(4, 20, 36, 52, 68, 84, 93, 116, 132, 148);
B 6(6, 22, 38, 54, 70, 86, 95, 118, 134, 150);
B 8(8, 24, 40, 56, 72, 88, 97, 120, 121, 137);
B10(10, 26, 42, 58, 74, 90, 99, 107, 123, 139);
B12(12, 28, 44, 60, 61, 77, 101, 109, 125, 141);
B14(14, 30, 31, 47, 63, 79, 103, 111, 127, 143);

Replication 3

B 1(1, 19, 36, 53, 70, 88, 92, 114, 131, 142);
B 3(3, 21, 38, 55, 72, 90, 94, 116, 133, 144);
B 5(5, 23, 40, 57, 74, 77, 96, 118, 135, 146);
B 7(7, 25, 42, 59, 61, 79, 98, 120, 122, 148);
B 9(9, 27, 44, 46, 63, 81, 100, 107, 124, 150);
B11(11, 29, 31, 48, 65, 83, 102, 109, 126, 137);
B13(13, 16, 33, 50, 67, 85, 104, 111, 128, 139);
B15(15, 18, 35, 52, 69, 87, 91, 113, 130, 141).

B 2(2, 20, 37, 54, 71, 89, 93, 115, 132, 143);
B 4(4, 22, 39, 56, 73, 76, 95, 117, 134, 145);
B 6(6, 24, 41, 58, 75, 78, 97, 119, 121, 147);
B 8(8, 26, 43, 60, 62, 80, 99, 106, 123, 149);
B10(10, 28, 45, 47, 64, 82, 101, 108, 125, 136);
B12(12, 30, 32, 49, 66, 84, 103, 110, 127, 138);
B14(14, 17, 34, 51, 68, 86, 105, 112, 129, 140);

Replication 4

B 1(1, 30, 39, 48, 72, 77, 94, 119, 126, 140);
B 3(3, 17, 41, 50, 74, 79, 96, 106, 128, 142);
B 5(5, 19, 43, 52, 61, 81, 98, 108, 130, 144);

B 2(2, 16, 40, 49, 73, 78, 95, 120, 127, 141);
B 4(4, 18, 42, 51, 75, 80, 97, 107, 129, 143);
B 6(6, 20, 44, 53, 62, 82, 99, 109, 131, 145);

B 7(7, 21, 45, 54, 63, 83, 100, 110, 132, 146);
B 9(9, 23, 32, 56, 65, 85, 102, 112, 134, 148);
B11(11, 25, 34, 58, 67, 87, 104, 114, 121, 150);
B13(13, 27, 36, 60, 69, 89, 91, 116, 123, 137);
B15(15, 29, 38, 47, 71, 76, 93, 118, 125, 139).

B 8(8, 22, 31, 55, 64, 84, 101, 111, 133, 147);
B10(10, 24, 33, 57, 66, 86, 103, 113, 135, 149);
B12(12, 26, 35, 59, 68, 88, 105, 115, 122, 136);
B14(14, 28, 37, 46, 70, 90, 92, 117, 124, 138);

Replication 5

B 1(1, 21, 32, 55, 68, 89, 99, 116, 128, 138);
B 3(3, 23, 34, 57, 70, 76, 101, 118, 130, 140);
B 5(5, 25, 36, 59, 72, 78, 103, 120, 132, 142);
B 7(7, 27, 38, 46, 74, 80, 105, 107, 134, 144);
B 9(9, 29, 40, 48, 61, 82, 92, 109, 121, 146);
B11(11, 16, 42, 50, 63, 84, 94, 111, 123, 148);
B13(13, 18, 44, 52, 65, 86, 96, 113, 125, 150);
B15(15, 20, 31, 54, 67, 88, 98, 115, 127, 137).

B 2(2, 22, 33, 56, 69, 90, 100, 117, 129, 139);
B 4(4, 24, 35, 58, 71, 77, 102, 119, 131, 141);
B 6(6, 26, 37, 60, 73, 79, 104, 106, 133, 143);
B 8(8, 28, 39, 47, 75, 81, 91, 108, 135, 145);
B10(10, 30, 41, 49, 62, 83, 93, 110, 122, 147);
B12(12, 17, 43, 51, 64, 85, 95, 112, 124, 149);
B14(14, 19, 45, 53, 66, 87, 97, 114, 126, 136);

Table 4: The list of resolvable designs available in literature that are less Efficient than the corresponding α -designs

S.No.	S.No. of the Corresponding α -design	ν	b	r	k	A-Efficiency	D-Efficiency	Remarks
1	64	12	15	5	4	0.9380	0.9690	S11
2	176	18	15	5	6	0.9475	0.9752	S38
3	288	24	15	5	8	0.9566	0.9801	S69
4	400	30	15	5	10	0.9633	0.9835	S114
5	7	9	12	4	3	0.8889	0.9428	LS8
6	67	16	16	4	4	0.8929	0.9473	LS30
7	127	25	20	4	5	0.9000	0.9524	LS54
8	187	36	24	4	6	0.9074	0.9571	LS76
9	247	49	28	4	7	0.9143	0.9610	LS89
10	367	81	36	4	9	0.9259	0.9673	LS126
11	427	100	40	4	10	0.9308	0.9698	LS140
12	307	64	32	4	8	0.9759	0.9883	α -Design
13	367	81	36	4	9	0.9782	0.9894	α -Design
14	375	99	44	4	9	0.9755	0.9882	α -Design
15	322	96	36	3	8	0.9537	0.9785	α -Design
16	323	96	48	4	8	0.9717	0.9864	α -Design
17	270	91	39	3	7	0.9450	0.9743	α -Design
18	271	91	52	4	7	0.9656	0.9835	α -Design
19	276	98	56	4	7	0.9643	0.9829	α -Design
20	221	90	30	2	6	0.8510	0.9369	α -Design
21	222	90	45	3	6	0.9308	0.9676	α -Design
22	92	40	50	5	4	0.9593	0.9797	α -Design
23	91	40	40	4	4	0.9411	0.9707	α -Design
24	90	40	30	3	4	0.8996	0.9522	α -Design
25	89	40	20	2	4	0.7663	0.9008	α -Design
26	79	28	28	4	4	0.9551	0.9775	α -Design
27	78	28	21	3	4	0.9193	0.9608	α -Design
28	77	28	14	2	4	0.8039	0.9146	α -Design
29	84	32	40	5	4	0.9660	0.9830	α -Design
30	82	32	24	3	4	0.9091	0.9565	α -Design
31	88	36	45	5	4	0.9631	0.9814	α -Design
32	87	36	36	4	4	0.9455	0.9727	α -Design
33	86	36	27	3	4	0.9070	0.9551	α -Design
34	85	36	18	2	4	0.7499	0.9000	α -Design
35	95	44	44	4	4	0.9389	0.9695	α -Design
36	94	44	33	3	4	0.8943	0.9499	α -Design
37	93	44	22	2	4	0.7010	0.8890	α -Design
38	100	48	60	5	4	0.9550	0.9774	α -Design
39	99	48	48	4	4	0.9363	0.9683	α -Design
40	98	48	36	3	4	0.8893	0.9480	α -Design
41	97	48	24	2	4	0.6784	0.8844	α -Design
42	102	52	39	3	4	0.8910	0.9482	α -Design
43	101	52	26	2	4	0.7394	0.8922	α -Design

S.No.	S.No. of the Corresponding α -Design	ν	b	r	k	A- Efficiency	D- Efficiency	Remarks
44	108	56	70	5	4	0.9512	0.9756	α -Design
45	107	56	56	4	4	0.9304	0.9658	α -Design
46	106	56	42	3	4	0.8857	0.9461	α -Design
47	112	60	75	5	4	0.9493	0.9748	α -Design
48	111	60	60	4	4	0.9277	0.9647	α -Design
49	110	60	45	3	4	0.8819	0.9447	α -Design
50	109	60	30	2	4	0.6178	0.8734	α -Design
51	36	30	50	5	3	0.9397	0.9692	α -Design
52	33	30	20	2	3	0.6050	0.8391	α -Design
53	28	24	40	5	3	0.9482	0.9736	α -Design
54	27	24	32	4	3	0.9260	0.9613	α -Design
55	32	27	45	5	3	0.9432	0.9710	α -Design
56	30	27	27	3	3	0.8586	0.9310	α -Design
57	40	33	55	5	3	0.9362	0.9672	α -Design
58	44	36	60	5	3	0.9297	0.9647	α -Design
59	42	36	36	3	3	0.8378	0.9219	α -Design
60	41	36	24	2	3	0.4894	0.8133	α -Design
61	48	39	65	5	3	0.9299	0.9644	α -Design
62	47	39	52	4	3	0.9007	0.9501	α -Design
63	46	39	39	3	3	0.8321	0.9196	α -Design
64	52	42	70	5	3	0.9290	0.9637	α -Design
65	51	42	56	4	3	0.8957	0.9481	α -Design
66	49	42	28	2	3	0.6023	0.8327	α -Design
67	56	45	75	5	3	0.9236	0.9615	α -Design
68	54	45	45	3	3	0.8273	0.9170	α -Design
69	53	45	30	2	3	0.5864	0.8290	α -Design

Table 5: List of PBIB(2) designs whose resolvable solutions are unknown although α -design with corresponding parameter exists

S.No.	v	b	r	k	Type	S. No. of the corresponding α -design
1	12	10	5	6	S28	172
2	18	10	5	9	S86	340
3	6	4	2	3	SR18	1
4	12	9	3	4	SR41	62
5	10	8	4	5	SR52	115 (2-reso)
6	20	16	4	5	SR58	123
7	12	8	4	6	SR66	171 (2-reso)
8	30	25	5	6	SR75	184
9	14	8	4	7	SR80	227
10	6	6	3	3	R42	2
11	12	20	5	3	R70	12
12	8	10	5	4	R97	60
13	12	12	4	4	R109	63
14	10	10	5	5	R139	116
15	15	20	4	3	T14	15(2-reso)
16	15	15	3	3	T16	14
17	21	35	5	3	T20	24
18	10	6	3	5	T44	114
19	15	6	2	5	T48	117
20	15	12	4	5	T49	119 (2-reso)
21	28	8	2	7	T72	233
22	28	16	4	7	T73	235 (2-reso)
23	45	10	2	9	T86	349
24	45	20	4	9	T87	351 (2-reso)
25	16	12	3	4	M16	66

Table 6: Catalogue of the more efficient designs than the corresponding α -designs

S.No. in Table 1	v	b	r	k	A-Efficiency	D-Efficiency	Remarks
7	9	12	4	3	1.0000	1.0000	BIBD, Square-Lattice
8	9	15	5	3	0.9846	0.9926	R59
10	12	12	3	3	0.9351	0.9663	Rect.-Lattice
11	12	16	4	3	0.9758	0.9868	SR26
66	16	12	3	4	0.9615	0.9801	Square-Lattice, LS29, LS36
67	16	16	4	4	0.9868	0.9930	Square-Lattice, SR44
68	16	20	5	4	1.0000	1.0000	BIBD, Square-Lattice
130	30	18	3	5	0.9492	0.9749	Rect.-Lattice
170	12	6	3	6	0.9680	0.9848	S27
175	18	12	4	6	0.9797	0.9898	S37
186	36	18	3	6	0.9608	0.9806	Square-Lattice, LS75
250	56	24	3	7	0.9577	0.9797	Rect.-Lattice
282	16	6	3	8	0.9740	0.9880	S61
284	16	10	5	8	0.9890	0.9946	M31a
292	32	20	5	8	0.9877	0.9938	S74
306	64	24	3	8	0.9643	0.9828	Square-Lattice, LS103
307	64	32	4	8	0.9798	0.9900	Square-Lattice, LS104
308	64	40	5	8	0.9878	0.9938	Square-Lattice, LS105
367	81	36	4	9	0.9804	0.9903	Square-Lattice, LS121
368	81	45	5	9	0.9877	0.9938	Square-Lattice, LS122
370	90	30	3	9	0.9637	0.9828	Rect.-Lattice
394	20	6	3	10	0.9783	0.9901	S106
426	100	30	3	10	0.9680	0.9848	LS138, Square-Lattice
427	100	40	4	10	0.9811	0.9907	LS139