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THE EFFECT OF TURNOVER RATE ON GROUP TASK TIME WHEN TASK TIME IS GOVERNED BY THE LEARNING CURVE

RESEARCH REPORT

Presented in Partial Fulfillment of the Requirements
For the Degree Master of Engineering, Industrial
Engineering Department of Texas A&M University

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ABSTRACT

A model is developed to analyze the effect of various percentage turnover per turnover period on group task time when task time is governed by the learning function.

A computer program is developed which generates tables showing the results of the analysis. Nineteen families of curves are presented which depict the contents of the tables.

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CHAPTER I

INTRODUCTION

In 1936, Dr. T. P. Wright introduced the concept of "learning" via a learning function which empirically described the cumulative average labor cost of producing an airplane as the total number of airplanes to be produced was increased. It is generally recognized by laymen that the time required to accomplish a task will diminish after each successive performance until a seemingly stable rate of performance is obtained. The manner in which the task time decreases as a function of the number of performances may be predicted with reasonable success by the learning curve. A rather simplistic but intrinsically sound definition of "learning" for the purposes of this paper could be expressed as follows: Learning occurs when on successive performances of a task the time to perform the task is diminished.

The usual application of the learning curve is by manufacturers who must determine a competitive price when bidding on a contract which specifies the number of items which are to be supplied. It may be readily seen that a vendor who bids on the basis of "first unit"

cost would grossly overprice his product. The learning function is also used on successive orders by the buyer to determine a reasonable price to pay the producer after the first costly units have been produced. Certainly, if little time has elapsed between placing a second order and the fulfillment of the previous contracted quantity, the cost for successive units should closely correspond to the cost of the last few units produced. Hence, a considerable savings to the buyer would be possible if he were aware of the "learning function" before negotiating a new contract. A producer might prefer to lose money or break even on the first batch of articles in anticipation of future orders when he would indeed be able to offer a much lower price than his competitors due to previous "learning."

The military commodity commands require maintainability specifications to be written into the request for proposal and contract for new equipments when applicable. Basically, these maintainability requirements are written in such a manner as to assure a certain mean repair time for the equipment or parts of the equipment. An attempt is usually made to describe the distribution of repair times by stating a maximum repair time or the standard deviation of the repair time. The

acceptability of the equipment must be illustrated by demonstrating the equipment repair time. Methods for determining acceptance or rejection based on the maintainability demonstration tests are contained in MIL STD 471. The tests are usually made under controlled conditions, supposedly duplicating those which will actually be encountered under normal maintenance conditions.

One of the fallacies in making this type of demonstration is that no allowance is made for the expected "learning" which will occur as the maintenance crews perform successive repairs on the equipment. Obviously, some notice of the learning function should be taken when specifying the maintainability requirements; otherwise, the specifications will tend to be overly restrictive and result in unnecessarily increased purchase cost of an equipment. Indiscriminate use of the normal learning function to predict the mean repair time should be avoided since factors such as turnover of maintenance personnel, time between successive performances of the task and design changes or retrofit actions must be considered.

This paper is devoted to an analysis of the effect of various turnover rates on the time required to perform a task by a group when the task time is governed by the

learning function. Some basic assumptions were made to facilitate the analysis and are as follows:

1. Turnover will occur only at the end of a turnover period.
2. An integer number of task repetitions will be accomplished in each time period.
3. The ratio of the crew size to the number of persons leaving the crew is an integer.

Assumption three was included only to facilitate the rapid achievement of a "steady state" average task time per time period.

In Chapter Three a computerized model will be developed to analyze the effect of turnover under the assumptions stated above. The method used to determine group task time when individual task times are known will be explained. A definition of all terms and a detailed analysis of the model will be presented. A computer program will be used to generate tables which will list values for the following:

a. Group task time to perform the ith repetition with zero turnover.
b. Group task time to perform the ith repetition with "P" percent turnover.
c. Cumulative average group task time to perform the ith repetition with zero turnover.

d. Cumulative average group task time to perform the ith repetition with "P" percent turnover.

e. Average group task time per turnover period with zero turnover.

f. Average group task time per turnover period with "P" percent turnover.

g. Ratio of group task time with "P" percent turnover to group task time with zero turnover for the ith repetition.

h. Ratio of group task time per turnover period with "P" percent turnover to group task time per turnover period with zero turnover.

Examples of the tables are included in Appendix A. A separate computer program which utilizes the IBM 360 computer and Calcomp Plotter to plot the tabled relationships is included in Appendix B along with nineteen plots.

A summary of the results of the models and recommended extensions of the analysis of this problem will be made in Chapters Four and Five.

A brief history of the development of the classical theory of learning is presented in Chapter Two. The basic "learning function" as originally presented in 1936 and later models will be stated. A brief discussion of the methodology used in applying the learning

function will be discussed.

CHAPTER II

CLASSICAL LEARNING CURVE THEORY

A brief overview of the history of learning theory is presented at this time to give the reader an insight into the development of the classical learning theory. Aristotle first stated the theory of association and his views are presented here as Tichener (5)* paraphrased them.

"Suppose, Aristotle says, that we are trying to recall something that has slipped our mind, what do we ordinarily do? We hunt through a number of things, beginning with something that is like what we want to recall, or contrary to it, or that was next to it in time, or adjacent to it in space."

Thus Aristotle foreshadowed the development of the four laws of association of ideas: similarity, contrast, succession in time and coexistence in space. These laws were later refined to form the basic argument of the "associationists."

The psychologists worked out logical forms to explain association. The concepts of motivation, pleasure and pain were introduced into the theory of learning by British psychologists.

*Numbers in parentheses refer to List of References.

Ebbinghaus began to try to quantity the effect of frequency of association on learning during the last quarter of the 19th century. His results were clear cut and showed that such as association existed. Ebbinghaus thus brought learning theory to its contemporary stage.

English (4) summed up the general "orthodox" position of psychologists on learning in the following statement.

"Mental life or behavior has its basis in experience. The environment affects us through our sense organs. The resulting neural impulse somehow leaves "traces" of its passage through the nervous system so that a recurrence of the same neural circuit is thereafter facilitated. Within limits, the more frequently this circuit is traversed, the greater the facilitation - and therefore the greater the learning. Learning is thus the getting and keeping intact of a unitary and unchanging response, or of a unitary bit of knowledge or an idea. Improvement is the selection of more suitable responses, or the elimination of parts of a complex response, but the basic fact is the fixation of unchangeable units."

English went on to say that no one advocates the view exactly as stated above; however, this is the essence of the views most psychologists held at the time.

T. P. Wright (7) in his famous article "Factors Affecting the Cost of Airplanes" introduced the classical learning curve as applied to the average cumulative labor cost of airplanes as the quantity of production increased. Wright began his studies of the variation in cost with quantity in 1922 which led to the publication of his article in 1936.

> In developing the curve which shows variation of labor cost with production quantity, it became evident that its form was of the type depicted by the formula $F = N^X$. This resolves into an expression for X as follows:
>
> $X = \frac{\text{Log } F}{\text{Log } N}$ Where F = a factor of cost variation proportional to the quantity N. The reciprocal of F represents a direct percent variation of cost vs. quantity. A curve may be plotted which shows directly the relationship between the two variables and when plotted on log-log paper, it becomes a straight line. In Fig. 3 [See Figure 2.1 in this paper] such a curve appears; there called the eighty percent curve which is represented by a value of .322 for the exponent X in the above formula. This eighty percent has a definite meaning in that it represents the factor by which the average labor cost in any quantity shall be multiplied in order to determine the average labor cost for a quantity of twice that number of airplanes.

Wright then presents examples of the theory as applied to the cost of an airplane per pound when producing increasing quantities.

Several authors after Wright have presented mathematical models to explain the stimulus-response learning theories developed by neurologists and

psychologists. However, the results of Wright's work modified to concern individual task times will be the primary consideration of this paper. Occasional references will be made to other mathematical models for enlightenment of the reader.

Wright stated some of the problems encountered with succeeding orders of the same plane which increased costs over those predicted by the learning function. Some of the factors mentioned are: design changes introduced between orders, the lapse of time which encourages forgetting, labor turnover between orders, and refurbishment of tools. The purpose of this paper is to quantify the effect of labor turnover on the average task time.

Wright's original equation is modified to the form shown in Equation 2.1 so that "x" represents the cumulative number of units produced, "N" is the slope of the curve and t(1) is the "value" factor for the first unit. The "value" factor might represent cost of the first unit, time required to perform the initial maintenance task, time required to build the first unit or any other "value" for which the learning function can be shown to be valid. Figure 2.1 shows a plot of the normalized learning function with the value of the ordinate being taken as one unit of cost per physical unit while the abscissa represents the cumulative number

of units produced. It should be noticed that the values of x are necessarily discrete; however, it is common practice to ignore this fact and to treat Equation 2.1 as a continuous function. In actual application the logarithmic form of Equation 2.1 is used and is shown in Equation 2.1.a.

$$t(x) = t(1)\ x^N \tag{2.1}$$

$$\log t(x) = \log t(1) + N \log x \tag{2.1.a}$$

Equation 2.1.a is shown plotted in Figure 2.1.a. From the plot it is obvious that N must be a negative number. The value of N may be determined as follows:

$$N = \frac{\log (t(2x)) - \log (t(x))}{\log (2x) - \log (x)} = \frac{\log \frac{t(2x)}{t(x)}}{\log \frac{2x}{x}}$$

$$= \frac{\log \frac{t(2x)}{t(x)}}{\log 2} \quad . \tag{2.2}$$

Wright showed that each time the quantity of "airplanes" doubled, the ratio of t(2x) to t(x) was a constant factor. Let us then call this factor the "experience factor - Q". Therefore, Equation 2.2 will appear as

$$N = \frac{\log Q}{\log 2} \quad , \tag{2.2.a}$$

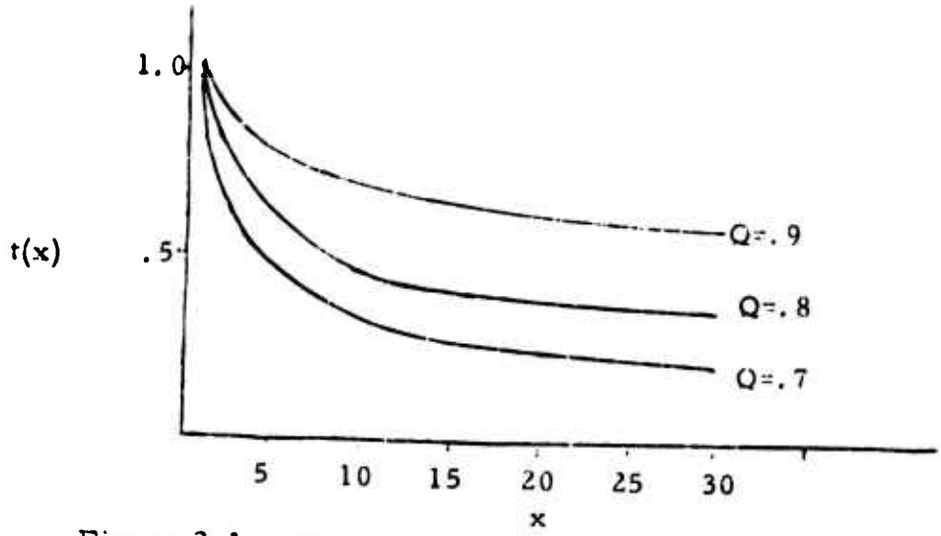

Figure 2.1 Classical learning curve for experience factors of .7, .8, and .9.

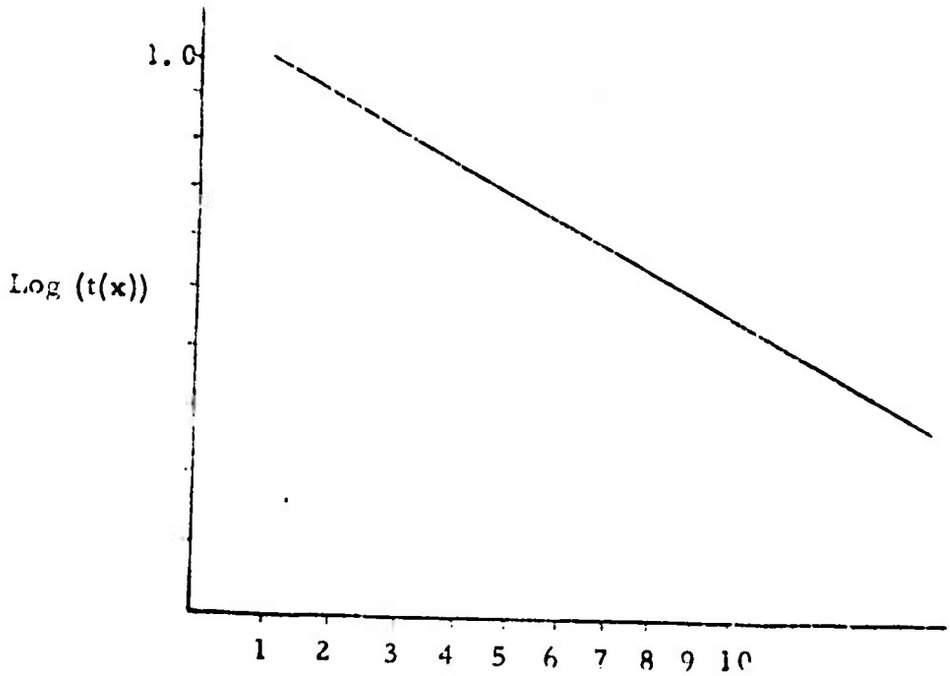

Figure 2.1.a Logarithmic plot of the classical learning curve for an experience factor of .9.

Thus, Equation 2.1 may be written as shown in Equation 2.3.

$$t(x) = t(1)\ x^{\frac{\log Q}{\log 2}} \qquad (2.3)$$

Armen Alchian (1) suggested and tested several alternate relationships between direct labor per pound of airframe cumulative production, time of production or rate of production. The results of the comparison of the predictive nature of these relationships to the classical learning curve indicated that the alternates would not generally be better fits. A list of the relationships is presented here.

L = direct labor per pound

T = time

P = production

ΔP = rate of production per month

a = constant where: $a > 0$

b = constant where: $-1 < b < 0$

$$\log L = a_1 + b_1 T \qquad (2.4.a)$$

$$\log L = a_2 + b_2 T + b_3\ (\Delta P) \qquad (2.4.b)$$

$$\log L = a_3 + b_4 \log T + b_5 \log (\Delta P) \qquad (2.4.c)$$

$$\log L = a_4 + b_6 T + b_7 \log (\Delta P) \qquad (2.4.d)$$

$$\log L = a_5 + b_8 T + b_9 \log (P) \qquad (2.4.e)$$

$$\log L = a_6 + b_{10} \log P + b_{11} \log (\Delta P) \qquad (2.4.f)$$

When past history of the parameters concerning the production of an item or the maintenance labor time per task or any other variable for which a model is desired is available, one may resort to regression analysis. Draper and Smith (3) present methods by which a regression analysis and test of hypothesis may be accomplished. This is a very powerful tool when properly used.

Dr. Wright used the learning curve as applied to the cumulative average hours per unit. Conway and Schultz (2) have considered the relationships between the curve based on the hours per piece and the curve as Dr. Wright originally proposed. Figure 2.2 shows the relationship when t(x) in Equation 2.3 is considered to be the hours per piece. Figure 2.3 depicts the relationship when t(x) in Equation 2.3 is considered to be the cumulative average hours per piece. Conway and Schultz then state that proponents of neither model have been able to establish the superiority of one model over the other either by logic or empirical evidence. Hence, it is largely a matter of choice as to which model is more computationly convenient as to which is used.

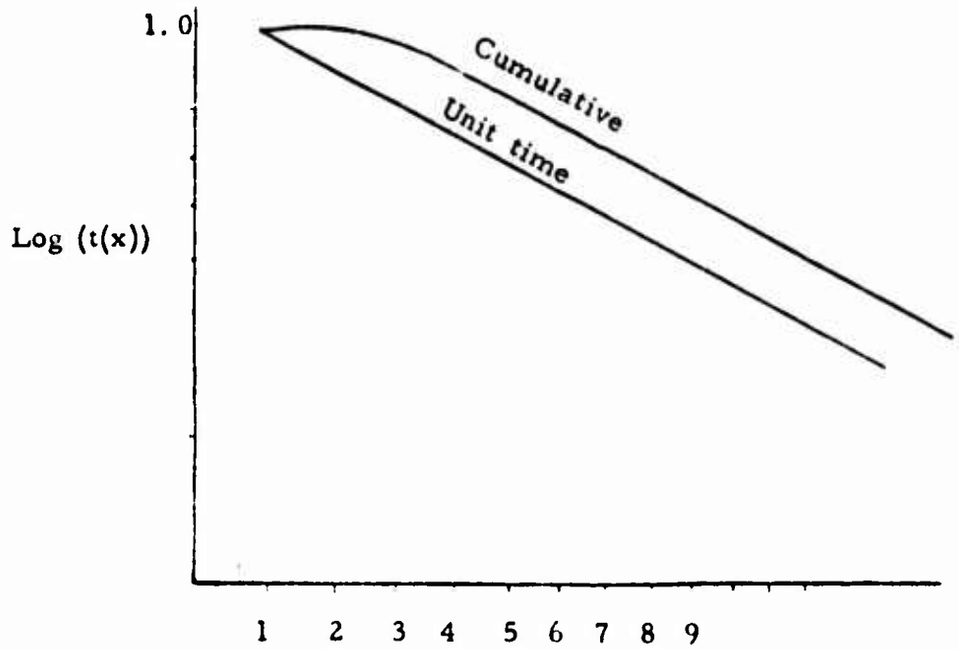

Figure 2.2 Learning curve when t(x) is the labor hours per piece.

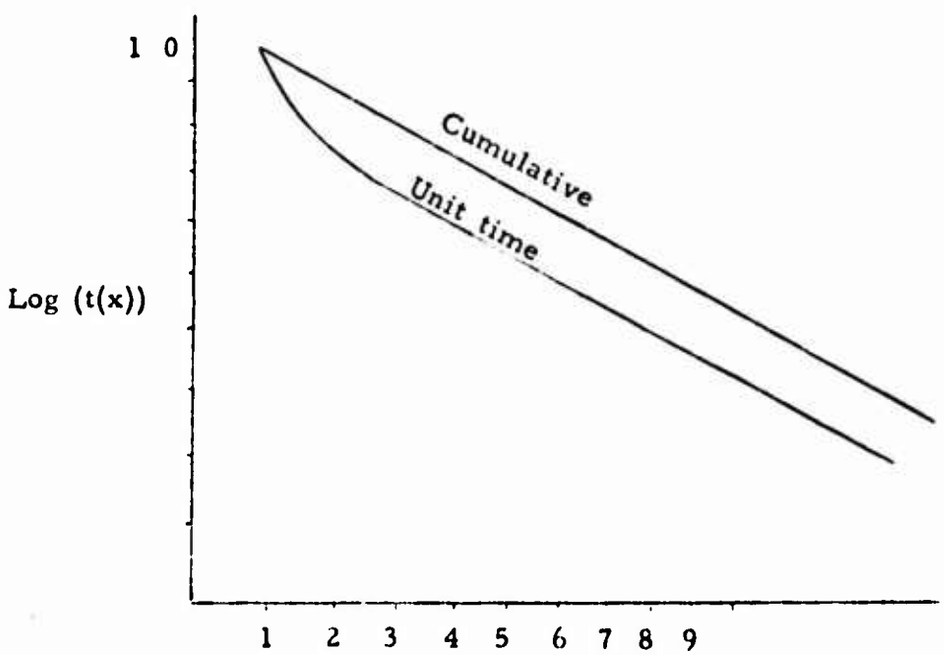

Figure 2.3 Learning curve when t(x) is the average labor hours per piece.

Wilson (6) has shown that the time required to perform a given maintenance task decreases as the number of times the task has been repeated increases and, logically, the average time also decreases. This fact is important and is used as a basis for the model to be developed in this paper. The curves presented for task time per task and cumulative average task time per task follow the same general form as those shown in Figure 2.2.

The computer model utilized to generate the tables shown in appendix A which describe the effect of turnover rate on group task time will be developed in the following chapter. Appendix B contains plots of the results of the computer model.

CHAPTER III

DEVELOPMENT OF A COMPUTER MODEL

1. Development of Point Convolution

"Point convolution" is a phrase which was coined by the author to describe the method of combining individual task times to form a composite group task time (convolution of task times) for a given repetition (point) of the repair task. A similar problem is encountered when one wishes to determine the expected time to complete a given task when each member of the work group has a different "work rate." For example: if workman A and workman B could complete a given task in 2 and 4 hours respectively when working alone, how long would it take workman A and workman B when working together to complete the task? The solution simply involves finding the reciprocal of the sum of the work rates of workman A and workman B.

T_A = Time required for workman A to perform the task

T_B = Time required for workman B to perform the task

$R_A = \frac{1}{T_A}$ = Work rate for workman A

$R_B = \frac{1}{T_B}$ = Work rate for workman B

R_T = Combined work rate of workman A and B

$R_T = R_A + R_B$

T_T = Time required for workman A and B to perform one task together

$T_T = \frac{1}{R_T}$

The concept may be extended to include any reasonable number of workmen.

$$R_T = R_A + R_B + R_C + \ldots + R_N \qquad (3.1)$$

$$T_T = \frac{1}{R_T}$$

Now that a method for convolving task times for a given absolute repetition has been developed, the terms to be used in the computer model will be defined.

2. Definition of Terms

The important terms which are used in the computer model are listed below in alphabetical order:

ATDAN - Ratio of average task time per time period with "PERCNT" percent turnover to average task time per time period with zero turnover.

ATTPN - Average task time per time period with zero turnover.

ATTTP - Average task time per time period with "PERCNT" percent turnover.

AVGT - Cumulative average task time per time period with "PERCNT" percent turnover.

AVGTN - Cumulative average task time per time period with zero turnover.

ETR - Expected number of repair tasks per crew in one time period.

F - The learning factor "N" as described in Equation 2.2

FAILR - The failure rate of the item being repaired.

IETR* - Integer value of ETR.

IRAT - Number of turnover periods before the "steady state" condition is reached.

M - Number of men leaving a crew at the end of a turnover period.

MM - Number of men comprising a crew at any given time.

NCRUS - Number of crews in the work force who repair the item under consideration.

NSYS - The number of systems or items in the population from which failures are drawn.

PERCNT - Equals 100 times M divided by MM and is the present turnover in one turnover period.

Q - The experience factor as described in Equation 2.2.a.

*Note: All names starting with I-N represent integer numbers.

R - The "work rate" for one member of the work crew.

T - Task time for the entire crew to complete one task repetition with turnover.

TI - Time required for the crew to perform the first task.

TIMP - The length of time comprising one time period (turnover period).

TDTN - The ratio of the time required to perform a task with "PERCNT" turnover to the time required to perform a task with zero turnover.

TN - The time required to perform a task when the turnover per time period is zero.

XCRUS - Floating point representation of NCRUS.

XETR - Floating point expected number of failures per time period.

XIR - Integer value of MM divided by M.

XM - Floating point representation of M.

XMM - Floating point representation of MM.

XNSYS - Floating point representation of NSYS.

XR - Floating point representation of R.

Indexing symbols and symbols for other temporary variables used in the computer program are not listed.

3. The Computer Model

The first objective in defining the model is to consider which parameters have a commonality between different situations so as to reduce the number of computations necessary to describe a range of different situations. Two factors can be readily determined from the classical learning function. Logically, separate tables will need to be generated for each value of the experience factor "Q" since this factor determines the slope of the curve. The tables may be normalized by setting the time required to perform the initial task, TI, equal to one. This is done so the time required to perform a given repetition may be determined from the tables simply by multiplying the tabled value by the actual time required to perform the initial task. The basis for specifying other parameters which exhibit commonality will be developed in the following paragraphs.

Just for the moment, consider the failures of the equipment or the item under consideration to follow the Poisson distribution. The failure rate of the exponential distribution is constant; hence, the number of items failing in an increment of time is directly proportional to the size of the time increment and the number of items in the population. The number of these

failures which a given crew would be required to repair is inversely proportional to the number of repair crews. The foregoing relationships are mathematically stated in Equation 3.2.

$$ETR = \frac{(NSYS)(FAILR)(TIMP)}{(NCRUS)} \qquad (3.2)$$

For the purposes of this paper, it shall be required that ETR be an integer value. Consideration of a non-integer value of ETR would require the development of a probabilistic model which would indubitably be much more difficult to evaluate and would also tend to conceal the essence of the results with its complexity. Hence, all members of a crew will be considered to complete any task which they begin; i.e., no substitutions and no absences will be allowed. It would seem that all cases with the same number of repetitions of the repair task during a given time period might exhibit some commonality. Note that the preceeding statement does not require the time period between turnovers, the failure rate, the number of items in the population or the number of crews to take on any particular value; but rather, allows each to take on a large range of values.

It seems reasonable to group situations according to the percent turnover at the end of each turnover period. The reason for doing this will be made clearer

as the model is developed.

Let $T^*(IX)$ represent the time required for one person in the crew to accomplish the entire IXth repair assuming this to be possible. For $1 \leq IX \leq IETR$:

$$R(IX) = \frac{MM}{T^*(IX)} \tag{3.3}$$

After the first turnover period, only MM-M of the original crew remain and M unexperienced repairmen are added to the crew. The time required for one repairman from the original group to perform the IXth repetition is $T^*(IX)$; however, this will be the first task repetition for each of the "M" new repairmen. The time required for a new repairman to perform the task will correspond to $T^*(IX-IETR)$. Therefore, for $IETR < IX \leq 2(IETR)$:

$$R(IX) = \frac{(MM-M)}{T^*(IX)} + \frac{M}{T^*(IX-IETR)} \quad . \tag{3.4}$$

And similarly it may be shown that for $2(IETR) < IX \leq 3(IETR)$:

$$R(IX) = \frac{(MM-2M)}{T^*(IX)} + \frac{M}{T^*(IX-IETR)} + \frac{M}{T^*(IX-2(IETR))}$$

$$\text{and } T(IX) = \frac{1}{R(IX)} \quad . \tag{3.5}$$

When MM is an exact multiple of M, it may be shown that for

$$\left[\frac{MM}{M} - 1\right] IETR < IX \leq \frac{MM}{M} (IETR):$$

$$R(IX) = \sum_{N=0}^{\frac{MM}{M}-1} \frac{M}{T^*(IX-(N)IETR)} , \qquad (3.6)$$

and for $\frac{MM}{M}(IETR) < IX \leq \left[\frac{MM}{M} + 1\right] IETR$:

$$R(IX) = \sum_{N=0}^{\frac{MM}{M}-1} \frac{M}{T^*(IX-(N)IETR)} \qquad (3.7)$$

and for every interval thereafter.

Therefore, our tables need only extend to repetition number $\frac{MM}{M}$ (IETR) since thereafter:

$$T^*\left[\left(\frac{MM}{M} (IETR)\right) + 1\right] = T^*\left[\left(\frac{MM}{M} - 1\right) (IETR) + 1\right], \qquad (3.8)$$

$$T^*\left[\left(\frac{MM+1}{M}\right) (IETR) + 1\right] = T^*\left[\left(\frac{MM}{M}\right) (IETR) + 1\right]$$

$$= T^*\left[\left(\frac{MM}{M} - 1\right)(IETR) + 1\right].$$

When MM is not an exact multiple of M, it can be shown that it is necessary to perform calculations for T(IX) only for IX less than or equal to the integer value of MM divided by M plus one times IETR, i. e.:

$$IX \leq (IETR)\left[1 + \text{INTEGER}\left(\frac{MM}{M}\right)\right].$$

Figure 3.1 illustrates the relationships presented above. Values in the body of the table represent the number of men from a group added during the time period indicated on the left of the table still remaining in the work group during the time period indicated at the top of the table.

Performing calculations for this many repetitions could be quite laborious if either $(\frac{MM}{M})$ or IETR is large. Fortunately the digital computer can rapidly perform the necessary calculations once a suitable program has been written.

4. The Computer Program

The computer program written to perform this analysis and a flow chart for the program are included in Appendix A along with some samples of the output which was generated. The reason for including a discussion of the computer program is simply to indicate how the necessary indexing was performed.

The following important indices are used in the computer program:

IX - The repetition number.

IT - The time period number.

IRAT - The number of time periods required for repetition of task times within successive time

MM=8, M=2

PA \ P	1	2	3	4	5
1	8	6	4	2	
2		2	2	2	2
3			2	2	2
				2	2
					2

Steady State Obtained

MM=8, M=3

PA \ P	1	2	3	4	5
1	8	5	2		
2		3	3	2	
3			3	3	2
				3	3
					3

Steady State Obtained

Note: The first entry in each row corresponds to the number added at the beginning of that turnover period. A number in the body of the table represents the number of men in the task force as a function of the period in which they were added (PAP) and the present period (P) for the MM and M shown.

Figure 3.1. Determination of turnover period during which the "steady state" task times are obtained.

periods to occur.

Equations 3.4 and 3.5 show how the portion of task time contributed by the original work force decreases until it makes no contribution in time period IRAT and thereafter. A special function "A" was devised to correspond to the work rate of the original work group.

"A" is given by:

$$A(IX) = \frac{1}{MM}\left[(MM-(IT)M)/(IX)\ EXP(F)\right]. \qquad (3.9)$$

The portion of the work rate contributed by the men added after the first period is represented by "B" where:

$$B(IX) = \frac{1}{MM} \sum_{N=1}^{IT} M/\left[(IX-(IT)(ETR))\ EXP(F)\right] \qquad (3.10)$$

Hence, the total work rate for any repetition before IRAT time periods is represented by:

$$R(IX) = \frac{1}{MM}\left[(MM-IT(M))/(IX)EXP(F) + \sum_{N=1}^{IT} (M/(IX-IT(ETR))EXP(F)\right] \qquad (3.11)$$

where $T(IX) = \frac{1}{R(IX)}$.

For time period number IRAT, the work rate is expressed by:

$$R(IX) = \frac{1}{MM} \sum_{N=1}^{IRAT-1} M/(IX - IT(ETR))\ EXP(F) \quad . \tag{3.12}$$

For every time period thereafter, the task time for the particular repetition is found by the relationship:

$$T(IX) = T(IX - IETR). \tag{3.13}$$

CHAPTER IV

RESULTS OF THE ANALYSIS

The input parameters required to generate a data set are the crew size, number of men in a turnover group, number of systems in the population, failure rate of the systems, length of time between turnovers, number of crews among which the failures are allocated, initial task time and the learning factor for the crew. In a case where only a limited number of repairs could be made during a turnover period, the parameters required to determine the number of repairs during a turnover period could be omitted. The parameters which could be omitted are the failure rate, the turnover period, number of crews and the number of systems in the population. The same parameters could be omitted in any situation where the number of task repetitions in a turnover period are known and equal for each turnover period.

Tables were generated for a crew size of 100 men with turnovers of 5, 10, 20, 25, 50 and 100 men per turnover period, a crew size of 50 men with turnovers of 1, 2, 5, 10, 25 and 50 men per turnover period, and a crew size of 10 men with turnovers of 1, 2, 5 and 10 men per turnover period for Q's of .80, .85, .90 and .95 with IETR's of 5, 10 and 15 repetitions during a turnover period. Examples of the above mentioned tables are included in Appendix A.

In every case where turnover occurred, the task time and average task time increased. Figure B1 (Appendix B) is a plot of the task time with various turnover percentages, a Q of .80 and 5 repetitions per turnover period. Notice that the task time during the first turnover period follows the normal learning curve regardless of the percent turnover. After the first turnover period, a discontinuous increase in the task time occurs at the beginning of each successive turnover period. The waveform for each percentage turnover has an exponentially decaying component until IRAT turnover periods have occurred. The task time then becomes a steady state waveform with a period of IETR repetitions. The type of plot shown in Figure B1 would be of use in determining the task time for any given repetition.

Perhaps a more useful bit of information would be

the determination of the cumulative average task time for various percent turnovers. Figures B2 through B4 depict the cumulative average task time for a given number of repetitions for a Q of .80 and IETR's of 5, 10 and 15. Observe that the curve corresponding to the zero percent turnover or normal learning function is the same regardless of the value of IETR as long as the experience factor is the same. For an IETR of 5 and a 20 percent turnover, the cumulative average task time after 200 repetitions is increased by 79 percent over that for the normal learning function. When IETR is changed to 10 and 15, the percent increase of the cumulative average task time is 48 and 34 percent respectively. When Q is increased to .95, the percent increase due to turnover for IETR's of 5, 10 and 15 is 16, 11 and 8 percent respectively. Figures B5 and B7 are plots of the cumulative average task time for a Q of .95 and IETR's of 5, 10 and 15. One may conclude from the above analysis that for a given Q as the number of repetitions in a given turnover period is increased, the cumulative average task time for a non zero percent turnover will be decreased. One may also conclude that the effect of turnover on task times governed by the learning function decreases as Q is increased.

Figure B1 depicts a very interesting relationship

when one is interested in obtaining a microscopic view of the task time; however, it may be desirable to determine the average task time during any given time period. Figure B8 through B13 are plots of the average task time per time period for Q's of .80 and .95 and IETR's of 5, 10 and 15 for various percent turnovers. The curves are discrete functions; however, they are depicted as being continuous. Values should only be used for an integer number for the period number. After IRAT turnover periods, the average task time per turnover period is constant. Observation of the plots immediately reveals that the average task time during any turnover period after the first increases as the percent turnover is increased.

Plots of the ratio of average task time per time period for different turnover rates to the average task time per time period with zero turnover are shown in Figures B14-B19 for various percent turnovers, Q's and IETR's. Analysis of the plots reveals the following information:

1. The ratio increases for a given Q, period number and percent turnover as IETR is increased.
2. The ratio is decreased by increasing Q for the same IETR, period number and percent turnover.

3. Increasing both Q and IETR for the same period number and turnover rate causes the ratio to decrease.

The figures in Appendix B are a good source to obtain approximate values of cumulative average task time for use in rough or first estimates. However, if contractual requirements are to be determined, tables such as those shown in Appendix A should be consulted.

Tables are included in Appendix A for 10, 20 and 50 percent turnover per turnover period for Q equal to 0.8, IETR equal to 5.0, and MM's of 10, 50 and 100. Also included is a table for 10, 20 and 50 percent turnover per turnover period for Q equal to 0.8, IETR equal to 10.0, and an MM of 100. A table for 10, 20 and 50 percent turnover per turnover period for Q equal to 0.95, IETR equal to 5.0, and an MM of 100 is also included. Before attempting to use the tables it would be wise to read the first page in Appendix A where the numbering system is explained.

In order to illustrate that the parameters Q, IETR and PERCNT are the only parameters necessary to determine a unique normalized table, tables A1, A2, and A3 may be compared point by point to tables A4, A5 and A6 respectively. Comparing tables A1, A2, A3 or A4, A5, A6 to tables A7, A8 and A9, respectively, leads one to

inductively conclude that a unique table is indeed generated for each set of values of Q, IETR and PERCNT. The foregoing may readily be seen from the mathematical model presented in Section 3 of this chapter. If any of the above tables are compared to tables A13, A14 and A15 where Q is equal to 0.95, it is found that the tabled entries are not identical.

The conclusions stated in the paragraph above are very important in that they allow the use of a table generated for a crew size of 10 with a turnover of 1 per turnover period to be used when the actual situation under consideration involves a crew size of 330 with a turnover of 33 per period (Q and IETR for each case are the same). This fact of course allows generalized tables to be generated and catalogued rather than having to generate a table for each set of parameters as they are encountered.

An example of the use of the tables will now be discussed. The following problem is presented:

The XYZ company operates a nationwide trucking firm for short distance hauling of heavy industrial products. Maintenance centers are located in strategic points about the nation, and are owned and operated by company ABC. Each maintenance crew is composed of ten men each with an experience factor of 0.8. The turnover rate is exactly two men every five major overhauls due to the

difficulty of the work. There will be approximately 100 major overhauls performed by each crew during one year. The ABC company wishes to determine what price to charge for the labor manhours so that it may make a good estimate of total costs before bidding on the contract. The labor cost for the first repetition was demonstrated to be $1000.

Solution 1: A direct application of the normal learning curve yields the following results (See Table A2).

The cumulative average task time after performing the 100th repetition is found by locating AVGTN(100).

AVGTN(100) = 0.32650.

Hence, the total labor cost for overhauling 100 trucks is estimated as follows:

TLC = 100(1000)(0.32650) = $32,650.

The cost of overhead is 20% of raw labor.

OVHD = 0.20(32,650) = $6,530.

The cost of parts is fixed and is $500 per truck.

PARTS = 100(500) = $50,000.

Hence the total cost of overhauling 100 trucks is:

TOTAL COST = TLC + OVHD + PARTS = $89,180.

Solution 2: The effect of turnover is to be taken into account in this solution. (See Table A2).

The cumulative average task time after performing

the 100th repetition when turnover is twenty percent per turnover period is found by locating AVGT(100) in the tables.

AVGT(100) = 0.48130.

TLC = 100(1000)(0.48130) = $48,130.

OVHD = 0.20(48,130) = $9,626.

PARTS = 100(500) = $50,000.

TOTAL COST = $107,756.

Analysis of solutions 1 and 2: The difference in the estimated labor costs alone amounts to $15,480. This amounts to a 47.4 percent increase in labor costs. Total costs are increased by $18,576. If company ABC had decided to charge fifteen percent over the total cost as the profit margin and had used the normal learning curve as the basis for calculating labor costs, they would have lost money on the contract.

The other columns in the tables could be used to schedule jobs in the shop, to determine the distribution of labor costs over the contract period, and to rapidly determine the average task time during a turnover period.

CHAPTER V

CONCLUSIONS AND EXTENSIONS

1. Conclusions

This analysis readily discloses the fact that considerable attention should be given to turnover rate, number of repetitions per turnover period and experience factor of the maintenance crews which are to perform maintenance on a given equipment or item before specifying the maintainability parameters. Indiscriminate use of the classical learning function could lead to gross underestimation of future task times when turnover is present.

This paper has presented the basis for a handbook of curves and tables based on three parameters:

1. Q - experience factor,
2. IETR - repetitions per turnover period, and
3. PERCNT - percent turnover per turnover period.

2. Extensions

The model just presented assumes that each man in the group has the same experience factor. A model could readily be developed which predicts the effect of turnover when each man in the group has a different

experience factor; however, calculations would have to be for each specific case since there are many possible combinations of parameters.

No consideration of the interaction between workers was considered in the foregoing model. After the initial turnover period, experienced men are available to give advice to the new workers thus possibly increasing the rate at which learning would occur. A model could be developed in which the work rate for the new men is proportionately increased for the first few repetitions.

An even more interesting model would be one in which not all members of the work group participated in the performance of each task. It seems that such an analysis would become quite difficult when turnover is also a factor to be considered.

List of References

1. Alchian, Armen, "Reliability of Progress Curves In Airframe Production," Econometrica, Vol. 31, No. 4, Oct. 1963, 1963, pp. 679-693.

2. Conway, R. W. and Andrew Shultz, Jr., "The Manufacturing Progress Function," The Journal of Industrial Engineering, Vol. X, No. 1, Jan. - Feb., 1959.

3. Draper, N. R. and H. Smith, Applied Regression Analysis, 1966, John Wiley and Sons, Inc., New York, N. Y.

4. English, Horace B., The Historical Roots of Learning Theory, 1954, Doubleday & Company, Inc., Garden City, N. Y.

5. Tichener, E. B., A Beginner's Psychology, Macmillan, New York, 1915, pp. 145, 146.

6. Wilson, Myron A., "The Learning Curve in Maintenance Analysis," 5th Reliability and Maintainability Conference, July 18-20, 1966, New York, N. Y.

7. Wright, T. P., "Factors Affecting the Cost of Airplanes," Journal of the Aeronautical Sciences, Vol. 3, Feb. 1936.

APPENDICES

APPENDIX A

This appendix contains the computer program used to generate tables showing the effects of turnover on group task time when task time is governed by the learning curve, a flow chart of the computer program and tables generated by the program.

The page numbers include the table numbers in this appendix. Page "A2.4" indicates that the page is in Appendix A, Table 2, and page 4 of Table 2. There are eight pages in each table in Appendix A.

```
C
C
C     ***********************************************************************
C     ***********************************************************************
C     ***********************************************************************
C
C
C
      DIMENSION II( 200),R( 200),AVGT( 200),ATTP( 200),
     CTN( 200),AVGTN( 200),ATTPN( 200),ATOAN( 200),TOTN( 200)
3     READ(5,5)   MM,M,NSYS,TIMP,NCRUS,FAILR,Q,TI
5     FORMAT (2I3,I6,F10.4,I3,3(E12.5))
      IF (MM-987) 10,1000,10
10    ALOG(2)/ALOG(2.0)
      XMM=MM
      XM=M
      XR=XMM/XM
      XIR=MM/M
      IF (XR-XIR) 11,15,11
11    WRITE(6,7)MM,M,NSYS,FAILR,TIMP,NCRUS,Q,TI
7     FORMAT (1H1,//,11X,'MM',5X,'M',5X,'NSYS',10X,'FAILR',9X,'TIMP',
     15X,'CREWS',14X,'Q',/,
     110X,I3,3X,I3,3X,I6,3X,E12.5,3X,F10.4,7X,I3,3X,E12.5,
     1//,20X,'TI',/,10X,F12.5)
      WRITE (6,501)
501   FORMAT (1H ,11X,'THE RATIO OF MM TO M IS NOT AN INTEGER.',/,11X,
     1'THE NEXT VALUES OF MM AND M WILL NOW BE CONSIDERED.')
      GO TO 3
15    XNSYS=NSYS
      XCRUS=NCRUS
      ETR=XNSYS*FAILR*TIMP/XCRUS
      XETR=ETR+.5
      IETR=XETR
      IF (IETR-1) 16,16,18
16    WRITE(6,7)MM,M,NSYS,FAILR,TIMP,NCRUS,Q,TI
```

```
      WRITE (6,17) ETR
17    FORMAT(1H0,11X,18HTHE VALUES OF THE ,19HINPUT PARAMETERS IN,
     118HDICATE THERE WILL ,/,11X,19HBE LESS THAN ONE RE,
     118HPAIR TASK PER CREW,18H DURING ONE TIME P,
     16HERIOD.,/,11X,'ETR=',F10.4)
      GO TO 3
18    INDEX= 200
      SUMM=0.0
      SUMMN=0.0
      DO 40 IX=1,INDEX
      B=0.0
      X=IX
      IF ((IX-1)/IETR-MM/M) 31,33,33
31    IT=(IX-1)/IETR
      W=IT
      A=(XMM-W*XM)/(X**F)
      IF(IT-1) 32,321,321
321   DO 322 N=1,IT
      W=N
      B=B+XM/((X-W*ETR)**F)
322   CONTINUE
32    R(IX)=A+B
      GO TO 35
33    J=IX-IETR
      R(IX)=R(J)
35    T(IX)=XMM/R(IX)
      SUMM=SUMM+T(IX)
      AVGT(IX)=SUMM/X
      TN(IX)=TI*X**F
      SUMMN=SUMMN+TN(IX)
      AVGTN(IX)=SUMMN/X
      TDTN(IX)=T(IX)/TN(IX)
40    CONTINUE
      IRAT=MM/M+1
      ICK=IRAT*IETR
      IF (ICK.LE.INDEX) GO TO 41
```

```
      IRAT=INDEX/IETR
41    DO 51 J=1,IRAT
      K=J*IETR
      L=J*IETR-IETR+1
      SUM=0.0
      SUMN=0.0
      DO 50 IX=L,K
      SUM=SUM+T(IX)
      SUMN=SUMN+TN(IX)
50    CONTINUE
      ATTTP(J)=SUM/ETR
      ATTPN(J)=SUMN/ETR
      ATDAN(J)=ATTTP(J)/ATTPN(J)
51    CONTINUE
      WRITE(6,6)MM,M,NSYS,FAILR,TIMP,NCRUS,Q,TI,ETR,IETR
6     FORMAT (1H1,//,11X,'MM',5X,'M',5X,'NSYS',10X,'FAILR',8X,'TIMP',
     11X,'CREWS',09X,'Q',/,
     110X,I3,3X,I3,3X,I6,3X,E12.5,3X, F9.4,3X,I3,3X, F7.5,
     1//,20X,'TI',12X,'ETR',3X,'IETR',/,10X,F12.5,3X,F12.5,4X,I3)          6C
      WRITE (6,127)
127   FORMAT (1HC,12X,'IX',10X,'R(IX)', 6X,'T(IX)',3X,'AVGT(IX)',5X,'J',
     13X,'ATTTP(J)')                                                      127A
      DO 133 IX=1,INDEX
      IF (IX-IRAT) 129,129,131
129   WRITE (6,130) IX,R(IX),T(IX),AVGT(IX),IX,ATTTP(IX)
130   FORMAT (1H ,11X,I3,3X,F12.5,3X, F8.5,3X, F8.5,3X,I3,3X, F8.5)
      GO TO 133
131   WRITE (6,132) IX,R(IX),T(IX),AVGT(IX)
132   FORMAT (1H ,11X,I3,3X,F12.5,3X, F8.5,3X, F8.5)
133   CONTINUE
      WRITE(6,6)MM,M,NSYS,FAILR,TIMP,NCRUS,Q,TI,ETR,IETR
      WRITE (6,147)
147   FORMAT (1HC,12X,'IX',5X,'TN(IX)',2X,'TOTN(IX)',2X,'AVGTN(IX)',
     13X,'ATTPN(J)',3X,'ATDAN(J)')                                        147A
      DO 153 IX=1,INDEX
      IF (IX-IRAT) 149,149,151
```

```
149    WRITE (6,150) IX,TN(IX),TDTN(IX),AVGTN(IX),ATTPN(IX),ATDAN(IX)
150    FORMAT (1H ,11X,I3,3X, F8.5,3X,F7.5,3X, F8.5,3X, F8.5,4X,F7.5)
       GO TO 153
151    WRITE (6,152) IX,TN(IX),TDTN(IX),AVGTN(IX)
152    FORMAT (1H ,11X,I3,3X, F8.5,3X,F7.5,3X, F8.5)
153    CONTINUE
       GO TO 3
1000   STOP
       END
C
C
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C
```

```
IE685  PHASE 1

                    I
                    .

                    IE685  PHASE 1

      DIMENSION T( 200),R( 200),AVGT( 200),ATTTP( 200),
      TN( 200),AVGTN( 200),ATTPN( 200),ATDAN( 200),TDTN( 200)

    ***READ(5,3)   MM,M,NSYS,TIMP,NCRUS,FAILR,Q,TI

      FORMAT (2I3,I6,F10.4,I3,3(E12.5))
                    I
                    I
                 . *   * .
              . *    IF     * .
            *    (MM-987)       *
         I * .                . * I
         I     * .        . *     I
         I          * . *         I
       - I          0 I         + I
      -------      -------     -------
      I            I 10001     I 10  I
                   -------     -------

                    I
      ----------------------------------------
      I F     =ALOG(Q)/ALOG(2.0)               I
      I XMM   =MM                              I
      I XM    =M                               I
      I XR    =XMM/XM                          I
      I XIR   =MM/M                            I
      ----------------------------------------
                    I
                    I
                    I
                 . *   * .
              . *    IF     * .
            *    (XR-XIR)       *
         I * .                . * I
         I     * .        . *     I
         I          * . *         I
       - I          0 I         + I
      -------      -------     -------
      I 11  I      I 15  I     I 11  I
      -------      -------     -------

1000  ***WRITE(6,7)MM,M,NSYS,FAILR,TIMP,NCRUS,Q,TI

      FORMAT (1H1,//,11X,'MM',5X,'M',5X,'NSYS',10X,'FAILR',9X,'TIMP',
      3X,'CREWS',14X,'Q',/,
      10X,I3,3X,I3,3X,I6,3X,E12.5,3X,F10.4,7X,I3,3X,E12.5,
      //,20X,'TI',/,10X,F12.5)

    ***WRITE (6,901)
                    I
```

(CONTINUED ON PAGE 2)

```
                 1000  PHASE 1

                        I
-----------------------------------------------------------------------

 100          FORMAT (1H ,11X,'THE RATIO OF MM TO M IS NOT AN INTEGER.',/,11X,
              'THE NEXT VALUES OF MM AND M WILL NOW BE CONSIDERED.')
                        I
                     -------
                     I 3   I
-----------------------------------------------------------------------

                        I
              ----------------------------------------
 5000         I XNSYS=NSYS                           I
              I XCRUS=NCRUS                          I
              I ETR  =XNSYS*FAILR*TIMP/XCRUS         I
              I XETR =ETR+.5                         I
              I IETR =XETR                           I
              ----------------------------------------
-----------------------------------------------------------------------
                        I
                        I
                        I
                   . *   * .
              . *    IF     * .
            *     (IETR-1)       *
-----------------------------------------------------------------------
          I * .                . * I
          I     * .        . *     I
          I          * . *         I
        - I          0 I         + I
        -------      -------     -------
        I 16  I      I 16  I     I 18  I
-----------------------------------------------------------------------
        -------      -------     -------

 6000       ****WRITE(6,7)MM,M,NSYS,FAILR,TIMP,NCRUS,Q,TI

            ****WRITE (6,7) ETR
-----------------------------------------------------------------------

 7000          FORMAT(1H0,11X,18HTHE VALUES OF THE ,19HINPUT PARAMETERS IN,
               1 3HDICATE THERE WILL ,/,11X,19HBE LESS THAN ONE RE,
               1 3HPAIR TASK PER CREW,18H DURING ONE TIME P,
               6HERIOD.,/,11X,'ETR=',F10.4)
                        I
-----------------------------------------------------------------------
                     -------
                     I 3   I
                     -------

-----------------------------------------------------------------------
                        I
              ----------------------------------------
 8000         I IDELA=200                            I
              I SUMM =0.0                            I
              I SUMMN=0.0                            I
              ----------------------------------------
                        I
```

(CONTINUED ON PAGE 3)

```
                    IEC65  PHASE 1

                          I
                          I
                   +-------------+
                   + DO          +
         +++++++++    40          +
         +         + IX=1,INDEX    +
                   +-------------+
         +                 I
         +                 I
         +        ----------------------------------------
         +        I F     =0.0                            I
         +        I X     =IX                             I
         +        ----------------------------------------
         +                 I
         +                 I
         +                 I
         +             . *   * .
         +         . *     IF     * .
         +       *((IX-1)/IETR-MM/M) *
         +     I * .                 . * I
         +     I     * .         . *     I
         +     I         * . *           I
         +  - I          0 I           + I
         + -------       -------       -------
         + I 31  I       I 33  I       I 33  I
         + -------       -------       -------
         +
         +                 I
         +        ----------------------------------------
1000     +        I II    =(IX-1)/IETR                    I
         +        I A     =IT                             I
         +        I A     =(XMM-W*XN)/(X**F)              I
         +        ----------------------------------------
         +                 I
         +                 I
         +                 I
         +             . *   * .
         +         . *     IF     * .
         +       *     (IT-1)        *
         +     I * .                 . * I
         +     I     * .         . *     I
         +     I         * . *           I
         +  - I          0 I           + I
         + -------       -------       -------
         + I 32  I       I 321 I       I 321 I
         + -------       -------       -------
         +
         +                 I
         +                 +-------------+
2100     +                 + DO          +
         +++++++++    322                 . +
         +         + .=1,II                +
         +                 +-------------+
         +                 I
         +                 I
         +        ----------------------------------------
         +        I W     =N                              I
```

```
                    IEBCD  PHASE 1
      +
      +                 I
      +        B=TMAX/((X-KMETR)**F)
      +
 2200 +        CONTINUE
      +                 I
      +        ----------------------------------------
 2000 +        I R(IX)=A+B                            I
      +        ----------------------------------------
      +                 I
      +                 I
      +              -------
      +              I 35  I
      +              -------
      +
      +
      +
      +                 I
      +        ----------------------------------------
 3000 +        I J     =IX-IETR                       I
      +        I R(IX)=R(J)                           I
      +        ----------------------------------------
      +                 I
      +        ----------------------------------------
 3000 +        I T(IX)=XMM/R(IX)                      I
      +        I SUMM =SUMM+T(IX)                     I
      +        I AVGT(IX) =SUMM/X                     I
      +        I TN(IX)  =TI*X**F                     I
      +        I SUMMN=SUMMN+TN(IX)                   I
      +        I AVGTN(IX) =SUMMN/X                   I
      +        I TOTN(IX) =T(IX)/TN(IX)               I
      +        ----------------------------------------
      +                 I
      +
      +        CONTINUE
      +                 I
      +        ----------------------------------------
      +        I IRAT =MM/M+1                         I
      +        I ICK  =IRAT*IETR                      I
      +        ----------------------------------------
      +                 I
      +                 I
      +                 I
      +            . *   * .
      +         . *    IF     * .
      +       * (ICK.LE.INDEX)     *
      +    I * .                 . * I
      +    :     * .         . *     I
      +    :          * . *          I
      +  - I          C I          + I
      + -------      -------      -------
      + I OUTPUT     I     I      I     I
      + -------      -------      -------
      +
      +                 I
      +        ----------------------------------------
      +        I IRAT =INDEX/IETR                     I
      +        ----------------------------------------
      +                 I
```

```
                 IFORM  PHASE 1
      +
      +                I
      +                I
      +          +-------------+
 1000 +          + DO          +
      +++++++++++    51          + 
      +          + J=1,IRAT    +
      +          +-------------+
      +                I
      +                I
      +        ----------------------------------------
      +        I K     =J*IETR                        I
      +        I L     =J*IETR-IETR+1                 I
      +        I SUM   =0.0                           I
      +        I SUMN  =0.0                           I
      +        ----------------------------------------
      +                I
      +                I
      +          +-------------+
      +          + DO          +
      +++++++++++    50          +
      +          + IX=L,K      +
      +          +-------------+
      +                I
      +                I
      +        ----------------------------------------
      +        I SUM   =SUM+T(IX)                     I
      +        I SUMN  =SUMN+TN(IX)                   I
      +        ----------------------------------------
      +                I
      +
      +        CONTINUE
      +                I
      +        ----------------------------------------
      +        I ATTTP(J) =SUM/ETR                    I
      +        I ATTPN(J) =SUMN/ETR                   I
      +        I ATDAN(J) =ATTTP(J)/ATTPN(J)          I
      +        ----------------------------------------
      +                I
      +
 1000 +        CONTINUE
      +
      +     ***WRITE(6,6)MM,M,NSYS,FAILR,TIMP,NCRUS,Q,TI,ETR,IETR
      +
      +        FORMAT (1H1,//,11X,'MM',5X,'M',5X,'NSYS',10X,'FAILR',9X,'TIMP',
      +        5X,'CREAS',14X,'Q',/,
      +        10X,I3,3X,I3,3X,I6,3X,E12.5,3X,F10.4,7X,I3,3X,F12.5,
      +        //,20X,'TI',12X,'ETR',3X,'IETR',/,10X,F12.5,3X,F12.5,4X,I3)
      +
      +     ***WRITE (6,127)
      +
 2700 +        FORMAT (1H0,12X,'IX',10X,'R(IX)',10X,'T(IX)',7X,'AVGT(IX)',5X,'J
      +        7X,'ATTTP(J)')
      +                I
```

(CONTINUED ON PAGE 6)

```
                IEC85  PHASE 1
+
+                    I
+                    I
+              +-------------+
+            + DO            +
++++++++++     133            +
+            + IX=1,INDEX    +
+              +-------------+
+                    I
+                    I
+                    I
+                . *   * .
+            . *    IF     * .
+          *    (IX-IRAT)      *
+       I * .                 . * I
+       I      * .        . *     I
+       I          * . *          I
+    - I           O I          + I
+   -------       -------      -------
+   I 129 I       I 129 I      I 131 I
+   -------       -------      -------
+
+
2900 +      ***WRITE (6,130) IX,R(IX),T(IX),AVGT(IX),IX,ATTTP(IX)
+
3000 +         FORMAT (1H ,11X,I3,3X,F12.5,3X,F12.5,3X,F12.5,3X,I3,3X,F12.5)
+                    I
+                 -------
+                 I 133 I
+                 -------
+
+
+
+
3100 +      ***WRITE (6,132) IX,R(IX),T(IX),AVGT(IX)
+
3200 +         FORMAT (1H ,11X,I3,3X,F12.5,3X,F12.5,3X,F12.5)
+
3300 +         CONTINUE
+
+      ***WRITE(6,6)MM,M,NSYS,FAILP,TIMP,NCRUS,Q,TI,ETR,IETR
+
+      ***WRITE (6,147)
+
4700 +         FORMAT (1H0,12X,'IX',9X,'TN(IX)',5X,'TDIN(IX)',6X,'AVGTN(IX)',
+         7X,'ATTPN(J)',3X,'ATDAN(J)')
+                    I
+              +-------------+
+            + DO            +
++++++++++     153            +
+            + IX=1,INDEX    +
+              +-------------+
+                    I
+                    I
```

(CONTINUED ON PAGE 7)

```
                    IEOOD  PHASE 1
+
+                        I
+                        I
+                        I
+                  . *   * .
+              . *     II     * .
+          *     (IX-IRAT)      *
+       I * .                 . * I
+       I      * .         . *     I
+       I          * . *           I
+    - I           0 I           + I
+   -------       -------       -------
+   I 149 I       I 149 I       I 151 I
+   -------       -------       -------
+
+
4900 +     ***WRITE (6,150) IX,TN(IX),TDTN(IX),AVGTN(IX),ATTPN(IX),ATDAN(IX)
+
5000 +        FORMAT (1H ,11X,I3,3X,F12.5,7X,F6.4,3X,F12.5,3X,F12.5,5X,F6.4)
+                        I
+                   -------
+                   I 153 I
+                   -------
+
+
+
+
5100 +     ***WRITE (6,152) IX,TN(IX),TDTN(IX),AVGTN(IX)
+
5200 +        FORMAT (1H ,11X,I3,3X,F12.5,7X,F6.4,3X,F12.5)
+
5300 +        CONTINUE
+                        I
+                   -------
+                   I 3   I
+                   -------
+
+
+
+
+        STOP
+
+
END
```

MM	M	NSYS	FAILR	TIMP	CREWS	Q
10	1	10000	0.50000E-03	10.0000	10	0.80000

TI	ETR	IETR
1.00000	5.00000	5

IX	R(IX)	T(IX)	AVGT(IX)	J	ATTTP(J)
1	10.00000	1.00000	1.00000	1	0.74755
2	12.50000	0.80000	0.90000	2	0.53146
3	14.24291	0.70210	0.83403	3	0.46451
4	15.62500	0.64000	0.78553	4	0.42891
5	16.78873	0.59564	0.74755	5	0.40694
6	17.02327	0.58743	0.72066	6	0.39254
7	18.08849	0.55284	0.69686	7	0.38295
8	19.00240	0.52625	0.67553	8	0.37673
9	19.81993	0.50454	0.65653	9	0.37304
10	20.56618	0.48624	0.63950	10	0.37136
11	20.09221	0.49771	0.62461	11	0.37136
12	20.92458	0.47791	0.61422		
13	21.64577	0.46198	0.60251		
14	22.30052	0.44842	0.59150		
15	22.90709	0.43655	0.58117		
16	22.03416	0.45384	0.57321		
17	22.77304	0.43912	0.56533		
18	23.41122	0.42715	0.55765		
19	23.99173	0.41681	0.55024		
20	24.53133	0.40764	0.54311		
21	23.37436	0.42782	0.53762		
22	24.05578	0.41553	0.53207		
23	24.66049	0.40551	0.52657		
24	25.20096	0.39681	0.52116		
25	25.70360	0.38905	0.51587		
26	24.32266	0.41114	0.51185		
27	24.98750	0.40020	0.50771		
28	25.55740	0.39128	0.50355		
29	26.07468	0.38351	0.49941		
30	26.55554	0.37657	0.49532		
31	24.98785	0.40019	0.49225		
32	25.63724	0.39006	0.48906		
33	26.19258	0.38179	0.48581		
34	26.69604	0.37459	0.48253		
35	27.16383	0.36814	0.47927		
36	25.43475	0.39316	0.47697		
37	26.07530	0.38350	0.47435		
38	26.62221	0.37563	0.47175		
39	27.11763	0.36876	0.46911		
40	27.57773	0.36261	0.46645		
41	25.70580	0.38902	0.46456		
42	26.34164	0.37963	0.46254		
43	26.88406	0.37197	0.46043		
44	27.37518	0.36529	0.45827		
45	27.83118	0.35931	0.45607		
46	25.83052	0.38714	0.45457		
47	26.46448	0.37786	0.45294		
48	27.00505	0.37030	0.45122		
49	27.49438	0.36371	0.44943		
50	27.94867	0.35780	0.44760		
51	25.83052	0.38714	0.44641		
52	26.46448	0.37786	0.44509		

53	27.00505	0.37030	0.44368
54	27.49438	0.36371	0.44220
55	27.94867	0.35780	0.44067
56	25.83052	0.38714	0.43971
57	26.46448	0.37786	0.43863
58	27.00505	0.37030	0.43745
59	27.49438	0.36371	0.43620
60	27.94867	0.35780	0.43489
61	25.83052	0.38714	0.43411
62	26.46448	0.37786	0.43320
63	27.00505	0.37030	0.43220
64	27.49438	0.36371	0.43113
65	27.94867	0.35780	0.43000
66	25.83052	0.38714	0.42935
67	26.46448	0.37786	0.42859
68	27.00505	0.37030	0.42773
69	27.49438	0.36371	0.42680
70	27.94867	0.35780	0.42581
71	25.83052	0.38714	0.42527
72	26.46448	0.37786	0.42461
73	27.00505	0.37030	0.42387
74	27.49438	0.36371	0.42305
75	27.94867	0.35780	0.42218
76	25.83052	0.38714	0.42172
77	26.46448	0.37786	0.42115
78	27.00505	0.37030	0.42050
79	27.49438	0.36371	0.41978
80	27.94867	0.35780	0.41901
81	25.83052	0.38714	0.41861
82	26.46448	0.37786	0.41812
83	27.00505	0.37030	0.41754
84	27.49438	0.36371	0.41690
85	27.94867	0.35780	0.41620
86	25.83052	0.38714	0.41587
87	26.46448	0.37786	0.41543
88	27.00505	0.37030	0.41492
89	27.49438	0.36371	0.41434
90	27.94867	0.35780	0.41371
91	25.83052	0.38714	0.41342
92	26.46448	0.37786	0.41303
93	27.00505	0.37030	0.41257
94	27.49438	0.36371	0.41205
95	27.94867	0.35780	0.41148
96	25.83052	0.38714	0.41123
97	26.46448	0.37786	0.41089
98	27.00505	0.37030	0.41047
99	27.49438	0.36371	0.41000
100	27.94867	0.35780	0.40948
101	25.83052	0.38714	0.40926
102	26.46448	0.37786	0.40895
103	27.00505	0.37030	0.40857
104	27.49438	0.36371	0.40814
105	27.94867	0.35780	0.40766
106	25.83052	0.38714	0.40747
107	26.46448	0.37786	0.40719
108	27.00505	0.37030	0.40685
109	27.49438	0.36371	0.40645
110	27.94867	0.35780	0.40601
111	25.83052	0.38714	0.40584
112	26.46448	0.37786	0.40559
113	27.00505	0.37030	0.40528

114	27.49438	0.36371	0.40491
115	27.[illegible]7	0.35780	0.40450
116	25.83052	0.38714	0.40435
117	26.46448	0.37786	0.40413
118	27.00505	0.37030	0.40384
119	27.49438	0.36371	0.40350
120	27.94867	0.35780	0.40312
121	25.83052	0.38714	0.40299
122	26.46448	0.37786	0.40279
123	27.00505	0.37030	0.40252
124	27.49438	0.36371	0.40221
125	27.94867	0.35780	0.40185
126	25.83052	0.38714	0.40174
127	26.46448	0.37786	0.40155
128	27.00505	0.37030	0.40130
129	27.49438	0.36371	0.40101
130	27.94867	0.35780	0.40068
131	25.83052	0.38714	0.40058
132	26.46448	0.37786	0.40040
133	27.00505	0.37030	0.40018
134	27.49438	0.36371	0.39991
135	27.94867	0.35780	0.39959
136	25.83052	0.38714	0.39950
137	26.46448	0.37786	0.39934
138	27.00505	0.37030	0.39913
139	27.49438	0.36371	0.39888
140	27.94867	0.35780	0.39859
141	25.83052	0.38714	0.39850
142	26.46448	0.37786	0.39836
143	27.00505	0.37030	0.39816
144	27.49438	0.36371	0.39792
145	27.94867	0.35780	0.39765
146	25.83052	0.38714	0.39757
147	26.46448	0.37786	0.39744
148	27.00505	0.37030	0.39726
149	27.49438	0.36371	0.39703
150	27.94867	0.35780	0.39677
151	25.83052	0.38714	0.39671
152	26.46448	0.37786	0.39658
153	27.00505	0.37030	0.39641
154	27.49438	0.36371	0.39620
155	27.94867	0.35780	0.39595
156	25.83052	0.38714	0.39589
157	26.46448	0.37786	0.39578
158	27.00505	0.37030	0.39562
159	27.49438	0.36371	0.39542
160	27.94867	0.35780	0.39518
161	25.83052	0.38714	0.39513
162	26.46448	0.37786	0.39503
163	27.00505	0.37030	0.39487
164	27.49438	0.36371	0.39468
165	27.94867	0.35780	0.39446
166	25.83052	0.38714	0.39442
167	26.46448	0.37786	0.39432
168	27.00505	0.37030	0.39417
169	27.49438	0.36371	0.39399
170	27.94867	0.35780	0.39378
171	25.83052	0.38714	0.39374
172	26.46448	0.37786	0.39365
173	27.00505	0.37030	0.39351
174	27.49438	0.36371	0.39334

175	27.94867	0.35780	0.39314
176	25.83052	0.38714	0.39311
177	26.46448	0.37786	0.39302
178	27.00505	0.37030	0.39289
179	27.49438	0.36371	0.39273
180	27.94867	0.35780	0.39253
181	25.83052	0.38714	0.39250
182	26.46448	0.37786	0.39242
183	27.00505	0.37030	0.39230
184	27.49438	0.36371	0.39215
185	27.94867	0.35780	0.39196
186	25.83052	0.38714	0.39194
187	26.46448	0.37786	0.39186
188	27.00505	0.37030	0.39175
189	27.49438	0.36371	0.39160
190	27.94867	0.35780	0.39142
191	25.83052	0.38714	0.39140
192	26.46448	0.37786	0.39133
193	27.00505	0.37030	0.39122
194	27.49438	0.36371	0.39108
195	27.94867	0.35780	0.39091
196	25.83052	0.38714	0.39089
197	26.46448	0.37786	0.39082
198	27.00505	0.37030	0.39072
199	27.49438	0.36371	0.39058
200	27.94867	0.35780	0.39042

MM	M	NSYS	FAILR	TIMP	CREWS	Q
10	1	10000	0.50000E-03	10.0000	10	0.80000

TI	ETR	IETR
1.00000	5.00000	5

IX	TN(IX)	TDTN(IX)	AVGTN(IX)	ATTPN(J)	ATDAN(J)
1	1.00000	1.00000	1.00000	0.74755	1.00000
2	0.80000	1.00000	0.90000	0.51553	1.03090
3	0.70210	1.00000	0.83403	0.43903	1.05803
4	0.64000	1.00000	0.78553	0.39488	1.08618
5	0.59564	1.00000	0.74755	0.36473	1.11574
6	0.56168	1.04584	0.71657	0.34226	1.14691
7	0.53449	1.03433	0.69056	0.32458	1.17985
8	0.51200	1.02783	0.66824	0.31014	1.21474
9	0.49295	1.02352	0.64876	0.29802	1.25175
10	0.47651	1.02041	0.63154	0.28764	1.29109
11	0.46211	1.07702	0.61613	0.27859	1.33298
12	0.44935	1.06356	0.60224		
13	0.43792	1.05496	0.58960		
14	0.42759	1.04871	0.57802		
15	0.41820	1.04387	0.56737		
16	0.40960	1.10801	0.55751		
17	0.40168	1.09319	0.54834		
18	0.39436	1.08314	0.53979		
19	0.38756	1.07549	0.53178		
20	0.38121	1.06934	0.52425		
21	0.37527	1.14004	0.51715		
22	0.36969	1.12399	0.51045		
23	0.36444	1.11270	0.50410		
24	0.35948	1.10385	0.49808		
25	0.35478	1.09658	0.49234		
26	0.35033	1.17357	0.48688		
27	0.34610	1.15631	0.48167		
28	0.34207	1.14384	0.47668		
29	0.33823	1.13388	0.47191		
30	0.33456	1.12557	0.46733		
31	0.33105	1.20888	0.46293		
32	0.32768	1.19036	0.45871		
33	0.32445	1.17672	0.45464		
34	0.32135	1.16568	0.45072		
35	0.31836	1.15634	0.44694		
36	0.31549	1.24621	0.44328		
37	0.31272	1.22636	0.43976		
38	0.31004	1.21152	0.43634		
39	0.30746	1.19938	0.43304		
40	0.30497	1.18902	0.42984		
41	0.30255	1.28579	0.42673		
42	0.30021	1.26452	0.42372		
43	0.29795	1.24843	0.42079		
44	0.29575	1.23514	0.41795		
45	0.29362	1.22372	0.41519		
46	0.29155	1.32787	0.41250		
47	0.28954	1.30506	0.40988		
48	0.28758	1.28764	0.40734		
49	0.28568	1.27314	0.40485		
50	0.28383	1.26062	0.40243		
51	0.28202	1.37272	0.40007		
52	0.28027	1.34824	0.39777		

53	0.27855	1.22937	0.39552
54	0.27655	1.31360	0.39432
55	0.27525	1.29990	0.39117
56	0.27366	1.41468	0.38907
57	0.27210	1.38866	0.38702
58	0.27058	1.36852	0.38501
59	0.26910	1.35158	0.38305
60	0.26765	1.33583	0.38113
61	0.26623	1.45417	0.37924
62	0.26484	1.42678	0.37740
63	0.26348	1.40544	0.37559
64	0.26214	1.38744	0.37382
65	0.26084	1.37172	0.37208
66	0.25956	1.49152	0.37037
67	0.25831	1.46285	0.36870
68	0.25708	1.44042	0.36706
69	0.25587	1.42145	0.36545
70	0.25469	1.40484	0.36386
71	0.25353	1.52700	0.36231
72	0.25239	1.49714	0.36078
73	0.25127	1.47371	0.35928
74	0.25017	1.45383	0.35781
75	0.24910	1.43639	0.35636
76	0.24804	1.56082	0.35493
77	0.24699	1.52586	0.35353
78	0.24597	1.50547	0.35215
79	0.24496	1.48476	0.35080
80	0.24397	1.46655	0.34946
81	0.24300	1.59317	0.34815
82	0.24204	1.56116	0.34685
83	0.24110	1.53589	0.34558
84	0.24017	1.51438	0.34432
85	0.23926	1.49545	0.34309
86	0.23836	1.62419	0.34187
87	0.23747	1.59119	0.34067
88	0.23660	1.56509	0.33949
89	0.23574	1.54283	0.33832
90	0.23490	1.52322	0.33717
91	0.23406	1.65401	0.33604
92	0.23324	1.62007	0.33492
93	0.23243	1.59318	0.33382
94	0.23163	1.57022	0.33273
95	0.23084	1.54997	0.33166
96	0.23007	1.68273	0.33060
97	0.22930	1.64791	0.32956
98	0.22854	1.62027	0.32853
99	0.22780	1.59664	0.32751
100	0.22706	1.57578	0.32650
101	0.22634	1.71046	0.32551
102	0.22562	1.67479	0.32453
103	0.22491	1.64643	0.32356
104	0.22421	1.62217	0.32261
105	0.22352	1.60072	0.32167
106	0.22284	1.73728	0.32073
107	0.22217	1.70080	0.31981
108	0.22151	1.67175	0.31890
109	0.22085	1.64687	0.31800
110	0.22020	1.62488	0.31711
111	0.21956	1.76325	0.31623
112	0.21893	1.72598	0.31537
113	0.21830	1.69628	0.31451

114	0.21768	1.67083	0.31366
115	0.21707	1.64830	0.31282
116	0.21647	1.78944	0.31199
117	0.21587	1.75042	0.31116
118	0.21528	1.72009	0.31035
119	0.21470	1.69407	0.30955
120	0.21412	1.67103	0.30875
121	0.21355	1.81290	0.30797
122	0.21298	1.77417	0.30719
123	0.21242	1.74323	0.30642
124	0.21187	1.71667	0.30565
125	0.21132	1.69314	0.30490
126	0.21078	1.83669	0.30415
127	0.21025	1.79726	0.30341
128	0.20972	1.76573	0.30268
129	0.20919	1.73866	0.30196
130	0.20867	1.71465	0.30124
131	0.20816	1.85984	0.30053
132	0.20765	1.81974	0.29982
133	0.20714	1.78765	0.29913
134	0.20665	1.76007	0.29844
135	0.20615	1.73561	0.29775
136	0.20566	1.88240	0.29708
137	0.20518	1.84165	0.29641
138	0.20470	1.80901	0.29574
139	0.20422	1.78095	0.29508
140	0.20375	1.75605	0.29443
141	0.20329	1.90441	0.29378
142	0.20232	1.86302	0.29314
143	0.20237	1.82986	0.29251
144	0.20191	1.80133	0.29188
145	0.20146	1.77600	0.29126
146	0.20102	1.92589	0.29064
147	0.20058	1.88389	0.29002
148	0.20014	1.85022	0.28942
149	0.19971	1.92123	0.28881
150	0.19928	1.79549	0.28822
151	0.19885	1.94689	0.28763
152	0.19843	1.90429	0.28704
153	0.19801	1.87012	0.28646
154	0.19759	1.84069	0.28588
155	0.19718	1.81455	0.28531
156	0.19678	1.96741	0.28474
157	0.19637	1.92423	0.28418
158	0.19597	1.88958	0.28362
159	0.19557	1.85972	0.28307
160	0.19518	1.83319	0.28252
161	0.19479	1.98749	0.28197
162	0.19440	1.94376	0.28143
163	0.19401	1.90862	0.28089
164	0.19363	1.87835	0.28036
165	0.19325	1.85144	0.27983
166	0.19288	2.00716	0.27931
167	0.19251	1.96287	0.27879
168	0.19214	1.92728	0.27827
169	0.19177	1.89660	0.27776
170	0.19141	1.86932	0.27725
171	0.19105	2.02643	0.27675
172	0.19069	1.98160	0.27625
173	0.19033	1.94556	0.27575
174	0.18998	1.91448	0.27526

175	0.18963	1.88634	0.27477
176	0.18928	2.04532	0.27426
177	0.18894	1.99996	0.27380
178	0.18859	1.96349	0.27332
179	0.18825	1.93202	0.27285
180	0.18792	1.90403	0.27238
181	0.18758	2.06384	0.27191
182	0.18725	2.01798	0.27144
183	0.18692	1.98108	0.27098
184	0.18659	1.94923	0.27052
185	0.18627	1.92090	0.27007
186	0.18594	2.08203	0.26961
187	0.18562	2.03566	0.26917
188	0.18530	1.99834	0.26872
189	0.18499	1.96613	0.26828
190	0.18467	1.93746	0.26784
191	0.18436	2.09988	0.26740
192	0.18405	2.05303	0.26696
193	0.18374	2.01530	0.26653
194	0.18344	1.98273	0.26611
195	0.18314	1.95373	0.26568
196	0.18283	2.11743	0.26526
197	0.18254	2.07009	0.26484
198	0.18224	2.03196	0.26442
199	0.18194	1.99904	0.26401
200	0.18165	1.96972	0.26359

MM	M	NSYS	FAILR	TIMP	CREWS	Q
10	2	10000	0.50000E-03	10.0000	10	0.80000

TI	ETR	IFTR
1.00000	5.00000	5

IX	R(IX)	T(IX)	AVGT(IX)	J	ATTTP(J)
1	10.00000	1.00000	1.00000	1	0.74755
2	12.50000	0.80000	0.90000	2	0.54850
3	14.24291	0.70210	0.83403	3	0.49328
4	15.62500	0.64000	0.78553	4	0.46955
5	16.78873	0.59564	0.74755	5	0.46046
6	16.24290	0.61565	0.72557	6	0.46046
7	17.46754	0.57249	0.70370		
8	18.47357	0.54131	0.68340		
9	19.35384	0.51669	0.66488		
10	20.14647	0.49636	0.64803		
11	18.54462	0.53924	0.63814		
12	19.59460	0.51034	0.62749		
13	20.45610	0.48885	0.61682		
14	21.21428	0.47138	0.60643		
15	21.90216	0.45658	0.59644		
16	19.65431	0.50879	0.59096		
17	20.65088	0.48424	0.58469		
18	21.46494	0.46588	0.57809		
19	22.18068	0.45084	0.57139		
20	22.83029	0.43801	0.56472		
21	20.10104	0.49749	0.56152		
22	21.08179	0.47434	0.55756		
23	21.88135	0.45701	0.55318		
24	22.58376	0.44280	0.54859		
25	23.22104	0.43064	0.54387		
26	20.10104	0.49749	0.54208		
27	21.08179	0.47434	0.53957		
28	21.88135	0.45701	0.53663		
29	22.58376	0.44280	0.53339		
30	23.22104	0.43064	0.52997		
31	20.10104	0.49749	0.52892		
32	21.08179	0.47434	0.52721		
33	21.88135	0.45701	0.52508		
34	22.58376	0.44280	0.52266		
35	23.22104	0.43064	0.52003		
36	20.10104	0.49749	0.51941		
37	21.08179	0.47434	0.51819		
38	21.88135	0.45701	0.51658		
39	22.58376	0.44280	0.51469		
40	23.22104	0.43064	0.51259		
41	20.10104	0.49749	0.51222		
42	21.08179	0.47434	0.51132		
43	21.88135	0.45701	0.51005		
44	22.58376	0.44280	0.50852		
45	23.22104	0.43064	0.50679		
46	20.10104	0.49749	0.50659		
47	21.08179	0.47434	0.50590		
48	21.88135	0.45701	0.50489		
49	22.58376	0.44280	0.50362		
50	23.22104	0.43064	0.50216		
51	20.10104	0.49749	0.50207		
52	21.08179	0.47434	0.50153		

53	21.88135	0.45701	0.50069
54	22.58376	0.44280	0.49962
55	23.22104	0.43064	0.49837
56	20.10104	0.49749	0.49835
57	21.08179	0.47434	0.49793
58	21.88135	0.45701	0.49722
59	22.58376	0.44280	0.49630
60	23.22104	0.43064	0.49521
61	20.10104	0.49749	0.49524
62	21.08179	0.47434	0.49491
63	21.88135	0.45701	0.49431
64	22.58376	0.44280	0.49350
65	23.22104	0.43064	0.49253
66	20.10104	0.49749	0.49261
67	21.08179	0.47434	0.49234
68	21.88135	0.45701	0.49182
69	22.58376	0.44280	0.49111
70	23.22104	0.43064	0.49024
71	20.10104	0.49749	0.49034
72	21.08179	0.47434	0.49012
73	21.88135	0.45701	0.48967
74	22.58376	0.44280	0.48903
75	23.22104	0.43064	0.48826
76	20.10104	0.49749	0.48838
77	21.08179	0.47434	0.48819
78	21.88135	0.45701	0.48779
79	22.58376	0.44280	0.48723
80	23.22104	0.43064	0.48652
81	20.10104	0.49749	0.48665
82	21.08179	0.47434	0.48650
83	21.88135	0.45701	0.48615
84	22.58376	0.44280	0.48563
85	23.22104	0.43064	0.48498
86	20.10104	0.49749	0.48513
87	21.08179	0.47434	0.48501
88	21.88135	0.45701	0.48469
89	22.58376	0.44280	0.48422
90	23.22104	0.43064	0.48362
91	20.10104	0.49749	0.48377
92	21.08179	0.47434	0.48367
93	21.88135	0.45701	0.48338
94	22.58376	0.44280	0.48295
95	23.22104	0.43064	0.48240
96	20.10104	0.49749	0.48256
97	21.08179	0.47434	0.48247
98	21.88135	0.45701	0.48221
99	22.58376	0.44280	0.48182
100	23.22104	0.43064	0.48130
101	20.10104	0.49749	0.48146
102	21.08179	0.47434	0.48139
103	21.88135	0.45701	0.48116
104	22.58376	0.44280	0.48079
105	23.22104	0.43064	0.48031
106	20.10104	0.49749	0.48047
107	21.08179	0.47434	0.48042
108	21.88135	0.45701	0.48020
109	22.58376	0.44280	0.47986
110	23.22104	0.43064	0.47941
111	20.10104	0.49749	0.47957
112	21.08179	0.47434	0.47952
113	21.88135	0.45701	0.47932

114	22.58376	0.44280	0.47900
115	[illegible]	0.43064	0.47858
116	20.10104	0.49749	0.47875
117	21.08179	0.47434	0.47871
118	21.88135	0.45701	0.47853
119	22.58376	0.44280	0.47822
120	23.22104	0.43064	0.47783
121	20.10104	0.49749	0.47799
122	21.08179	0.47434	0.47796
123	21.88135	0.45701	0.47779
124	22.58376	0.44280	0.47751
125	23.22104	0.43064	0.47713
126	20.10104	0.49749	0.47729
127	21.08179	0.47434	0.47727
128	21.88135	0.45701	0.47711
129	22.58376	0.44280	0.47685
130	23.22104	0.43064	0.47649
131	20.10104	0.49749	0.47665
132	21.08179	0.47434	0.47663
133	21.88135	0.45701	0.47649
134	22.58376	0.44280	0.47623
135	23.22104	0.43064	0.47590
136	20.10104	0.49749	0.47606
137	21.08179	0.47434	0.47604
138	21.88135	0.45701	0.47591
139	22.58376	0.44280	0.47567
140	23.22104	0.43064	0.47535
141	20.10104	0.49749	0.47550
142	21.08179	0.47434	0.47549
143	21.88135	0.45701	0.47536
144	22.58376	0.44280	0.47514
145	23.22104	0.43064	0.47483
146	20.10104	0.49749	0.47499
147	21.08179	0.47434	0.47498
148	21.88135	0.45701	0.47486
149	22.58376	0.44280	0.47465
150	23.22104	0.43064	0.47435
151	20.10104	0.49749	0.47451
152	21.08179	0.47434	0.47450
153	21.88135	0.45701	0.47439
154	22.58376	0.44280	0.47418
155	23.22104	0.43064	0.47390
156	20.10104	0.49749	0.47406
157	21.08179	0.47434	0.47406
158	21.88135	0.45701	0.47395
159	22.58376	0.44280	0.47375
160	23.22104	0.43064	0.47348
161	20.10104	0.49749	0.47363
162	21.08179	0.47434	0.47364
163	21.88135	0.45701	0.47353
164	22.58376	0.44280	0.47335
165	23.22104	0.43064	0.47309
166	20.10104	0.49749	0.47324
167	21.08179	0.47434	0.47324
168	21.88135	0.45701	0.47315
169	22.58376	0.44280	0.47297
170	23.22104	0.43064	0.47272
171	20.10104	0.49749	0.47286
172	21.08179	0.47434	0.47287
173	21.88135	0.45701	0.47278
174	22.58376	0.44280	0.47261

175	23.22104	0.43064	0.47237
176	20.10104	0.49749	0.47251
177	21.08179	0.47434	0.47252
178	21.88135	0.45701	0.47243
179	22.58376	0.44280	0.47227
180	23.22104	0.43064	0.47204
181	20.10104	0.49749	0.47218
182	21.08179	0.47434	0.47219
183	21.88135	0.45701	0.47210
184	22.58376	0.44280	0.47195
185	23.22104	0.43064	0.47172
186	20.10104	0.49749	0.47186
187	21.08179	0.47434	0.47187
188	21.88135	0.45701	0.47179
189	22.58376	0.44280	0.47164
190	23.22104	0.43064	0.47143
191	20.10104	0.49749	0.47156
192	21.08179	0.47434	0.47158
193	21.88135	0.45701	0.47150
194	22.58376	0.44280	0.47135
195	23.22104	0.43064	0.47114
196	20.10104	0.49749	0.47128
197	21.08179	0.47434	0.47129
198	21.88135	0.45701	0.47122
199	22.58376	0.44280	0.47108
200	23.22104	0.43064	0.47088

A9.5

MM	M	NSYS	FAILR	TIMP	CREWS	Q
10	2	10000	0.50000E-03	10.0000	10	0.80000

TI	ETR	IETR
1.00000	5.00000	5

IX	TN(IX)	TDTN(IX)	AVGTN(IX)	ATTPN(J)	ATDAN(J)
1	1.00000	1.00000	1.00000	0.74755	1.00000
2	0.80000	1.00000	0.90000	0.51553	1.06397
3	0.70210	1.00000	0.83403	0.43903	1.12356
4	0.64000	1.00000	0.78553	0.39488	1.18910
5	0.59564	1.00000	0.74755	0.36473	1.26245
6	0.56168	1.09609	0.71657	0.34226	1.34534
7	0.53449	1.07110	0.69056		
8	0.51200	1.05725	0.66824		
9	0.49295	1.04817	0.64876		
10	0.47651	1.04167	0.63154		
11	0.46211	1.16690	0.61613		
12	0.44935	1.13575	0.60224		
13	0.43792	1.11631	0.59960		
14	0.42759	1.10241	0.57802		
15	0.41820	1.09177	0.56737		
16	0.40960	1.24217	0.55751		
17	0.40168	1.20553	0.54834		
18	0.39436	1.18135	0.53979		
19	0.38756	1.16330	0.53178		
20	0.38121	1.14902	0.52425		
21	0.37527	1.32569	0.51715		
22	0.36969	1.28309	0.51045		
23	0.36444	1.25402	0.50410		
24	0.35948	1.23178	0.49808		
25	0.35478	1.21382	0.49234		
26	0.35033	1.42004	0.48688		
27	0.34610	1.37053	0.48167		
28	0.34207	1.33600	0.47668		
29	0.33823	1.30915	0.47191		
30	0.33456	1.28720	0.46733		
31	0.33105	1.50277	0.46293		
32	0.32768	1.44758	0.45871		
33	0.32445	1.40857	0.45464		
34	0.32135	1.37794	0.45072		
35	0.31836	1.35268	0.44694		
36	0.31549	1.57688	0.44328		
37	0.31272	1.51684	0.43976		
38	0.31004	1.47402	0.43634		
39	0.30746	1.44016	0.43304		
40	0.30497	1.41210	0.42984		
41	0.30255	1.64430	0.42673		
42	0.30021	1.58002	0.42372		
43	0.29795	1.53386	0.42079		
44	0.29575	1.49719	0.41795		
45	0.29362	1.46667	0.41519		
46	0.29155	1.70636	0.41250		
47	0.28954	1.63828	0.40988		
48	0.28758	1.58915	0.40734		
49	0.28568	1.54998	0.40485		
50	0.28383	1.51727	0.40243		
51	0.28202	1.76399	0.40007		
52	0.28027	1.69247	0.39777		

54	0.27[illegible]	1.59923	0.39332
55	0.27525	1.56455	0.39117
56	0.27356	1.81791	0.38907
57	0.27210	1.74324	0.38702
58	0.27058	1.68897	0.38501
59	0.26910	1.64547	0.38305
60	0.26765	1.60900	0.38113
61	0.26623	1.86865	0.37924
62	0.26484	1.79107	0.37740
63	0.26348	1.73454	0.37559
64	0.26214	1.68913	0.37382
65	0.26084	1.65099	0.37208
66	0.25956	1.91665	0.37037
67	0.25831	1.83636	0.36870
68	0.25708	1.77771	0.36706
69	0.25587	1.73054	0.36545
70	0.25469	1.69086	0.36386
71	0.25353	1.96224	0.36231
72	0.25239	1.87940	0.36078
73	0.25127	1.81879	0.35928
74	0.25017	1.76995	0.35781
75	0.24910	1.72883	0.35636
76	0.24804	2.00571	0.35493
77	0.24699	1.92047	0.35353
78	0.24597	1.85799	0.35215
79	0.24496	1.80760	0.35080
80	0.24397	1.76513	0.34946
81	0.24300	2.04727	0.34815
82	0.24204	1.95976	0.34685
83	0.24110	1.89553	0.34558
84	0.24017	1.84367	0.34432
85	0.23926	1.79992	0.34309
86	0.23836	2.08713	0.34187
87	0.23747	1.99746	0.34067
88	0.23660	1.93156	0.33949
89	0.23574	1.87831	0.33832
90	0.23490	1.83334	0.33717
91	0.23406	2.12545	0.33604
92	0.23324	2.03372	0.33492
93	0.23243	1.96624	0.33382
94	0.23163	1.91165	0.33273
95	0.23084	1.86553	0.33166
96	0.23007	2.16237	0.33060
97	0.22930	2.06866	0.32956
98	0.22854	1.99967	0.32853
99	0.22780	1.94381	0.32751
100	0.22706	1.89659	0.32650
101	0.22634	2.19800	0.32551
102	0.22562	2.10241	0.32453
103	0.22491	2.03196	0.32356
104	0.22421	1.97439	0.32261
105	0.22352	1.92662	0.32167
106	0.22284	2.23246	0.32073
107	0.22217	2.13505	0.31981
108	0.22151	2.06320	0.31890
109	0.22085	2.00497	0.31800
110	0.22020	1.95569	0.31711
111	0.21956	2.26583	0.31623
112	0.21893	2.16667	0.31537
113	0.21830	2.09348	0.31451

114	0.21708	2.03413	0.31366
115	0.21677	1.98388	0.31282
116	0.21647	2.29820	0.31199
117	0.21587	2.19735	0.31116
118	0.21526	2.12287	0.31035
119	0.21470	2.06243	0.30955
120	0.21412	2.01124	0.30875
121	0.21355	2.32964	0.30797
122	0.21298	2.22715	0.30719
123	0.21242	2.15142	0.30642
124	0.21187	2.08994	0.30565
125	0.21132	2.03785	0.30490
126	0.21078	2.36020	0.30415
127	0.21025	2.25614	0.30341
128	0.20972	2.17919	0.30268
129	0.20919	2.11671	0.30196
130	0.20867	2.06374	0.30124
131	0.20816	2.38996	0.30053
132	0.20765	2.28436	0.29982
133	0.20714	2.20624	0.29913
134	0.20665	2.14278	0.29844
135	0.20615	2.08897	0.29775
136	0.20566	2.41895	0.29708
137	0.20518	2.31187	0.29641
138	0.20470	2.23261	0.29574
139	0.20422	2.16820	0.29508
140	0.20375	2.11357	0.29443
141	0.20329	2.44723	0.29378
142	0.20282	2.33870	0.29314
143	0.20237	2.25834	0.29251
144	0.20191	2.19301	0.29188
145	0.20146	2.13758	0.29126
146	0.20102	2.47484	0.29064
147	0.20058	2.36490	0.29002
148	0.20014	2.28346	0.28942
149	0.19971	2.21724	0.28881
150	0.19928	2.16104	0.28822
151	0.19885	2.50181	0.28763
152	0.19843	2.39050	0.28704
153	0.19801	2.30802	0.28646
154	0.19759	2.24093	0.28588
155	0.19718	2.18397	0.28531
156	0.19678	2.52819	0.28474
157	0.19637	2.41554	0.28418
158	0.19597	2.33204	0.28362
159	0.19557	2.26410	0.28307
160	0.19518	2.20641	0.28252
161	0.19479	2.55400	0.28197
162	0.19440	2.44004	0.28143
163	0.19401	2.35554	0.28089
164	0.19363	2.28678	0.28036
165	0.19325	2.22837	0.27983
166	0.19288	2.57927	0.27931
167	0.19251	2.46404	0.27879
168	0.19214	2.37857	0.27827
169	0.19177	2.30899	0.27776
170	0.19141	2.24990	0.27725
171	0.19105	2.60403	0.27675
172	0.19069	2.48755	0.27625
173	0.19033	2.40113	0.27575
174	0.18998	2.33077	0.27526

175	0.18963	2.27099	0.27477
176	0.18928	2.62630	0.27428
177	0.18894	2.51060	0.27380
178	0.18859	2.42325	0.27332
179	0.18825	2.35212	0.27285
180	0.18792	2.29168	0.27238
181	0.18758	2.65211	0.27191
182	0.18725	2.53322	0.27144
183	0.18692	2.44496	0.27098
184	0.18659	2.37308	0.27052
185	0.18627	2.31198	0.27007
186	0.18594	2.67548	0.26961
187	0.18562	2.55542	0.26917
188	0.18530	2.46627	0.26872
189	0.18499	2.39365	0.26828
190	0.18467	2.33192	0.26784
191	0.18436	2.69842	0.26740
192	0.18405	2.57722	0.26696
193	0.18374	2.48720	0.26653
194	0.18344	2.41386	0.26611
195	0.18314	2.35150	0.26568
196	0.18283	2.72096	0.26526
197	0.18254	2.59864	0.26484
198	0.18224	2.50776	0.26442
199	0.18194	2.43371	0.26401
200	0.18165	2.37074	0.26359

MM	M	NSYS	FAILR	TIMP	CREWS	Q
10	5	10000	0.50000E-03	10.0000	10	0.80000

TI	ETR	IETR
1.00000	5.00000	5

IX	R(IX)	T(IX)	AVGT(IX)	J	ATTTP(J)
1	10.00000	1.00000	1.00000	1	0.74755
2	12.50000	0.80000	0.90000	2	0.60774
3	14.24291	0.70210	0.83403	3	0.60774
4	15.62500	0.64000	0.78553		
5	16.78873	0.59564	0.74755		
6	13.90182	0.71933	0.74284		
7	15.60472	0.64083	0.72827		
8	16.88707	0.59217	0.71126		
9	17.95552	0.55693	0.69411		
10	18.88731	0.52946	0.67765		
11	13.90182	0.71933	0.68144		
12	15.60472	0.64083	0.67805		
13	16.88707	0.59217	0.67145		
14	17.95552	0.55693	0.66327		
15	18.88731	0.52946	0.65434		
16	13.90182	0.71933	0.65841		
17	15.60472	0.64083	0.65737		
18	16.88707	0.59217	0.65375		
19	17.95552	0.55693	0.64865		
20	18.88731	0.52946	0.64269		
21	13.90182	0.71933	0.64634		
22	15.60472	0.64083	0.64609		
23	16.88707	0.59217	0.64375		
24	17.95552	0.55693	0.64013		
25	18.88731	0.52946	0.63570		
26	13.90182	0.71933	0.63892		
27	15.60472	0.64083	0.63899		
28	16.88707	0.59217	0.63732		
29	17.95552	0.55693	0.63455		
30	18.88731	0.52946	0.63104		
31	13.90182	0.71933	0.63389		
32	15.60472	0.64083	0.63411		
33	16.88707	0.59217	0.63284		
34	17.95552	0.55693	0.63060		
35	18.88731	0.52946	0.62771		
36	13.90182	0.71933	0.63026		
37	15.60472	0.64083	0.63054		
38	16.88707	0.59217	0.62953		
39	17.95552	0.55693	0.62767		
40	18.88731	0.52946	0.62522		
41	13.90182	0.71933	0.62751		
42	15.60472	0.64083	0.62783		
43	16.88707	0.59217	0.62700		
44	17.95552	0.55693	0.62541		
45	18.88731	0.52946	0.62328		
46	13.90182	0.71933	0.62536		
47	15.60472	0.64083	0.62569		
48	16.88707	0.59217	0.62499		
49	17.95552	0.55693	0.62360		
50	18.88731	0.52946	0.62172		
51	13.90182	0.71933	0.62364		
52	15.60472	0.64083	0.62397		

53	16.88707	0.59217	0.62337
54	17.95552	0.55693	0.62214
55	18.88731	0.52946	0.62045
56	13.90182	0.71933	0.62222
57	15.60472	0.64083	0.62254
58	16.88707	0.59217	0.62202
59	17.95552	0.55693	0.62092
60	18.88731	0.52946	0.61939
61	13.90182	0.71933	0.62103
62	15.60472	0.64083	0.62135
63	16.88707	0.59217	0.62089
64	17.95552	0.55693	0.61989
65	18.88731	0.52946	0.61849
66	13.90182	0.71933	0.62002
67	15.60472	0.64083	0.62033
68	16.88707	0.59217	0.61992
69	17.95552	0.55693	0.61901
70	18.88731	0.52946	0.61773
71	13.90182	0.71933	0.61916
72	15.60472	0.64083	0.61946
73	16.88707	0.59217	0.61908
74	17.95552	0.55693	0.61824
75	18.88731	0.52946	0.61706
76	13.90182	0.71933	0.61841
77	15.60472	0.64083	0.61870
78	16.88707	0.59217	0.61836
79	17.95552	0.55693	0.61758
80	18.88731	0.52946	0.61648
81	13.90182	0.71933	0.61775
82	15.60472	0.64083	0.61803
83	16.88707	0.59217	0.61772
84	17.95552	0.55693	0.61699
85	18.88731	0.52946	0.61596
86	13.90182	0.71933	0.61717
87	15.60472	0.64083	0.61744
88	16.88707	0.59217	0.61715
89	17.95552	0.55693	0.61647
90	18.88731	0.52946	0.61551
91	13.90182	0.71933	0.61665
92	15.60472	0.64083	0.61691
93	16.88707	0.59217	0.61664
94	17.95552	0.55693	0.61601
95	18.88731	0.52946	0.61510
96	13.90182	0.71933	0.61618
97	15.60472	0.64083	0.61644
98	16.88707	0.59217	0.61619
99	17.95552	0.55693	0.61559
100	18.88731	0.52946	0.61473
101	13.90182	0.71933	0.61577
102	15.60472	0.64083	0.61601
103	16.88707	0.59217	0.61578
104	17.95552	0.55693	0.61521
105	18.88731	0.52946	0.61440
106	13.90182	0.71933	0.61539
107	15.60472	0.64083	0.61563
108	16.88707	0.59217	0.61541
109	17.95552	0.55693	0.61487
110	18.88731	0.52946	0.61409
111	13.90182	0.71933	0.61504
112	15.60472	0.64083	0.61527
113	16.88707	0.59217	0.61507

114	17.95552	0.55693	0.61456
115	[illegible]	0.52946	0.61382
116	13.90182	0.71933	0.61473
117	15.60472	0.64083	0.61495
118	16.88707	0.59217	0.61476
119	17.95552	0.55693	0.61427
120	18.88731	0.52946	0.61357
121	13.90182	0.71933	0.61444
122	15.60472	0.64083	0.61466
123	16.88707	0.59217	0.61447
124	17.95552	0.55693	0.61401
125	18.88731	0.52946	0.61333
126	13.90182	0.71933	0.61417
127	15.60472	0.64083	0.61438
128	16.88707	0.59217	0.61421
129	17.95552	0.55693	0.61377
130	18.88731	0.52946	0.61312
131	13.90182	0.71933	0.61393
132	15.60472	0.64083	0.61413
133	16.88707	0.59217	0.61397
134	17.95552	0.55693	0.61354
135	18.88731	0.52946	0.61292
136	13.90182	0.71933	0.61370
137	15.60472	0.64083	0.61390
138	16.88707	0.59217	0.61374
139	17.95552	0.55693	0.61333
140	18.88731	0.52946	0.61273
141	13.90182	0.71933	0.61349
142	15.60472	0.64083	0.61368
143	16.88707	0.59217	0.61353
144	17.95552	0.55693	0.61314
145	18.88731	0.52946	0.61256
146	13.90182	0.71933	0.61329
147	15.60472	0.64083	0.61348
148	16.88707	0.59217	0.61334
149	17.95552	0.55693	0.61296
150	18.88731	0.52946	0.61240
151	13.90182	0.71933	0.61311
152	15.60472	0.64083	0.61329
153	16.88707	0.59217	0.61315
154	17.95552	0.55693	0.61279
155	18.88731	0.52946	0.61225
156	13.90182	0.71933	0.61294
157	15.60472	0.64083	0.61311
158	16.88707	0.59217	0.61298
159	17.95552	0.55693	0.61263
160	18.88731	0.52946	0.61211
161	13.90182	0.71933	0.61277
162	15.60472	0.64083	0.61295
163	16.88707	0.59217	0.61282
164	17.95552	0.55693	0.61248
165	18.88731	0.52946	0.61198
166	13.90182	0.71933	0.61262
167	15.60472	0.64083	0.61279
168	16.88707	0.59217	0.61267
169	17.95552	0.55693	0.61234
170	18.88731	0.52946	0.61185
171	13.90182	0.71933	0.61248
172	15.60472	0.64083	0.61264
173	16.88707	0.59217	0.61253
174	17.95552	0.55693	0.61221

175	18.88731	0.52946	0.61173
176	13.90182	0.71933	0.61235
177	15.60472	0.64083	0.61251
178	16.88707	0.59217	0.61239
179	17.95552	0.55693	0.61208
180	18.88731	0.52946	0.61162
181	13.90182	0.71933	0.61222
182	15.60472	0.64083	0.61238
183	16.88707	0.59217	0.61226
184	17.95552	0.55693	0.61196
185	18.88731	0.52946	0.61152
186	13.90182	0.71933	0.61210
187	15.60472	0.64083	0.61225
188	16.88707	0.59217	0.61214
189	17.95552	0.55693	0.61185
190	18.88731	0.52946	0.61142
191	13.90182	0.71933	0.61198
192	15.60472	0.64083	0.61213
193	16.88707	0.59217	0.61203
194	17.95552	0.55693	0.61175
195	18.88731	0.52946	0.61132
196	13.90182	0.71933	0.61188
197	15.60472	0.64083	0.61202
198	16.88707	0.59217	0.61192
199	17.95552	0.55693	0.61165
200	18.88731	0.52946	0.61123

MM	N	DAYS	FAILR	TIMP	CREWS	Q
10	5	10000	0.50000E-03	10.0000	10	0.80000

TI	FTR	IETR
1.00000	5.00000	5

IX	TN(IX)	TOTN(IX)	AVGTN(IX)	ATTPN(J)	ATDAN(J)
1	1.00000	1.00000	1.00000	0.74755	1.00000
2	0.90000	1.00000	0.90000	0.51553	1.17888
3	0.70210	1.00000	0.83403	0.43903	1.38428
4	0.64000	1.00000	0.78553		
5	0.59564	1.00000	0.74755		
6	0.56168	1.28067	0.71657		
7	0.53449	1.19896	0.69056		
8	0.51200	1.15658	0.66824		
9	0.49275	1.12979	0.64876		
10	0.47651	1.11111	0.63154		
11	0.46211	1.55662	0.61613		
12	0.44935	1.42814	0.60224		
13	0.43792	1.35224	0.58960		
14	0.42759	1.30248	0.57802		
15	0.41820	1.26604	0.56737		
16	0.40960	1.75618	0.55751		
17	0.40168	1.59536	0.54834		
18	0.39436	1.50160	0.53979		
19	0.38756	1.43704	0.53178		
20	0.38121	1.38889	0.52425		
21	0.37527	1.91685	0.51715		
22	0.36969	1.73343	0.51045		
23	0.36444	1.62489	0.50410		
24	0.35948	1.54928	0.49808		
25	0.35478	1.49233	0.49234		
26	0.35033	2.05328	0.48688		
27	0.34610	1.85157	0.48167		
28	0.34207	1.73112	0.47668		
29	0.33823	1.64660	0.47191		
30	0.33456	1.58255	0.46733		
31	0.33105	2.17290	0.46293		
32	0.32768	1.95566	0.45871		
33	0.32445	1.82515	0.45464		
34	0.32135	1.73312	0.45072		
35	0.31836	1.66306	0.44694		
36	0.31549	2.28006	0.44328		
37	0.31272	2.04924	0.43976		
38	0.31004	1.90995	0.43634		
39	0.30746	1.81133	0.43304		
40	0.30497	1.73611	0.42984		
41	0.30255	2.37754	0.42673		
42	0.30021	2.13458	0.42372		
43	0.29795	1.98749	0.42079		
44	0.29575	1.88311	0.41795		
45	0.29362	1.80321	0.41519		
46	0.29155	2.46727	0.41250		
47	0.28954	2.21229	0.40988		
48	0.28758	2.05913	0.40734		
49	0.28568	1.94950	0.40485		
50	0.28383	1.86542	0.40243		
51	0.28202	2.55060	0.40007		
52	0.28027	2.28651	0.39777		

53	0.27355	2.12588	0.39552
54	0.27	2.01144	0.39332
55	0.27525	1.92354	0.39117
56	0.27366	2.62457	0.38907
57	0.27210	2.35510	0.38702
58	0.27058	2.18848	0.38501
59	0.26910	2.06961	0.38305
60	0.26765	1.97818	0.38113
61	0.26623	2.70194	0.37924
62	0.26484	2.41972	0.37740
63	0.26348	2.24752	0.37559
64	0.26214	2.12452	0.37382
65	0.26084	2.02982	0.37208
66	0.25956	2.77134	0.37037
67	0.25831	2.48090	0.36870
68	0.25708	2.30346	0.36706
69	0.25587	2.17660	0.36545
70	0.25469	2.07853	0.36386
71	0.25353	2.83727	0.36231
72	0.25239	2.53905	0.36078
73	0.25127	2.35668	0.35928
74	0.25017	2.22613	0.35781
75	0.24910	2.12552	0.35636
76	0.24804	2.90011	0.35493
77	0.24699	2.59453	0.35353
78	0.24597	2.40749	0.35215
79	0.24496	2.27353	0.35080
80	0.24397	2.17014	0.34946
81	0.24300	2.96021	0.34815
82	0.24204	2.64761	0.34685
83	0.24110	2.45613	0.34558
84	0.24017	2.31890	0.34432
85	0.23926	2.21291	0.34309
86	0.23836	3.01785	0.34187
87	0.23747	2.69854	0.34067
88	0.23660	2.50282	0.33949
89	0.23574	2.36246	0.33832
90	0.23490	2.25400	0.33717
91	0.23406	3.07325	0.33604
92	0.23324	2.74753	0.33492
93	0.23243	2.54774	0.33382
94	0.23163	2.40440	0.33273
95	0.23084	2.29358	0.33166
96	0.23007	3.12663	0.33060
97	0.22930	2.79474	0.32956
98	0.22854	2.59106	0.32853
99	0.22780	2.44485	0.32751
100	0.22706	2.33177	0.32650
101	0.22634	3.17815	0.32551
102	0.22562	2.84033	0.32453
103	0.22491	2.63290	0.32356
104	0.22421	2.48394	0.32261
105	0.22352	2.36868	0.32167
106	0.22284	3.22798	0.32073
107	0.22217	2.88443	0.31981
108	0.22151	2.67339	0.31890
109	0.22085	2.52178	0.31800
110	0.22020	2.40442	0.31711
111	0.21956	3.27623	0.31623
112	0.21893	2.92715	0.31537
113	0.21830	2.71262	0.31451

114	0.21[illegible]	2.55945	0.31366
115	0.21[illegible]	3.43508	0.31282
116	0.21647	3.32[illegible]3	0.31199
117	0.21587	2.56859	0.31116
118	0.21528	2.75070	0.31035
119	0.21470	2.59465	0.30955
120	0.21412	2.47273	0.30875
121	0.21355	3.36849	0.30797
122	0.21298	3.00886	0.30719
123	0.21242	2.78759	0.30642
124	0.21187	2.62865	0.30565
125	0.21132	2.50544	0.30490
126	0.21078	3.41268	0.30415
127	0.21025	3.04802	0.30341
128	0.20972	2.82368	0.30268
129	0.20919	2.66232	0.30196
130	0.20867	2.53727	0.30124
131	0.20816	3.45571	0.30053
132	0.20765	3.08614	0.29982
133	0.20714	2.85373	0.29913
134	0.20665	2.69511	0.29844
135	0.20615	2.56829	0.29775
136	0.20566	3.49763	0.29708
137	0.20518	3.12[illegible]0	0.29641
138	0.20470	2.89239	0.29574
139	0.20422	2.72738	0.29508
140	0.20375	2.59853	0.29443
141	0.20329	3.53852	0.29378
142	0.20282	3.15955	0.29314
143	0.20237	2.92623	0.29251
144	0.20191	2.75829	0.29188
145	0.20146	2.62806	0.29126
146	0.20102	3.57844	0.29064
147	0.20058	3.19495	0.29002
148	0.20014	2.95879	0.28942
149	0.19971	2.78876	0.28881
150	0.19928	2.65689	0.28822
151	0.19885	3.61744	0.28763
152	0.19843	3.22954	0.28704
153	0.19801	2.99061	0.28646
154	0.19759	2.81455	0.28588
155	0.19718	2.68509	0.28531
156	0.19678	3.65558	0.28474
157	0.19637	3.26336	0.28418
158	0.19597	3.02173	0.28362
159	0.19557	2.84769	0.28307
160	0.19518	2.71268	0.28252
161	0.19479	3.69290	0.28197
162	0.19440	3.29647	0.28143
163	0.19401	3.05219	0.28089
164	0.19363	2.87622	0.28036
165	0.19325	2.73968	0.27983
166	0.19288	3.72943	0.27931
167	0.19251	3.32889	0.27879
168	0.19214	3.08202	0.27827
169	0.19177	2.90416	0.27776
170	0.19141	2.76614	0.27725
171	0.19105	3.76524	0.27675
172	0.19069	3.36065	0.27625
173	0.19033	3.11125	0.27575
174	0.18998	2.93155	0.27526

175	0.18943	2.79207	0.27477
176	[illegible]	[illegible]	0.27428
177	0.18[illegible]	[illegible]	0.27380
178	0.18853	3.13992	0.27332
179	0.18825	2.95841	0.27285
180	0.18792	2.81751	0.27238
181	0.18758	3.83476	0.27191
182	0.18725	3.42235	0.27144
183	0.18692	3.16805	0.27098
184	0.18659	2.98477	0.27052
185	0.18627	2.84247	0.27007
186	0.18594	3.86855	0.26961
187	0.18562	3.45234	0.26917
188	0.18530	3.19566	0.26872
189	0.18499	3.01064	0.26828
190	0.18467	2.86698	0.26784
191	0.18436	3.90173	0.26740
192	0.18405	3.46179	0.26696
193	0.18374	3.22278	0.26653
194	0.18344	3.03605	0.26611
195	0.18314	2.89105	0.26568
196	0.18283	3.93422	0.26526
197	0.18254	3.51073	0.26484
198	0.18224	3.24942	0.26442
199	0.18194	3.06102	0.26401
200	0.18165	2.91471	0.26359

MM	M	NSTS	FAILR	TIMP	CREWS	Q
50	5	10000	0.50000E-03	10.0000	10	0.80000

TI	ETR	IETR
1.00000	5.00000	5

IX	S(IX)	T(IX)	AVGT(IX)	J	ATTTP(J)
1	50.00000	1.00000	1.00000	1	0.74755
2	62.50000	0.80000	0.90000	2	0.53146
3	71.21454	0.70210	0.83403	3	0.46451
4	78.12498	0.64000	0.78553	4	0.42891
5	83.94368	0.59564	0.74755	5	0.40694
6	88.11635	0.56743	0.72086	6	0.39254
7	90.44246	0.55284	0.69686	7	0.38295
8	95.01204	0.52625	0.67553	8	0.37673
9	99.09972	0.50454	0.65653	9	0.37304
10	102.83095	0.48623	0.63950	10	0.37136
11	100.46106	0.49771	0.62661	11	0.37136
12	104.62289	0.47791	0.61422		
13	108.22888	0.46198	0.60251		
14	111.[illegible]270	0.44842	0.59150		
15	114.[illegible]551	0.43655	0.58117		
16	110.17094	0.45384	0.57321		
17	113.86526	0.43912	0.56533		
18	117.05624	0.42715	0.55765		
19	119.95856	0.41681	0.55024		
20	122.65674	0.40764	0.54311		
21	116.87181	0.42782	0.53762		
22	120.32890	0.41553	0.53207		
23	123.30246	0.40551	0.52656		
24	126.00484	0.39681	0.52116		
25	128.51804	0.38905	0.51587		
26	121.61336	0.41114	0.51185		
27	124.93755	0.40020	0.50771		
28	127.78708	0.39128	0.50355		
29	130.37338	0.38351	0.49941		
30	132.77773	0.37657	0.49532		
31	124.93922	0.40019	0.49225		
32	128.18620	0.39006	0.48906		
33	130.96232	0.38179	0.48581		
34	133.48021	0.37459	0.48253		
35	135.81918	0.36814	0.47927		
36	127.17381	0.39316	0.47687		
37	130.37650	0.38350	0.47435		
38	133.11102	0.37563	0.47175		
39	135.58821	0.36876	0.46911		
40	137.88875	0.36261	0.46645		
41	128.52902	0.38902	0.46456		
42	131.70834	0.37963	0.46254		
43	134.42041	0.37197	0.46043		
44	136.87604	0.36529	0.45827		
45	139.15596	0.35931	0.45607		
46	129.15271	0.38714	0.45457		
47	132.32249	0.37786	0.45294		
48	135.02533	0.37030	0.45122		
49	137.47211	0.36371	0.44943		
50	139.74345	0.35780	0.44760		
51	129.15271	0.38714	0.44641		
52	132.32248	0.37786	0.44509		

53	135.[illegible]	0.37030	0.44368
54	[illegible]	0.[illegible]371	0.44220
55	139.74345	0.35780	0.44067
56	129.15271	0.38714	0.43971
57	132.32248	0.37786	0.43863
58	135.02533	0.37030	0.43745
59	137.47211	0.36371	0.43620
60	139.74345	0.35780	0.43489
61	129.15271	0.38714	0.43411
62	132.32248	0.37786	0.43320
63	135.02533	0.37030	0.43220
64	137.47211	0.36371	0.43113
65	139.74345	0.35780	0.43000
66	129.15271	0.38714	0.42935
67	132.32248	0.37786	0.42859
68	135.02533	0.37030	0.42773
69	137.47211	0.36371	0.42680
70	139.74345	0.35780	0.42581
71	129.15271	0.38714	0.42527
72	132.32248	0.37786	0.42461
73	135.02533	0.37030	0.42387
74	137.47211	0.36371	0.42305
75	139.74345	0.35780	0.42218
76	129.15271	0.38714	0.42172
77	132.32248	0.37786	0.42115
78	135.02533	0.37030	0.42050
79	137.47211	0.36371	0.41978
80	139.74345	0.35780	0.41901
81	129.15271	0.38714	0.41861
82	132.32248	0.37786	0.41812
83	135.02533	0.37030	0.41754
84	137.47211	0.36371	0.41690
85	139.74345	0.35780	0.41620
86	129.15271	0.38714	0.41587
87	132.32248	0.37786	0.41543
88	135.02533	0.37030	0.41492
89	137.47211	0.36371	0.41434
90	139.74345	0.35780	0.41371
91	129.15271	0.38714	0.41342
92	132.32248	0.37786	0.41303
93	135.02533	0.37030	0.41257
94	137.47211	0.36371	0.41205
95	139.74345	0.35780	0.41148
96	129.15271	0.38714	0.41123
97	132.32248	0.37786	0.41089
98	135.02533	0.37030	0.41047
99	137.47211	0.36371	0.41000
100	139.74345	0.35780	0.40948
101	129.15271	0.38714	0.40926
102	132.32248	0.37786	0.40895
103	135.02533	0.37030	0.40857
104	137.47211	0.36371	0.40814
105	139.74345	0.35780	0.40766
106	129.15271	0.38714	0.40747
107	132.32248	0.37786	0.40719
108	135.02533	0.37030	0.40685
109	137.47211	0.36371	0.40645
110	139.74345	0.35780	0.40601
111	129.15271	0.38714	0.40584
112	132.32248	0.37786	0.40559
113	135.02533	0.37030	0.40528

114	[illegible]	0.36371	0.40491
115	[illegible]	[illegible]780	0.40455
116	[illegible]	0.38714	0.40435
117	132.32248	0.37786	0.40413
118	135.02533	0.37030	0.40384
119	137.47211	0.36371	0.40350
120	139.74345	0.35780	0.40312
121	129.15271	0.38714	0.40299
122	132.32248	0.37786	0.40279
123	135.02533	0.37030	0.40252
124	137.47211	0.36371	0.40221
125	139.74345	0.35780	0.40185
126	129.15271	0.38714	0.40174
127	132.32248	0.37786	0.40155
128	135.02533	0.37030	0.40130
129	137.47211	0.36371	0.40101
130	139.74345	0.35780	0.40068
131	129.15271	0.38714	0.40058
132	132.32248	0.37786	0.40040
133	135.02533	0.37030	0.40018
134	137.47211	0.36371	0.39991
135	139.74345	0.35780	0.39959
136	129.15271	0.38714	0.39950
137	132.32248	0.37786	0.39934
138	135.02533	0.37030	0.39913
139	137.47211	0.36371	0.39888
140	139.74345	0.35780	0.39859
141	129.15271	0.38714	0.39850
142	132.32248	0.37786	0.39836
143	135.02533	0.37030	0.39816
144	137.47211	0.36371	0.39792
145	139.74345	0.35780	0.39765
146	129.15271	0.38714	0.39757
147	132.32248	0.37786	0.39744
148	135.02533	0.37030	0.39726
149	137.47211	0.36371	0.39703
150	139.74345	0.35780	0.39677
151	129.15271	0.38714	0.39671
152	132.32248	0.37786	0.39658
153	135.02533	0.37030	0.39641
154	137.47211	0.36371	0.39620
155	139.74345	0.35780	0.39595
156	129.15271	0.38714	0.39589
157	132.32248	0.37786	0.39578
158	135.02533	0.37030	0.39562
159	137.47211	0.36371	0.39542
160	139.74345	0.35780	0.39518
161	129.15271	0.38714	0.39513
162	132.32248	0.37786	0.39503
163	135.02533	0.37030	0.39487
164	137.47211	0.36371	0.39468
165	139.74345	0.35780	0.39446
166	129.15271	0.38714	0.39442
167	132.32248	0.37786	0.39432
168	135.02533	0.37030	0.39417
169	137.47211	0.36371	0.39399
170	139.74345	0.35780	0.39378
171	129.15271	0.38714	0.39374
172	132.32248	0.37786	0.39365
173	135.02532	0.37030	0.39351
174	137.47211	0.36371	0.39334

175	[illegible]	0.35780	0.39314
176	[illegible]	[illegible].38714	0.39311
177	[illegible]	0.37786	0.39302
178	[illegible]	0.37030	0.39289
179	137.47211	0.36371	0.39273
180	139.74345	0.35780	0.39253
181	129.15271	0.38714	0.39250
182	132.32248	0.37786	0.39242
183	135.02533	0.37030	0.39230
184	137.47211	0.36371	0.39215
185	139.74345	0.35780	0.39196
186	129.15271	0.38714	0.39194
187	132.32248	0.37786	0.39186
188	135.02533	0.37030	0.39175
189	137.47211	0.36371	0.39160
190	139.74345	0.35780	0.39142
191	129.15271	0.38714	0.39140
192	132.32248	0.37786	0.39133
193	135.02533	0.37030	0.39122
194	137.47211	0.36371	0.39108
195	139.74345	0.35780	0.39091
196	129.15271	0.38714	0.39089
197	132.32248	0.37786	0.39082
198	135.02533	0.37030	0.39072
199	137.47211	0.36371	0.39058
200	139.74345	0.35780	0.39042

MM	X	NSIM	FAILR	TIMP	CREWS	Q
50	5	10000	0.500000E-03	10.0000	10	0.80000

TI	ETR	IETR
1.00000	0.00000	5

IX	TN(IX)	TOTN(IX)	AVGTN(IX)	ATTPN(J)	ATDAN(J)
1	1.00000	1.00000	1.00000	0.74755	1.00000
2	0.80000	1.00000	0.90000	0.51553	1.03090
3	0.70210	1.00000	0.83403	0.43903	1.05803
4	0.64000	1.00000	0.78553	0.39488	1.08618
5	0.59564	1.00000	0.74755	0.36473	1.11573
6	0.56168	1.04584	0.71657	0.34226	1.14691
7	0.53449	1.03433	0.69056	0.32458	1.17985
8	0.51200	1.02753	0.66824	0.31014	1.21474
9	0.49295	1.02352	0.64876	0.29802	1.25175
10	0.47651	1.02041	0.63154	0.28764	1.29109
11	0.46211	1.01702	0.61613	0.27859	1.33298
12	0.44935	1.06356	0.60224		
13	0.43792	1.05496	0.58950		
14	0.42759	1.04871	0.57802		
15	0.41820	1.04387	0.56737		
16	0.40960	1.10371	0.55751		
17	0.40168	1.09319	0.54834		
18	0.39436	1.08313	0.53979		
19	0.38756	1.07549	0.53178		
20	0.38121	1.06954	0.52425		
21	0.37527	1.14004	0.51715		
22	0.36969	1.12399	0.51045		
23	0.36444	1.11270	0.50410		
24	0.35948	1.10385	0.49808		
25	0.35479	1.09658	0.49234		
26	0.35033	1.17397	0.48688		
27	0.34610	1.15631	0.48167		
28	0.34207	1.14383	0.47668		
29	0.33823	1.13398	0.47191		
30	0.33456	1.12557	0.46733		
31	0.33105	1.20888	0.46293		
32	0.32768	1.19036	0.45871		
33	0.32445	1.17672	0.45464		
34	0.32135	1.16568	0.45072		
35	0.31836	1.15634	0.44694		
36	0.31549	1.24621	0.44328		
37	0.31272	1.22636	0.43976		
38	0.31004	1.21152	0.43634		
39	0.30746	1.19938	0.43304		
40	0.30497	1.18902	0.42984		
41	0.30255	1.28579	0.42673		
42	0.30021	1.26452	0.42372		
43	0.29795	1.24843	0.42079		
44	0.29575	1.23514	0.41795		
45	0.29362	1.22372	0.41519		
46	0.29155	1.32787	0.41250		
47	0.28954	1.30506	0.40988		
48	0.28758	1.28764	0.40734		
49	0.28568	1.27314	0.40485		
50	0.28383	1.26062	0.40243		
51	0.28202	1.37272	0.40007		
52	0.28027	1.34824	0.39777		

53	0.27[illegible]	1.32[illegible]7	0.39552
54	0.2[illegible]	[illegible]	0.39332
55	0.27525	1.[illegible]0	0.39117
56	0.27365	1.41463	0.38907
57	0.27210	1.38863	0.38702
58	0.27058	1.36352	0.38501
59	0.26910	1.35158	0.38305
60	0.26765	1.33683	0.38113
61	0.26623	1.45417	0.37924
62	0.26484	1.42678	0.37740
63	0.26348	1.40544	0.37559
64	0.26214	1.38744	0.37382
65	0.26084	1.37172	0.37208
66	0.25956	1.49152	0.37037
67	0.25831	1.46285	0.36870
68	0.25708	1.44042	0.36706
69	0.25587	1.42145	0.36545
70	0.25469	1.40484	0.36386
71	0.25353	1.52700	0.36231
72	0.25239	1.49714	0.36078
73	0.25127	1.47370	0.35928
74	0.25017	1.45383	0.35781
75	0.24910	1.43679	0.35636
76	0.24804	1.56052	0.35493
77	0.24699	1.52936	0.35353
78	0.24597	1.50547	0.35215
79	0.24496	1.48475	0.35080
80	0.24397	1.46655	0.34946
81	0.24300	1.59317	0.34815
82	0.24204	1.56116	0.34685
83	0.24110	1.53599	0.34558
84	0.24017	1.51438	0.34432
85	0.23925	1.49545	0.34309
86	0.23836	1.62418	0.34187
87	0.23747	1.59119	0.34067
88	0.23660	1.56508	0.33949
89	0.23574	1.54283	0.33832
90	0.23490	1.52322	0.33717
91	0.23406	1.65401	0.33604
92	0.23324	1.62007	0.33492
93	0.23243	1.59318	0.33382
94	0.23163	1.57022	0.33273
95	0.23084	1.54997	0.33166
96	0.23007	1.68273	0.33060
97	0.22930	1.64791	0.32956
98	0.22854	1.62027	0.32853
99	0.22780	1.59664	0.32751
100	0.22706	1.57578	0.32650
101	0.22634	1.71046	0.32551
102	0.22562	1.67479	0.32453
103	0.22491	1.64643	0.32356
104	0.22421	1.62216	0.32261
105	0.22352	1.60072	0.32167
106	0.22284	1.73728	0.32073
107	0.22217	1.70079	0.31981
108	0.22151	1.67175	0.31890
109	0.22085	1.64687	0.31800
110	0.22020	1.62487	0.31711
111	0.21956	1.76325	0.31623
112	0.21893	1.72598	0.31537
113	0.21830	1.69626	0.31451

114	0.21[illegible]	1.67082	0.31366
115	0.21[illegible]	1.64629	0.31282
116	0.21547	1.78843	0.31199
117	0.21567	1.75042	0.31116
118	0.21528	1.72009	0.31035
119	0.21470	1.69407	0.30955
120	0.21412	1.67103	0.30875
121	0.21355	1.81290	0.30797
122	0.21298	1.77416	0.30719
123	0.21242	1.74323	0.30642
124	0.21187	1.71667	0.30565
125	0.21132	1.69314	0.30490
126	0.21078	1.83668	0.30415
127	0.21025	1.79725	0.30341
128	0.20972	1.76573	0.30268
129	0.20919	1.73865	0.30196
130	0.20867	1.71465	0.30124
131	0.20816	1.85984	0.30053
132	0.20765	1.81974	0.29982
133	0.20714	1.78765	0.29913
134	0.20665	1.76007	0.29844
135	0.20615	1.73561	0.29775
136	0.20565	1.88240	0.29708
137	0.20518	1.84165	0.29641
138	0.20470	1.80901	0.29574
139	0.20422	1.78095	0.29508
140	0.20375	1.75605	0.29443
141	0.20329	1.90441	0.29378
142	0.20282	1.86302	0.29314
143	0.20237	1.82986	0.29251
144	0.20191	1.80133	0.29188
145	0.20146	1.77600	0.29126
146	0.20102	1.92589	0.29064
147	0.20058	1.88389	0.29002
148	0.20014	1.85022	0.28942
149	0.19971	1.82123	0.28881
150	0.19928	1.79549	0.28822
151	0.19885	1.94688	0.28763
152	0.19843	1.90429	0.28704
153	0.19801	1.87011	0.28646
154	0.19759	1.84069	0.28588
155	0.19718	1.81454	0.28531
156	0.19678	1.96741	0.28474
157	0.19637	1.92423	0.28418
158	0.19597	1.88957	0.28362
159	0.19557	1.85972	0.28307
160	0.19518	1.83319	0.28252
161	0.19479	1.98749	0.28197
162	0.19440	1.94375	0.28143
163	0.19401	1.90862	0.28089
164	0.19363	1.87834	0.28036
165	0.19325	1.85143	0.27983
166	0.19288	2.00716	0.27931
167	0.19251	1.96287	0.27879
168	0.19214	1.92728	0.27827
169	0.19177	1.89659	0.27776
170	0.19141	1.86931	0.27725
171	0.19105	2.02642	0.27675
172	0.19069	1.98160	0.27625
173	0.19033	1.94556	0.27575
174	0.18998	1.91448	0.27526

175	0.18926	1.88684	0.27477
176	0.18[illegible]	2.04531	0.27428
177	0.18894	1.99996	0.27380
178	0.18859	1.96349	0.27332
179	0.18825	1.93202	0.27285
180	0.18792	1.90403	0.27238
181	0.18758	2.06384	0.27191
182	0.18725	2.01798	0.27144
183	0.18692	1.98107	0.27098
184	0.18659	1.94923	0.27052
185	0.18627	1.92090	0.27007
186	0.18594	2.08203	0.26961
187	0.18562	2.03566	0.26917
188	0.18530	1.99534	0.26872
189	0.18499	1.96613	0.26828
190	0.18467	1.93746	0.26784
191	0.18436	2.09988	0.26740
192	0.18405	2.05303	0.26696
193	0.18374	2.01530	0.26653
194	0.18344	1.98273	0.26611
195	0.18314	1.95373	0.26568
196	0.18283	2.11742	0.26526
197	0.18254	2.07009	0.26484
198	0.18224	2.03196	0.26442
199	0.18194	1.99903	0.26401
200	0.18165	1.96972	0.26359

MM	M	ASYS	FAILR	TIMP	CREWS	Q
50	10	10000	0.50000E-03	10.0000	10	0.80000

TI	ETR	IETR
1.00000	0.00000	5

IX	R(IX)	T(IX)	AVGT(IX)	J	ATTTP(J)
1	50.00000	1.00000	1.00000	1	0.74755
2	62.50000	0.80000	0.90000	2	0.54850
3	71.21454	0.70210	0.83403	3	0.49328
4	78.12498	0.64000	0.78553	4	0.46955
5	83.94368	0.59564	0.74755	5	0.46046
6	81.21454	0.61565	0.72557	6	0.46046
7	87.33774	0.57249	0.70370		
8	92.36787	0.54131	0.68340		
9	96.76920	0.51669	0.66488		
10	100.73239	0.49636	0.64803		
11	92.72308	0.53924	0.63814		
12	97.97307	0.51034	0.62749		
13	102.28052	0.48885	0.61682		
14	106.07143	0.47138	0.60643		
15	109.51079	0.45658	0.59644		
16	98.27159	0.50879	0.59096		
17	103.25443	0.48424	0.58469		
18	107.32472	0.46588	0.57809		
19	110.90341	0.45084	0.57139		
20	114.15149	0.43801	0.56472		
21	100.50522	0.49749	0.56152		
22	105.40900	0.47434	0.55756		
23	109.40678	0.45701	0.55318		
24	112.91881	0.44280	0.54859		
25	116.10526	0.43064	0.54387		
26	100.50522	0.49749	0.54208		
27	105.40900	0.47434	0.53957		
28	109.40678	0.45701	0.53663		
29	112.91881	0.44280	0.53339		
30	116.10526	0.43064	0.52997		
31	100.50522	0.49749	0.52892		
32	105.40900	0.47434	0.52721		
33	109.40678	0.45701	0.52508		
34	112.91881	0.44280	0.52266		
35	116.10526	0.43064	0.52003		
36	100.50522	0.49749	0.51941		
37	105.40900	0.47434	0.51819		
38	109.40678	0.45701	0.51658		
39	112.91881	0.44280	0.51469		
40	116.10526	0.43064	0.51259		
41	100.50522	0.49749	0.51222		
42	105.40900	0.47434	0.51132		
43	109.40678	0.45701	0.51005		
44	112.91881	0.44280	0.50852		
45	116.10526	0.43064	0.50679		
46	100.50522	0.49749	0.50659		
47	105.40900	0.47434	0.50590		
48	109.40678	0.45701	0.50489		
49	112.91881	0.44280	0.50362		
50	116.10526	0.43064	0.50216		
51	100.50522	0.49749	0.50207		
52	105.40900	0.47434	0.50153		

53	109.40678	0.45701	0.50069
54	[illegible]	0.44280	0.49962
55	116.10526	0.43064	0.49837
56	100.50522	0.49749	0.49835
57	105.40900	0.47434	0.49793
58	109.40678	0.45701	0.49722
59	112.91881	0.44280	0.49630
60	116.10526	0.43064	0.49521
61	100.50522	0.49749	0.49524
62	105.40900	0.47434	0.49491
63	109.40678	0.45701	0.49431
64	112.91881	0.44280	0.49350
65	116.10526	0.43064	0.49253
66	100.50522	0.49749	0.49261
67	105.40900	0.47434	0.49234
68	109.40678	0.45701	0.49182
69	112.91881	0.44280	0.49111
70	116.10526	0.43064	0.49024
71	100.50522	0.49749	0.49034
72	105.40900	0.47434	0.49012
73	109.40678	0.45701	0.48967
74	112.91881	0.44280	0.48903
75	116.10526	0.43064	0.48826
76	100.50522	0.49749	0.48838
77	105.40900	0.47434	0.48819
78	109.40678	0.45701	0.48779
79	112.91881	0.44280	0.48723
80	116.10526	0.43064	0.48652
81	100.50522	0.49749	0.48665
82	105.40900	0.47434	0.48650
83	109.40678	0.45701	0.48615
84	112.91881	0.44280	0.48563
85	116.10526	0.43064	0.48498
86	100.50522	0.49749	0.48513
87	105.40900	0.47434	0.48501
88	109.40678	0.45701	0.48469
89	112.91881	0.44280	0.48422
90	116.10526	0.43064	0.48362
91	100.50522	0.49749	0.48377
92	105.40900	0.47434	0.48367
93	109.40678	0.45701	0.48338
94	112.91881	0.44280	0.48295
95	116.10526	0.43064	0.48240
96	100.50522	0.49749	0.48256
97	105.40900	0.47434	0.48247
98	109.40678	0.45701	0.48221
99	112.91881	0.44280	0.48182
100	116.10526	0.43064	0.48130
101	100.50522	0.49749	0.48146
102	105.40900	0.47434	0.48139
103	109.40678	0.45701	0.48116
104	112.91881	0.44280	0.48079
105	116.10526	0.43064	0.48031
106	100.50522	0.49749	0.48047
107	105.40900	0.47434	0.48042
108	109.40678	0.45701	0.48020
109	112.91881	0.44280	0.47986
110	116.10526	0.43064	0.47941
111	100.50522	0.49749	0.47957
112	105.40900	0.47434	0.47952
113	109.40678	0.45701	0.47932

114	112.91881	0.44280	0.47900
115	[illegible]	0.43064	0.47858
116	100.50522	0.49749	0.47875
117	105.40900	0.47434	0.47871
118	109.40678	0.45701	0.47853
119	112.91881	0.44280	0.47822
120	116.10526	0.43064	0.47783
121	100.50522	0.49749	0.47799
122	105.40900	0.47434	0.47796
123	109.40678	0.45701	0.47779
124	112.91881	0.44280	0.47751
125	116.10526	0.43064	0.47713
126	100.50522	0.49749	0.47729
127	105.40900	0.47434	0.47727
128	109.40678	0.45701	0.47711
129	112.91881	0.44280	0.47685
130	116.10526	0.43064	0.47649
131	100.50522	0.49749	0.47665
132	105.40900	0.47434	0.47663
133	109.40678	0.45701	0.47649
134	112.91881	0.44280	0.47623
135	116.10526	0.43064	0.47590
136	100.50522	0.49749	0.47606
137	105.40900	0.47434	0.47604
138	109.40678	0.45701	0.47591
139	112.91881	0.44280	0.47567
140	116.10526	0.43064	0.47535
141	100.50522	0.49749	0.47550
142	105.40900	0.47434	0.47549
143	109.40678	0.45701	0.47536
144	112.91881	0.44280	0.47514
145	116.10526	0.43064	0.47483
146	100.50522	0.49749	0.47499
147	105.40900	0.47434	0.47498
148	109.40678	0.45701	0.47486
149	112.91881	0.44280	0.47465
150	116.10526	0.43064	0.47435
151	100.50522	0.49749	0.47451
152	105.40900	0.47434	0.47450
153	109.40678	0.45701	0.47439
154	112.91881	0.44280	0.47418
155	116.10526	0.43064	0.47390
156	100.50522	0.49749	0.47406
157	105.40900	0.47434	0.47406
158	109.40678	0.45701	0.47395
159	112.91881	0.44280	0.47375
160	116.10526	0.43064	0.47348
161	100.50522	0.49749	0.47363
162	105.40900	0.47434	0.47364
163	109.40678	0.45701	0.47353
164	112.91881	0.44280	0.47335
165	116.10526	0.43064	0.47309
166	100.50522	0.49749	0.47324
167	105.40900	0.47434	0.47324
168	109.40678	0.45701	0.47315
169	112.91881	0.44280	0.47297
170	116.10526	0.43064	0.47272
171	100.50522	0.49749	0.47286
172	105.40900	0.47434	0.47287
173	109.40678	0.45701	0.47278
174	112.91881	0.44280	0.47261

175	116.10526	0.43064	0.47237
176	100.50522	0.49749	0.47251
177	105.40900	0.47434	0.47252
178	109.40678	0.45701	0.47243
179	112.91881	0.44280	0.47227
180	116.10526	0.43064	0.47204
181	100.50522	0.49749	0.47218
182	105.40900	0.47434	0.47219
183	109.40678	0.45701	0.47210
184	112.91881	0.44280	0.47195
185	116.10526	0.43064	0.47172
186	100.50522	0.49749	0.47186
187	105.40900	0.47434	0.47187
188	109.40678	0.45701	0.47179
189	112.91881	0.44280	0.47164
190	116.10526	0.43064	0.47143
191	100.50522	0.49749	0.47156
192	105.40900	0.47434	0.47158
193	109.40678	0.45701	0.47150
194	112.91881	0.44280	0.47135
195	116.10526	0.43064	0.47114
196	100.50522	0.49749	0.47128
197	105.40900	0.47434	0.47129
198	109.40678	0.45701	0.47122
199	112.91881	0.44280	0.47108
200	116.10526	0.43064	0.47088

MM	M	NSYS	FATIG	TIMP	CREWS	Q
50	10	10000	0.50000E-03	10.0000	10	0.80000

TI	FTR	IFTR
1.00000	5.00000	5

IX	IN(IX)	TDTN(IX)	AVGTN(IX)	ATTPN(J)	ATDAN(J)
1	1.00000	1.00000	1.00000	0.74755	1.00000
2	0.80000	1.00000	0.90000	0.51553	1.06397
3	0.70210	1.00000	0.83403	0.43903	1.12356
4	0.64000	1.00000	0.78563	0.39488	1.18910
5	0.59564	1.00000	0.74755	0.36473	1.25245
6	0.56168	1.09609	0.71657	0.34226	1.34534
7	0.53449	1.07110	0.69026		
8	0.51200	1.05775	0.66825		
9	0.49295	1.04817	0.64476		
10	0.47651	1.04167	0.63154		
11	0.46211	1.16690	0.61613		
12	0.44935	1.13575	0.60234		
13	0.43392	1.11651	0.58960		
14	0.42789	1.10241	0.57882		
15	0.41820	1.09177	0.56737		
16	0.40960	1.24217	0.55751		
17	0.40168	1.20553	0.54834		
18	0.39436	1.18135	0.53979		
19	0.38756	1.16230	0.53179		
20	0.38121	1.14662	0.52425		
21	0.37527	1.32540	0.51715		
22	0.36969	1.28309	0.51045		
23	0.36444	1.25402	0.50410		
24	0.35946	1.23176	0.49808		
25	0.35478	1.21382	0.49234		
26	0.35033	1.42004	0.48687		
27	0.34610	1.37053	0.48167		
28	0.34207	1.33630	0.47668		
29	0.33823	1.30915	0.47191		
30	0.33456	1.28720	0.46732		
31	0.33105	1.50277	0.46293		
32	0.32768	1.44758	0.45871		
33	0.32445	1.40957	0.45464		
34	0.32135	1.37794	0.45073		
35	0.31836	1.35268	0.44694		
36	0.31549	1.57688	0.44329		
37	0.31272	1.51694	0.43976		
38	0.31004	1.47402	0.43634		
39	0.30746	1.44016	0.43304		
40	0.30497	1.41210	0.42984		
41	0.30256	1.64430	0.42679		
42	0.30021	1.58002	0.42372		
43	0.29794	1.53386	0.42079		
44	0.29575	1.49719	0.41795		
45	0.29362	1.46667	0.41519		
46	0.29155	1.70656	0.41250		
47	0.28954	1.63828	0.40988		
48	0.28758	1.58915	0.40734		
49	0.28568	1.54998	0.40485		
50	0.28383	1.51727	0.40243		
51	0.28202	1.76399	0.40007		
52	0.28027	1.69247	0.39777		

53	0.27855	1.64066	0.39552
54	0.27[illegible]	1.59923	0.39332
55	0.27525	1.56455	0.39117
56	0.27366	1.81791	0.38907
57	0.27210	1.74324	0.38702
58	0.27058	1.68897	0.38501
59	0.26910	1.64547	0.38305
60	0.26765	1.60899	0.38113
61	0.26623	1.86865	0.37924
62	0.26484	1.79107	0.37740
63	0.26348	1.73454	0.37559
64	0.26214	1.68913	0.37382
65	0.26084	1.65099	0.37208
66	0.25956	1.91665	0.37037
67	0.25831	1.83636	0.36870
68	0.25708	1.77771	0.36706
69	0.25587	1.73054	0.36545
70	0.25469	1.69086	0.36386
71	0.25353	1.96224	0.36231
72	0.25239	1.87940	0.36078
73	0.25127	1.81378	0.35928
74	0.25017	1.76995	0.35781
75	0.24910	1.72883	0.35636
76	0.24804	2.00571	0.35493
77	0.24699	1.92046	0.35353
78	0.24597	1.85799	0.35215
79	0.24496	1.80760	0.35080
80	0.24397	1.76513	0.34946
81	0.24300	2.04727	0.34815
82	0.24204	1.95976	0.34685
83	0.24110	1.89553	0.34558
84	0.24017	1.84367	0.34432
85	0.23926	1.79991	0.34309
86	0.23836	2.08713	0.34187
87	0.23747	1.99746	0.34067
88	0.23660	1.93156	0.33949
89	0.23574	1.87831	0.33832
90	0.23490	1.83334	0.33717
91	0.23406	2.12545	0.33604
92	0.23324	2.03372	0.33492
93	0.23243	1.96623	0.33382
94	0.23163	1.91165	0.33273
95	0.23084	1.86553	0.33166
96	0.23007	2.16237	0.33060
97	0.22930	2.06866	0.32956
98	0.22854	1.99966	0.32853
99	0.22780	1.94381	0.32751
100	0.22706	1.89659	0.32650
101	0.22634	2.19800	0.32551
102	0.22562	2.10241	0.32453
103	0.22491	2.03196	0.32356
104	0.22421	1.97489	0.32261
105	0.22352	1.92662	0.32167
106	0.22284	2.23246	0.32073
107	0.22217	2.13505	0.31981
108	0.22151	2.06320	0.31890
109	0.22085	2.00497	0.31800
110	0.22020	1.95558	0.31711
111	0.21956	2.26583	0.31623
112	0.21893	2.16667	0.31537
113	0.21830	2.09348	0.31451

114	0.21[illegible]	2.05413	0.31366
115	0.21[illegible]	1.98388	0.31282
116	0.21667	2.27320	0.31199
117	0.21587	2.19735	0.31116
118	0.21524	2.12287	0.31035
119	0.21470	2.06243	0.30955
120	0.21412	2.01124	0.30875
121	0.21355	2.32964	0.30797
122	0.21298	2.22715	0.30719
123	0.21242	2.15142	0.30642
124	0.21187	2.08994	0.30565
125	0.21132	2.03785	0.30490
126	0.21076	2.36020	0.30415
127	0.21025	2.25614	0.30341
128	0.20972	2.17919	0.30268
129	0.20919	2.11671	0.30196
130	0.20867	2.06374	0.30124
131	0.20816	2.38996	0.30053
132	0.20765	2.28436	0.29982
133	0.20714	2.20624	0.29913
134	0.20665	2.14278	0.29844
135	0.20615	2.08897	0.29775
136	0.20566	2.41895	0.29708
137	0.20518	2.31186	0.29641
138	0.20470	2.23261	0.29574
139	0.20422	2.16820	0.29508
140	0.20375	2.11357	0.29443
141	0.20329	2.44723	0.29378
142	0.20282	2.33970	0.29314
143	0.20237	2.25834	0.29251
144	0.20191	2.19301	0.29188
145	0.20146	2.13758	0.29126
146	0.20102	2.47484	0.29064
147	0.20058	2.36490	0.29002
148	0.20014	2.28346	0.28942
149	0.19971	2.21724	0.28881
150	0.19928	2.16104	0.28822
151	0.19885	2.50181	0.28763
152	0.19843	2.39050	0.28704
153	0.19801	2.30802	0.28646
154	0.19759	2.24093	0.28588
155	0.19718	2.18397	0.28531
156	0.19678	2.52819	0.28474
157	0.19637	2.41554	0.28418
158	0.19597	2.33204	0.28362
159	0.19557	2.26410	0.28307
160	0.19518	2.20641	0.28252
161	0.19479	2.55400	0.28197
162	0.19440	2.44004	0.28143
163	0.19401	2.35554	0.28089
164	0.19363	2.28678	0.28036
165	0.19325	2.22837	0.27983
166	0.19288	2.57927	0.27931
167	0.19251	2.46404	0.27879
168	0.19214	2.37856	0.27827
169	0.19177	2.30899	0.27776
170	0.19141	2.24989	0.27725
171	0.19105	2.60403	0.27675
172	0.19069	2.48755	0.27625
173	0.19033	2.40113	0.27575
174	0.18998	2.33077	0.27526

175	0.18963	2.27099	0.27477
176	0.18928	2.62830	0.27428
177	0.18894	2.51060	0.27380
178	0.18859	2.42325	0.27332
179	0.18825	2.35212	0.27285
180	0.18792	2.29168	0.27238
181	0.18758	2.65211	0.27191
182	0.18725	2.53322	0.27144
183	0.18692	2.44496	0.27098
184	0.18659	2.37308	0.27052
185	0.18627	2.31198	0.27007
186	0.18594	2.67548	0.26961
187	0.18562	2.55542	0.26917
188	0.18530	2.46627	0.26872
189	0.18499	2.39365	0.26828
190	0.18467	2.33191	0.26784
191	0.18436	2.69842	0.26740
192	0.18405	2.57722	0.26696
193	0.18374	2.48720	0.26653
194	0.18344	2.41385	0.26611
195	0.18314	2.35150	0.26568
196	0.18283	2.72096	0.26526
197	0.18254	2.59863	0.26484
198	0.18224	2.50776	0.26442
199	0.18194	2.43371	0.26401
200	0.18165	2.37074	0.26359

MM	M	NSYS	FAILR	TIMP	CREWS	Q
50	25	10000	0.50000E-03	10.0000	10	0.80000

TI	FTR	IETR
1.00000	5.00000	5

IX	R(IX)	T(IX)	AVGT(IX)
1	50.00000	1.00000	1.00000
2	62.50000	0.80000	0.90000
3	71.21454	0.70210	0.83403
4	78.12498	0.64000	0.78553
5	83.94368	0.59564	0.74755
6	69.50909	0.71933	0.74284
7	78.02361	0.64083	0.72827
8	84.43539	0.59217	0.71126
9	89.77762	0.55693	0.69411
10	94.43661	0.52946	0.67765
11	69.50909	0.71933	0.68143
12	78.02361	0.64083	0.67805
13	84.43539	0.59217	0.67144
14	89.77762	0.55693	0.66327
15	94.43661	0.52946	0.65434
16	69.50909	0.71933	0.65841
17	78.02361	0.64083	0.65737
18	84.43539	0.59217	0.65375
19	89.77762	0.55693	0.64865
20	94.43661	0.52946	0.64269
21	69.50909	0.71933	0.64634
22	78.02361	0.64083	0.64609
23	84.43539	0.59217	0.64375
24	89.77762	0.55693	0.64013
25	94.43661	0.52946	0.63570
26	69.50909	0.71933	0.63892
27	78.02361	0.64083	0.63899
28	84.43539	0.59217	0.63732
29	89.77762	0.55693	0.63455
30	94.43661	0.52946	0.63104
31	69.50909	0.71933	0.63389
32	78.02361	0.64083	0.63411
33	84.43539	0.59217	0.63284
34	89.77762	0.55693	0.63060
35	94.43661	0.52946	0.62771
36	69.50909	0.71933	0.63026
37	78.02361	0.64083	0.63054
38	84.43539	0.59217	0.62953
39	89.77762	0.55693	0.62767
40	94.43661	0.52946	0.62522
41	69.50909	0.71933	0.62751
42	78.02361	0.64083	0.62783
43	84.43539	0.59217	0.62700
44	89.77762	0.55693	0.62541
45	94.43661	0.52946	0.62328
46	69.50909	0.71933	0.62536
47	78.02361	0.64083	0.62569
48	84.43539	0.59217	0.62499
49	89.77762	0.55693	0.62360
50	94.43661	0.52946	0.62172
51	69.50909	0.71933	0.62364
52	78.02361	0.64083	0.62397

J	ATTTP(J)
1	0.74755
2	0.60774
3	0.60774

53	84.43539	0.59217	0.62337
54	89.77762	0.55693	0.62214
55	94.43661	0.52946	0.62045
56	69.50909	0.71933	0.62222
57	78.02361	0.64083	0.62254
58	84.43539	0.59217	0.62202
59	89.77762	0.55693	0.62092
60	94.43661	0.52946	0.61939
61	69.50909	0.71933	0.62103
62	78.02361	0.64083	0.62135
63	84.43539	0.59217	0.62089
64	89.77762	0.55693	0.61989
65	94.43661	0.52946	0.61849
66	69.50909	0.71933	0.62002
67	78.02361	0.64083	0.62033
68	84.43539	0.59217	0.61992
69	89.77762	0.55693	0.61901
70	94.43661	0.52946	0.61773
71	69.50909	0.71933	0.61916
72	78.02361	0.64083	0.61946
73	84.43539	0.59217	0.61908
74	89.77762	0.55693	0.61824
75	94.43661	0.52946	0.61706
76	69.50909	0.71933	0.61841
77	78.02361	0.64083	0.61870
78	84.43539	0.59217	0.61836
79	89.77762	0.55693	0.61758
80	94.43661	0.52946	0.61648
81	69.50909	0.71933	0.61775
82	78.02361	0.64083	0.61803
83	84.43539	0.59217	0.61772
84	89.77762	0.55693	0.61699
85	94.43661	0.52946	0.61596
86	69.50909	0.71933	0.61717
87	78.02361	0.64083	0.61744
88	84.43539	0.59217	0.61715
89	89.77762	0.55693	0.61647
90	94.43661	0.52946	0.61551
91	69.50909	0.71933	0.61665
92	78.02361	0.64083	0.61691
93	84.43539	0.59217	0.61664
94	89.77762	0.55693	0.61601
95	94.43661	0.52946	0.61510
96	69.50909	0.71933	0.61618
97	78.02361	0.64083	0.61644
98	84.43539	0.59217	0.61619
99	89.77762	0.55693	0.61559
100	94.43661	0.52946	0.61473
101	69.50909	0.71933	0.61577
102	78.02361	0.64083	0.61601
103	84.43539	0.59217	0.61578
104	89.77762	0.55693	0.61521
105	94.43661	0.52946	0.61440
106	69.50909	0.71933	0.61539
107	78.02361	0.64083	0.61563
108	84.43539	0.59217	0.61541
109	89.77762	0.55693	0.61487
110	94.43661	0.52946	0.61409
111	69.50909	0.71933	0.61504
112	78.02361	0.64083	0.61527
113	84.43539	0.59217	0.61507

114	89.77762	0.55693	0.61456
115	[illegible]	0.52946	0.61382
116	69.50909	0.71933	0.61473
117	78.02361	0.64083	0.61495
118	84.43539	0.59217	0.61476
119	89.77762	0.55693	0.61427
120	94.43661	0.52946	0.61357
121	69.50909	0.71933	0.61444
122	78.02361	0.64083	0.61466
123	84.43539	0.59217	0.61447
124	89.77762	0.55693	0.61401
125	94.43661	0.52946	0.61333
126	69.50909	0.71933	0.61417
127	78.02361	0.64083	0.61438
128	84.43539	0.59217	0.61421
129	89.77762	0.55693	0.61377
130	94.43661	0.52946	0.61312
131	69.50909	0.71933	0.61393
132	78.02361	0.64083	0.61413
133	84.43539	0.59217	0.61397
134	89.77762	0.55693	0.61354
135	94.43661	0.52946	0.61292
136	69.50909	0.71933	0.61370
137	78.02361	0.64083	0.61390
138	84.43539	0.59217	0.61374
139	89.77762	0.55693	0.61333
140	94.43661	0.52946	0.61273
141	69.50909	0.71933	0.61349
142	78.02361	0.64083	0.61368
143	84.43539	0.59217	0.61353
144	89.77762	0.55693	0.61314
145	94.43661	0.52946	0.61256
146	69.50909	0.71933	0.61329
147	78.02361	0.64083	0.61348
148	84.43539	0.59217	0.61334
149	89.77762	0.55693	0.61296
150	94.43661	0.52946	0.61240
151	69.50909	0.71933	0.61311
152	78.02361	0.64083	0.61329
153	84.43539	0.59217	0.61315
154	89.77762	0.55693	0.61279
155	94.43661	0.52946	0.61225
156	69.50909	0.71933	0.61294
157	78.02361	0.64083	0.61311
158	84.43539	0.59217	0.61298
159	89.77762	0.55693	0.61263
160	94.43661	0.52946	0.61211
161	69.50909	0.71933	0.61277
162	78.02361	0.64083	0.61295
163	84.43539	0.59217	0.61282
164	89.77762	0.55693	0.61248
165	94.43661	0.52946	0.61198
166	69.50909	0.71933	0.61262
167	78.02361	0.64083	0.61279
168	84.43539	0.59217	0.61267
169	89.77762	0.55693	0.61234
170	94.43661	0.52946	0.61185
171	69.50909	0.71933	0.61248
172	78.02361	0.64083	0.61264
173	84.43539	0.59217	0.61253
174	89.77762	0.55693	0.61221

175	[illegible]	0.52946	0.61173
176	[illegible]	0.71933	0.61235
177	78.02361	0.64083	0.61251
178	84.43539	0.59217	0.61239
179	89.77762	0.55693	0.61208
180	94.43661	0.52946	0.61162
181	69.50909	0.71933	0.61222
182	78.02361	0.64083	0.61238
183	84.43539	0.59217	0.61226
184	89.77762	0.55693	0.61196
185	94.43661	0.52946	0.61152
186	69.50909	0.71933	0.61210
187	78.02361	0.64083	0.61225
188	84.43539	0.59217	0.61214
189	89.77762	0.55693	0.61185
190	94.43661	0.52946	0.61142
191	69.50909	0.71933	0.61198
192	78.02361	0.64083	0.61213
193	84.43539	0.59217	0.61203
194	89.77762	0.55693	0.61175
195	94.43661	0.52946	0.61132
196	69.50909	0.71933	0.61188
197	78.02361	0.64083	0.61202
198	84.43539	0.59217	0.61192
199	89.77762	0.55693	0.61165
200	94.43661	0.52946	0.61123

MM	M	NSYS	FAILR	TIMP	CREWS	Q
50	25	10000	0.50000E-03	10.0000	10	0.80000

TI	FTR	IETR
1.00000	5.00000	5

IX	TN(IX)	TOTN(IX)	AVGTN(IX)	ATTPN(J)	ATDAN(J)
1	1.00000	1.00000	1.00000	0.74755	1.00000
2	0.80000	1.00000	0.90000	0.51553	1.17888
3	0.70210	1.00000	0.83403	0.43903	1.38428
4	0.64000	1.00000	0.78553		
5	0.59564	1.00000	0.74755		
6	0.56168	1.28067	0.71657		
7	0.53449	1.19396	0.69056		
8	0.51200	1.15658	0.66824		
9	0.49295	1.12979	0.64876		
10	0.47651	1.11111	0.63154		
11	0.46211	1.55662	0.61613		
12	0.44935	1.42614	0.60224		
13	0.43792	1.35224	0.58960		
14	0.42759	1.30248	0.57802		
15	0.41820	1.26604	0.56737		
16	0.40960	1.23618	0.55751		
17	0.40168	1.59536	0.54834		
18	0.39436	1.50159	0.53979		
19	0.38756	1.43704	0.53178		
20	0.38121	1.38889	0.52425		
21	0.37527	1.91685	0.51715		
22	0.36969	1.73343	0.51045		
23	0.36444	1.62483	0.50410		
24	0.35948	1.54928	0.49808		
25	0.35478	1.49233	0.49234		
26	0.35033	2.09328	0.48688		
27	0.34610	1.85157	0.48167		
28	0.34207	1.73111	0.47668		
29	0.33823	1.64660	0.47191		
30	0.33456	1.58254	0.46733		
31	0.33105	2.17290	0.46293		
32	0.32768	1.95566	0.45871		
33	0.32445	1.82515	0.45464		
34	0.32135	1.73312	0.45072		
35	0.31836	1.66306	0.44694		
36	0.31549	2.28006	0.44328		
37	0.31272	2.04924	0.43976		
38	0.31004	1.90995	0.43634		
39	0.30746	1.81138	0.43304		
40	0.30497	1.73611	0.42984		
41	0.30255	2.37754	0.42673		
42	0.30021	2.13458	0.42372		
43	0.29795	1.98749	0.42079		
44	0.29575	1.88311	0.41795		
45	0.29362	1.80320	0.41519		
46	0.29155	2.46727	0.41250		
47	0.28954	2.21329	0.40988		
48	0.28758	2.05913	0.40734		
49	0.28568	1.94950	0.40485		
50	0.28383	1.86542	0.40243		
51	0.28202	2.55060	0.40007		
52	0.28027	2.28651	0.39777		

53	0.27[illegible]	2.12598	0.39552
54	0.27[illegible]	2.01144	0.39332
55	0.27525	1.92354	0.39117
56	0.27366	2.62857	0.38907
57	0.27210	2.35510	0.38702
58	0.27058	2.18848	0.38501
59	0.26910	2.06961	0.38305
60	0.26765	1.97818	0.38113
61	0.26623	2.70194	0.37924
62	0.26484	2.41372	0.37740
63	0.26348	2.24752	0.37559
64	0.26214	2.12452	0.37382
65	0.26084	2.02982	0.37208
66	0.25956	2.77134	0.37037
67	0.25831	2.48090	0.36870
68	0.25708	2.30346	0.36706
69	0.25587	2.17660	0.36545
70	0.25469	2.07882	0.36386
71	0.25353	2.83727	0.36231
72	0.25239	2.53905	0.36078
73	0.25127	2.35668	0.35928
74	0.25017	2.22618	0.35781
75	0.24910	2.12551	0.35636
76	0.24804	2.90011	0.35493
77	0.24699	2.59453	0.35353
78	0.24597	2.40748	0.35215
79	0.24496	2.27353	0.35080
80	0.24397	2.17014	0.34946
81	0.24300	2.96021	0.34815
82	0.24204	2.64761	0.34685
83	0.24110	2.45612	0.34558
84	0.24017	2.31890	0.34432
85	0.23926	2.21291	0.34309
86	0.23836	3.01785	0.34187
87	0.23747	2.69854	0.34067
88	0.23660	2.50281	0.33949
89	0.23574	2.36246	0.33832
90	0.23490	2.25400	0.33717
91	0.23406	3.07326	0.33604
92	0.23324	2.74753	0.33492
93	0.23243	2.54774	0.33382
94	0.23163	2.40440	0.33273
95	0.23084	2.29358	0.33166
96	0.23007	3.12663	0.33060
97	0.22930	2.79474	0.32956
98	0.22854	2.59106	0.32853
99	0.22780	2.44485	0.32751
100	0.22706	2.33177	0.32650
101	0.22634	3.17816	0.32551
102	0.22562	2.84033	0.32453
103	0.22491	2.63290	0.32356
104	0.22421	2.48394	0.32261
105	0.22352	2.36868	0.32167
106	0.22284	3.22798	0.32073
107	0.22217	2.88443	0.31981
108	0.22151	2.67338	0.31890
109	0.22085	2.52178	0.31800
110	0.22020	2.40442	0.31711
111	0.21956	3.27623	0.31623
112	0.21893	2.92715	0.31537
113	0.21830	2.71262	0.31451

114	0.21753	2.55845	0.31366
115	0.21700	3.43959	0.31282
116	0.21647	3.32304	0.31199
117	0.21587	2.96959	0.31116
118	0.21525	2.75069	0.31035
119	0.21470	2.59405	0.30955
120	0.21412	2.47273	0.30875
121	0.21355	3.36849	0.30797
122	0.21298	3.00886	0.30719
123	0.21242	2.78769	0.30642
124	0.21187	2.62865	0.30565
125	0.21132	2.50544	0.30490
126	0.21078	3.41269	0.30415
127	0.21025	3.04802	0.30341
128	0.20972	2.82368	0.30268
129	0.20919	2.66232	0.30196
130	0.20867	2.53727	0.30124
131	0.20816	3.45571	0.30053
132	0.20765	3.08614	0.29982
133	0.20714	2.85873	0.29913
134	0.20665	2.69511	0.29844
135	0.20615	2.56829	0.29775
136	0.20566	3.49763	0.29708
137	0.20518	3.12330	0.29641
138	0.20470	2.89289	0.29574
139	0.20422	2.72708	0.29508
140	0.20375	2.59853	0.29443
141	0.20329	3.53852	0.29378
142	0.20282	3.15955	0.29314
143	0.20237	2.92623	0.29251
144	0.20191	2.75829	0.29188
145	0.20146	2.62805	0.29126
146	0.20102	3.57844	0.29064
147	0.20058	3.19495	0.29002
148	0.20014	2.95879	0.28942
149	0.19971	2.78876	0.28881
150	0.19928	2.65689	0.28822
151	0.19885	3.61744	0.28763
152	0.19843	3.22954	0.28704
153	0.19801	2.99060	0.28646
154	0.19759	2.81855	0.28588
155	0.19718	2.68509	0.28531
156	0.19678	3.65589	0.28474
157	0.19637	3.26336	0.28418
158	0.19597	3.02172	0.28362
159	0.19557	2.84769	0.28307
160	0.19518	2.71267	0.28252
161	0.19479	3.69290	0.28197
162	0.19440	3.29647	0.28143
163	0.19401	3.05218	0.28089
164	0.19363	2.87622	0.28036
165	0.19325	2.73968	0.27983
166	0.19288	3.72944	0.27931
167	0.19251	3.32889	0.27879
168	0.19214	3.08202	0.27827
169	0.19177	2.90416	0.27776
170	0.19141	2.76614	0.27725
171	0.19105	3.76524	0.27675
172	0.19069	3.36065	0.27625
173	0.19033	3.11125	0.27575
174	0.18998	2.93155	0.27526

175	0.18960	2.79207	0.27477
176	0.18927	3.80033	0.27428
177	0.18894	3.39179	0.27380
178	0.18859	3.13992	0.27332
179	0.18625	2.95841	0.27285
180	0.18792	2.81751	0.27238
181	0.18758	3.83476	0.27191
182	0.18725	3.42235	0.27144
183	0.18692	3.16805	0.27098
184	0.18659	2.98477	0.27052
185	0.18627	2.84247	0.27007
186	0.18594	3.86855	0.26961
187	0.18562	3.45234	0.26917
188	0.18530	3.19566	0.26872
189	0.18499	3.01064	0.26828
190	0.18467	2.86698	0.26784
191	0.18436	3.90173	0.26740
192	0.18405	3.48179	0.26696
193	0.18374	3.22278	0.26653
194	0.18344	3.03605	0.26611
195	0.18314	2.89105	0.26568
196	0.18283	3.93432	0.26526
197	0.18254	3.51073	0.26484
198	0.18224	3.24942	0.26442
199	0.18194	3.06102	0.26401
200	0.18165	2.91471	0.26359

MM	M	NSYS	FAILR	TIMP	CREWS	Q
100	10	10000	0.50000E-03	10.0000	10	0.80000

TI	ETR	IETR
1.00000	5.00000	5

IX	R(IX)	T(IX)	AVGT(IX)	J	ATTTP(J)
1	100.00000	1.00000	1.00000	1	0.74755
2	125.00000	0.80000	0.90000	2	0.53146
3	142.42908	0.70210	0.83403	3	0.46451
4	156.24998	0.64000	0.78553	4	0.42891
5	167.88737	0.59564	0.74755	5	0.40694
6	170.23273	0.58743	0.72086	6	0.39254
7	180.88492	0.55284	0.69686	7	0.38295
8	190.02409	0.52625	0.67553	8	0.37673
9	198.19943	0.50454	0.65653	9	0.37304
10	205.66199	0.48623	0.63950	10	0.37136
11	200.92213	0.49771	0.62661	11	0.37136
12	209.24579	0.47791	0.61422		
13	216.45776	0.46198	0.60251		
14	223.00542	0.44842	0.59150		
15	229.07103	0.43655	0.58117		
16	220.34190	0.45384	0.57321		
17	227.73053	0.43912	0.56533		
18	234.11250	0.42715	0.55765		
19	239.91736	0.41681	0.55024		
20	245.31349	0.40764	0.54311		
21	233.74365	0.42782	0.53762		
22	240.65784	0.41553	0.53207		
23	246.60493	0.40551	0.52656		
24	252.00970	0.39681	0.52116		
25	257.03589	0.38905	0.51587		
26	243.22675	0.41114	0.51185		
27	249.87511	0.40020	0.50771		
28	255.57414	0.39128	0.50355		
29	260.74658	0.38351	0.49941		
30	265.55542	0.37657	0.49532		
31	249.87851	0.40019	0.49225		
32	256.37231	0.39006	0.48906		
33	261.92578	0.38179	0.48581		
34	266.96045	0.37459	0.48253		
35	271.63818	0.36814	0.47927		
36	254.34764	0.39316	0.47687		
37	260.75293	0.38350	0.47435		
38	266.22192	0.37563	0.47175		
39	271.17627	0.36876	0.46911		
40	275.77734	0.36261	0.46645		
41	257.05811	0.38902	0.46456		
42	263.41650	0.37963	0.46254		
43	268.84082	0.37197	0.46043		
44	273.75195	0.36529	0.45827		
45	278.31177	0.35931	0.45607		
46	258.30542	0.38714	0.45457		
47	264.64502	0.37786	0.45294		
48	270.05054	0.37030	0.45122		
49	274.94409	0.36371	0.44943		
50	279.48682	0.35780	0.44760		
51	258.30542	0.38714	0.44641		
52	264.64502	0.37786	0.44509		

53	270.05054	0.37030	0.44368
54	274.94409	0.36371	0.44220
55	279.48682	0.35780	0.44067
56	258.30542	0.38714	0.43971
57	264.64502	0.37786	0.43863
58	270.05054	0.37030	0.43745
59	274.94409	0.36371	0.43620
60	279.48682	0.35780	0.43489
61	258.30542	0.38714	0.43411
62	264.64502	0.37786	0.43320
63	270.05054	0.37030	0.43220
64	274.94409	0.36371	0.43113
65	279.48682	0.35780	0.43000
66	258.30542	0.38714	0.42935
67	264.64502	0.37786	0.42859
68	270.05054	0.37030	0.42773
69	274.94409	0.36371	0.42680
70	279.48682	0.35780	0.42581
71	258.30542	0.38714	0.42527
72	264.64502	0.37786	0.42461
73	270.05054	0.37030	0.42387
74	274.94409	0.36371	0.42305
75	279.48682	0.35780	0.42218
76	258.30542	0.38714	0.42172
77	264.64502	0.37786	0.42115
78	270.05054	0.37030	0.42050
79	274.94409	0.36371	0.41978
80	279.48682	0.35780	0.41901
81	258.30542	0.38714	0.41861
82	264.64502	0.37786	0.41812
83	270.05054	0.37030	0.41754
84	274.94409	0.36371	0.41690
85	279.48682	0.35780	0.41620
86	258.30542	0.38714	0.41587
87	264.64502	0.37786	0.41543
88	270.05054	0.37030	0.41492
89	274.94409	0.36371	0.41434
90	279.48682	0.35780	0.41371
91	258.30542	0.38714	0.41342
92	264.64502	0.37786	0.41303
93	270.05054	0.37030	0.41257
94	274.94409	0.36371	0.41205
95	279.48682	0.35780	0.41148
96	258.30542	0.38714	0.41123
97	264.64502	0.37786	0.41089
98	270.05054	0.37030	0.41047
99	274.94409	0.36371	0.41000
100	279.48682	0.35780	0.40948
101	258.30542	0.38714	0.40926
102	264.64502	0.37786	0.40895
103	270.05054	0.37030	0.40857
104	274.94409	0.36371	0.40814
105	279.48682	0.35780	0.40766
106	258.30542	0.38714	0.40747
107	264.64502	0.37786	0.40719
108	270.05054	0.37030	0.40685
109	274.94409	0.36371	0.40645
110	279.48682	0.35780	0.40601
111	258.30542	0.38714	0.40584
112	264.64502	0.37786	0.40559
113	270.05054	0.37030	0.40528

114	274.94409	0.36371	0.40491
115	[illegible]	0.35780	0.40450
116	258.30542	0.38714	0.40435
117	264.64502	0.37786	0.40413
118	270.05054	0.37030	0.40384
119	274.94409	0.36371	0.40350
120	279.48682	0.35780	0.40312
121	258.30542	0.38714	0.40299
122	264.64502	0.37786	0.40279
123	270.05054	0.37030	0.40252
124	274.94409	0.36371	0.40221
125	279.48682	0.35780	0.40185
126	258.30542	0.38714	0.40174
127	264.64502	0.37786	0.40155
128	270.05054	0.37030	0.40130
129	274.94409	0.36371	0.40101
130	279.48682	0.35780	0.40068
131	258.30542	0.38714	0.40058
132	264.64502	0.37786	0.40040
133	270.05054	0.37030	0.40018
134	274.94409	0.36371	0.39991
135	279.48682	0.35780	0.39959
136	258.30542	0.38714	0.39950
137	264.64502	0.37786	0.39934
138	270.05054	0.37030	0.39913
139	274.94409	0.36371	0.39888
140	279.48682	0.35780	0.39859
141	258.30542	0.38714	0.39850
142	264.64502	0.37786	0.39836
143	270.05054	0.37030	0.39816
144	274.94409	0.36371	0.39792
145	279.48682	0.35780	0.39765
146	258.30542	0.38714	0.39757
147	264.64502	0.37786	0.39744
148	270.05054	0.37030	0.39726
149	274.94409	0.36371	0.39703
150	279.48682	0.35780	0.39677
151	258.30542	0.38714	0.39671
152	264.64502	0.37786	0.39658
153	270.05054	0.37030	0.39641
154	274.94409	0.36371	0.39620
155	279.48682	0.35780	0.39595
156	258.30542	0.38714	0.39589
157	264.64502	0.37786	0.39578
158	270.05054	0.37030	0.39562
159	274.94409	0.36371	0.39542
160	279.48682	0.35780	0.39518
161	258.30542	0.38714	0.39513
162	264.64502	0.37786	0.39503
163	270.05054	0.37030	0.39487
164	274.94409	0.36371	0.39468
165	279.48682	0.35780	0.39446
166	258.30542	0.38714	0.39442
167	264.64502	0.37786	0.39432
168	270.05054	0.37030	0.39417
169	274.94409	0.36371	0.39399
170	279.48682	0.35780	0.39378
171	258.30542	0.38714	0.39374
172	264.64502	0.37786	0.39365
173	270.05054	0.37030	0.39351
174	274.94409	0.36371	0.39334

175	279.48682	0.35780	0.39314
176	[illegible]	0.38714	0.39311
177	264.64502	0.37786	0.39302
178	270.05054	0.37030	0.39289
179	274.94409	0.36371	0.39273
180	279.48682	0.35780	0.39253
181	258.30542	0.38714	0.39250
182	264.64502	0.37786	0.39242
183	270.05054	0.37030	0.39230
184	274.94409	0.36371	0.39215
185	279.48682	0.35780	0.39196
186	258.30542	0.38714	0.39194
187	264.64502	0.37786	0.39186
188	270.05054	0.37030	0.39175
189	274.94409	0.36371	0.39160
190	279.48682	0.35780	0.39142
191	258.30542	0.38714	0.39140
192	264.64502	0.37786	0.39133
193	270.05054	0.37030	0.39122
194	274.94409	0.36371	0.39108
195	279.48682	0.35780	0.39091
196	258.30542	0.38714	0.39089
197	264.64502	0.37786	0.39082
198	270.05054	0.37030	0.39072
199	274.94409	0.36371	0.39058
200	279.48682	0.35780	0.39042

MM	M	DAYS	FAILR	TIMP	CREWS	Q
100	10	10000	0.50000E-03	10.0000	10	0.80000

TI	ETR	IETR
1.00000	5.00000	5

IX	TN(IX)	TOTN(IX)	AVGTN(IX)	ATTPN(J)	ATDAN(J)
1	1.00000	1.00000	1.00000	0.74755	1.00000
2	0.80000	1.00000	0.90000	0.51553	1.03090
3	0.70210	1.00000	0.83403	0.43903	1.05803
4	0.64000	1.00000	0.78553	0.39488	1.08618
5	0.59564	1.00000	0.74755	0.36473	1.11573
6	0.56168	1.04584	0.71657	0.34226	1.14690
7	0.53449	1.03433	0.69056	0.32458	1.17985
8	0.51200	1.02783	0.66824	0.31014	1.21474
9	0.49295	1.02352	0.64876	0.29802	1.25175
10	0.47651	1.02041	0.63154	0.28764	1.29109
11	0.46211	1.07702	0.61613	0.27859	1.33298
12	0.44935	1.06356	0.60224		
13	0.43792	1.05496	0.58960		
14	0.42759	1.04871	0.57802		
15	0.41820	1.04387	0.56737		
16	0.40960	1.10801	0.55751		
17	0.40168	1.09319	0.54834		
18	0.39436	1.08313	0.53979		
19	0.38756	1.07549	0.53178		
20	0.38121	1.06934	0.52425		
21	0.37527	1.14004	0.51715		
22	0.36969	1.12399	0.51045		
23	0.36444	1.11270	0.50410		
24	0.35948	1.10385	0.49808		
25	0.35478	1.09658	0.49234		
26	0.35033	1.17357	0.48688		
27	0.34610	1.15631	0.48167		
28	0.34207	1.14384	0.47668		
29	0.33823	1.13388	0.47191		
30	0.33456	1.12557	0.46733		
31	0.33105	1.20888	0.46293		
32	0.32768	1.19036	0.45871		
33	0.32445	1.17672	0.45464		
34	0.32135	1.16568	0.45072		
35	0.31836	1.15635	0.44694		
36	0.31549	1.24621	0.44328		
37	0.31272	1.22636	0.43976		
38	0.31004	1.21152	0.43634		
39	0.30746	1.19938	0.43304		
40	0.30497	1.18902	0.42984		
41	0.30255	1.28579	0.42673		
42	0.30021	1.26452	0.42372		
43	0.29795	1.24843	0.42079		
44	0.29575	1.23514	0.41795		
45	0.29362	1.22372	0.41519		
46	0.29155	1.32787	0.41250		
47	0.28954	1.30506	0.40988		
48	0.28758	1.28764	0.40734		
49	0.28568	1.27314	0.40485		
50	0.28383	1.26062	0.40243		
51	0.28202	1.37272	0.40007		
52	0.28027	1.34823	0.39777		

53	0.27[illegible]	1.32937	0.39552
54	[illegible]	1.31359	0.39332
55	0.27529	1.29990	0.39117
56	0.27366	1.41468	0.38907
57	0.27210	1.38868	0.38702
58	0.27058	1.36352	0.38501
59	0.26910	1.35158	0.38305
60	0.26765	1.33683	0.38113
61	0.26623	1.45417	0.37924
62	0.26484	1.42678	0.37740
63	0.26348	1.40544	0.37559
64	0.26214	1.38744	0.37382
65	0.26084	1.37172	0.37208
66	0.25956	1.49152	0.37037
67	0.25831	1.46285	0.36870
68	0.25708	1.44042	0.36706
69	0.25587	1.42145	0.36545
70	0.25469	1.40484	0.36386
71	0.25353	1.52700	0.36231
72	0.25239	1.49714	0.36078
73	0.25127	1.47371	0.35928
74	0.25017	1.45383	0.35781
75	0.24910	1.43639	0.35636
76	0.24804	1.56082	0.35493
77	0.24699	1.52985	0.35353
78	0.24597	1.50547	0.35215
79	0.24496	1.48475	0.35080
80	0.24397	1.46655	0.34946
81	0.24300	1.59317	0.34815
82	0.24204	1.56116	0.34685
83	0.24110	1.53589	0.34558
84	0.24017	1.51438	0.34432
85	0.23926	1.49545	0.34309
86	0.23836	1.62418	0.34187
87	0.23747	1.59119	0.34067
88	0.23660	1.56509	0.33949
89	0.23574	1.54283	0.33832
90	0.23490	1.52322	0.33717
91	0.23406	1.65401	0.33604
92	0.23324	1.62007	0.33492
93	0.23243	1.59318	0.33382
94	0.23163	1.57022	0.33273
95	0.23084	1.54997	0.33166
96	0.23007	1.68273	0.33060
97	0.22930	1.64791	0.32956
98	0.22854	1.62027	0.32853
99	0.22780	1.59664	0.32751
100	0.22706	1.57578	0.32650
101	0.22634	1.71046	0.32551
102	0.22562	1.67479	0.32453
103	0.22491	1.64643	0.32356
104	0.22421	1.62216	0.32261
105	0.22352	1.60072	0.32167
106	0.22284	1.73728	0.32073
107	0.22217	1.70079	0.31981
108	0.22151	1.67175	0.31890
109	0.22085	1.64687	0.31800
110	0.22020	1.62488	0.31711
111	0.21956	1.76325	0.31623
112	0.21893	1.72598	0.31537
113	0.21830	1.69628	0.31451

114	0.21768	1.67082	0.31366
115	0.21717	1.64930	0.31282
116	0.21647	1.78843	0.31199
117	0.21587	1.75042	0.31116
118	0.21528	1.72009	0.31035
119	0.21470	1.69407	0.30955
120	0.21412	1.67103	0.30875
121	0.21355	1.81290	0.30797
122	0.21298	1.77416	0.30719
123	0.21242	1.74323	0.30642
124	0.21187	1.71667	0.30565
125	0.21132	1.69314	0.30490
126	0.21078	1.83668	0.30415
127	0.21025	1.79725	0.30341
128	0.20972	1.76573	0.30268
129	0.20919	1.73865	0.30196
130	0.20867	1.71465	0.30124
131	0.20816	1.85984	0.30053
132	0.20765	1.81974	0.29982
133	0.20714	1.78765	0.29913
134	0.20665	1.76007	0.29844
135	0.20615	1.73561	0.29775
136	0.20566	1.88240	0.29708
137	0.20518	1.84165	0.29641
138	0.20470	1.80901	0.29574
139	0.20422	1.78095	0.29508
140	0.20375	1.75605	0.29443
141	0.20329	1.90441	0.29378
142	0.20282	1.86302	0.29314
143	0.20237	1.82986	0.29251
144	0.20191	1.80133	0.29188
145	0.20146	1.77600	0.29126
146	0.20102	1.92589	0.29064
147	0.20058	1.88389	0.29002
148	0.20014	1.85022	0.28942
149	0.19971	1.82123	0.28881
150	0.19928	1.79549	0.28822
151	0.19885	1.94688	0.28763
152	0.19843	1.90429	0.28704
153	0.19801	1.87011	0.28646
154	0.19759	1.84069	0.28588
155	0.19718	1.81454	0.28531
156	0.19678	1.96741	0.28474
157	0.19637	1.92423	0.28418
158	0.19597	1.88958	0.28362
159	0.19557	1.85972	0.28307
160	0.19518	1.83319	0.28252
161	0.19479	1.98749	0.28197
162	0.19440	1.94375	0.28143
163	0.19401	1.90862	0.28089
164	0.19363	1.87835	0.28036
165	0.19325	1.85143	0.27983
166	0.19288	2.00716	0.27931
167	0.19251	1.96287	0.27879
168	0.19214	1.92728	0.27827
169	0.19177	1.89660	0.27776
170	0.19141	1.86932	0.27725
171	0.19105	2.02642	0.27675
172	0.19069	1.98160	0.27625
173	0.19033	1.94556	0.27575
174	0.18998	1.91448	0.27526

175	0.18963	1.88684	0.27477
176	0.18[illegible]	2.04531	0.27428
177	0.18894	1.99996	0.27380
178	0.18859	1.96349	0.27332
179	0.18825	1.93202	0.27285
180	0.18792	1.90403	0.27238
181	0.18758	2.06384	0.27191
182	0.18725	2.01798	0.27144
183	0.18692	1.98108	0.27098
184	0.18659	1.94923	0.27052
185	0.18627	1.92090	0.27007
186	0.18594	2.08203	0.26961
187	0.18562	2.03566	0.26917
188	0.18530	1.99834	0.26872
189	0.18499	1.96613	0.26828
190	0.18467	1.93746	0.26784
191	0.18436	2.09988	0.26740
192	0.18405	2.05303	0.26696
193	0.18374	2.01530	0.26653
194	0.18344	1.98273	0.26611
195	0.18314	1.95373	0.26568
196	0.18283	2.11742	0.26526
197	0.18254	2.07009	0.26484
198	0.18224	2.03196	0.26442
199	0.18194	1.99903	0.26401
200	0.18165	1.96972	0.26359

MM	M	NSYS	FAILR	TIMP	CREWS	Q
100	20	10000	0.50000E-03	10.0000	10	0.80000

TI	FTR	IETR
1.00000	5.00000	5

IX	R(IX)	T(IX)	AVGT(IX)	J	ATTTP(J)
1	100.00000	1.00000	1.00000	1	0.74755
2	125.00000	0.80000	0.90000	2	0.54850
3	142.42908	0.70210	0.83403	3	0.49328
4	156.24998	0.64000	0.78553	4	0.46955
5	167.88737	0.59564	0.74755	5	0.46046
6	162.42911	0.61565	0.72557	6	0.46046
7	174.67549	0.57249	0.70370		
8	184.73578	0.54131	0.68340		
9	193.53839	0.51669	0.66488		
10	201.46481	0.49636	0.64803		
11	185.44618	0.53924	0.63814		
12	195.94615	0.51034	0.62749		
13	204.56104	0.48885	0.61682		
14	212.14289	0.47138	0.60643		
15	219.02161	0.45658	0.59644		
16	196.54320	0.50879	0.59096		
17	206.50888	0.48424	0.58469		
18	214.54946	0.46588	0.57809		
19	221.80685	0.45084	0.57139		
20	228.30301	0.43801	0.56472		
21	201.01048	0.49749	0.56152		
22	210.81801	0.47434	0.55756		
23	218.81363	0.45701	0.55318		
24	225.83766	0.44280	0.54859		
25	232.21057	0.43064	0.54387		
26	201.01048	0.49749	0.54208		
27	210.81801	0.47434	0.53957		
28	218.81363	0.45701	0.53663		
29	225.83766	0.44280	0.53339		
30	232.21057	0.43064	0.52997		
31	201.01048	0.49749	0.52892		
32	210.81801	0.47434	0.52721		
33	218.81363	0.45701	0.52508		
34	225.83766	0.44280	0.52266		
35	232.21057	0.43064	0.52003		
36	201.01048	0.49749	0.51941		
37	210.81801	0.47434	0.51819		
38	218.81363	0.45701	0.51658		
39	225.83766	0.44280	0.51469		
40	232.21057	0.43064	0.51259		
41	201.01048	0.49749	0.51222		
42	210.81801	0.47434	0.51132		
43	218.81363	0.45701	0.51005		
44	225.83766	0.44280	0.50852		
45	232.21057	0.43064	0.50679		
46	201.01048	0.49749	0.50659		
47	210.81801	0.47434	0.50590		
48	218.81363	0.45701	0.50489		
49	225.83766	0.44280	0.50362		
50	232.21057	0.43064	0.50216		
51	201.01048	0.49749	0.50207		
52	210.81801	0.47434	0.50153		

53	218.[illegible]3	0.45701	0.50069
54	[illegible]	0.44280	0.49962
55	232.21057	0.43064	0.49837
56	201.01048	0.49749	0.49835
57	210.81801	0.47434	0.49793
58	218.81363	0.45701	0.49722
59	225.83766	0.44280	0.49630
60	232.21057	0.43064	0.49521
61	201.01048	0.49749	0.49524
62	210.81801	0.47434	0.49491
63	218.81363	0.45701	0.49431
64	225.83766	0.44280	0.49350
65	232.21057	0.43064	0.49253
66	201.01048	0.49749	0.49261
67	210.81801	0.47434	0.49234
68	218.81363	0.45701	0.49182
69	225.83766	0.44280	0.49111
70	232.21057	0.43064	0.49024
71	201.01048	0.49749	0.49034
72	210.81801	0.47434	0.49012
73	218.81363	0.45701	0.48967
74	225.83766	0.44280	0.48903
75	232.21057	0.43064	0.48826
76	201.01048	0.49749	0.48838
77	210.81801	0.47434	0.48819
78	218.81363	0.45701	0.48779
79	225.83766	0.44280	0.48723
80	232.21057	0.43064	0.48652
81	201.01048	0.49749	0.48665
82	210.81801	0.47434	0.48650
83	218.81363	0.45701	0.48615
84	225.83766	0.44280	0.48563
85	232.21057	0.43064	0.48498
86	201.01048	0.49749	0.48513
87	210.81801	0.47434	0.48501
88	218.81363	0.45701	0.48469
89	225.83766	0.44280	0.48422
90	232.21057	0.43064	0.48362
91	201.01048	0.49749	0.48377
92	210.81801	0.47434	0.48367
93	218.81363	0.45701	0.48338
94	225.83766	0.44280	0.48295
95	232.21057	0.43064	0.48240
96	201.01048	0.49749	0.48256
97	210.81801	0.47434	0.48247
98	218.81363	0.45701	0.48221
99	225.83766	0.44280	0.48182
100	232.21057	0.43064	0.48130
101	201.01048	0.49749	0.48146
102	210.81801	0.47434	0.48139
103	218.81363	0.45701	0.48116
104	225.83766	0.44280	0.48079
105	232.21057	0.43064	0.48031
106	201.01048	0.49749	0.48047
107	210.81801	0.47434	0.48042
108	218.81363	0.45701	0.48020
109	225.83766	0.44280	0.47986
110	232.21057	0.43064	0.47941
111	201.01048	0.49749	0.47957
112	210.81801	0.47434	0.47952
113	218.81363	0.45701	0.47932

114	225.83766	0.44280	0.47900
115	[illegible]	0.43064	0.47858
116	201.01048	0.49749	0.47875
117	210.81801	0.47434	0.47871
118	218.81363	0.45701	0.47853
119	225.83766	0.44280	0.47822
120	232.21057	0.43064	0.47783
121	201.01048	0.49749	0.47799
122	210.81801	0.47434	0.47796
123	218.81363	0.45701	0.47779
124	225.83766	0.44280	0.47751
125	232.21057	0.43064	0.47713
126	201.01048	0.49749	0.47729
127	210.81801	0.47434	0.47727
128	218.81363	0.45701	0.47711
129	225.83766	0.44280	0.47685
130	232.21057	0.43064	0.47649
131	201.01048	0.49749	0.47665
132	210.81801	0.47434	0.47663
133	218.81363	0.45701	0.47649
134	225.83766	0.44280	0.47623
135	232.21057	0.43064	0.47590
136	201.01048	0.49749	0.47606
137	210.81801	0.47434	0.47604
138	218.81363	0.45701	0.47591
139	225.83766	0.44280	0.47567
140	232.21057	0.43064	0.47535
141	201.01048	0.49749	0.47550
142	210.81801	0.47434	0.47549
143	218.81363	0.45701	0.47536
144	225.83766	0.44280	0.47514
145	232.21057	0.43064	0.47483
146	201.01048	0.49749	0.47499
147	210.81801	0.47434	0.47498
148	218.81363	0.45701	0.47486
149	225.83766	0.44280	0.47465
150	232.21057	0.43064	0.47435
151	201.01048	0.49749	0.47451
152	210.81801	0.47434	0.47450
153	218.81363	0.45701	0.47439
154	225.83766	0.44280	0.47418
155	232.21057	0.43064	0.47390
156	201.01048	0.49749	0.47406
157	210.81801	0.47434	0.47406
158	218.81363	0.45701	0.47395
159	225.83766	0.44280	0.47375
160	232.21057	0.43064	0.47348
161	201.01048	0.49749	0.47363
162	210.81801	0.47434	0.47364
163	218.81363	0.45701	0.47353
164	225.83766	0.44280	0.47335
165	232.21057	0.43064	0.47309
166	201.01048	0.49749	0.47324
167	210.81801	0.47434	0.47324
168	218.81363	0.45701	0.47315
169	225.83766	0.44280	0.47297
170	232.21057	0.43064	0.47272
171	201.01048	0.49749	0.47286
172	210.81801	0.47434	0.47287
173	218.81363	0.45701	0.47278
174	225.83766	0.44280	0.47261

175	232.21057	0.43064	0.47237
176	[illegible]	0.49749	0.47251
177	210.81801	0.47434	0.47252
178	218.81363	0.45701	0.47243
179	225.83766	0.44280	0.47227
180	232.21057	0.43064	0.47204
181	201.01048	0.49749	0.47218
182	210.81801	0.47434	0.47219
183	218.81363	0.45701	0.47210
184	225.83766	0.44280	0.47195
185	232.21057	0.43064	0.47172
186	201.01048	0.49749	0.47186
187	210.81801	0.47434	0.47187
188	218.81363	0.45701	0.47179
189	225.83766	0.44280	0.47164
190	232.21057	0.43064	0.47143
191	201.01048	0.49749	0.47156
192	210.81801	0.47434	0.47158
193	218.81363	0.45701	0.47150
194	225.83766	0.44280	0.47135
195	232.21057	0.43064	0.47114
196	201.01048	0.49749	0.47128
197	210.81801	0.47434	0.47129
198	218.81363	0.45701	0.47122
199	225.83766	0.44280	0.47108
200	232.21057	0.43064	0.47088

MM	M	NSYS	FAILR	TIMP	CREWS	Q
100	20	10000	0.50000E-03	10.0000	10	0.80000

TI	ETR	IETR
1.00000	5.00000	5

IX	TN(IX)	TOTN(IX)	AVGTN(IX)	ATTPN(J)	ATDAN(J)
1	1.00000	1.00000	1.00000	0.74755	1.00000
2	0.80000	1.00000	0.90000	0.51553	1.06397
3	0.70210	1.00000	0.83403	0.43903	1.12356
4	0.64000	1.00000	0.78553	0.39488	1.18910
5	0.59584	1.00000	0.74755	0.36473	1.26245
6	0.56168	1.09609	0.71657	0.34226	1.34534
7	0.53449	1.07110	0.69056		
8	0.51200	1.05725	0.66824		
9	0.49295	1.04817	0.64876		
10	0.47651	1.04167	0.63154		
11	0.46211	1.16690	0.61613		
12	0.44935	1.13575	0.60224		
13	0.43792	1.11631	0.58960		
14	0.42759	1.10241	0.57802		
15	0.41820	1.09177	0.56737		
16	0.40960	1.24217	0.55751		
17	0.40168	1.20553	0.54834		
18	0.39436	1.18135	0.53979		
19	0.38756	1.16330	0.53178		
20	0.38121	1.14902	0.52425		
21	0.37527	1.32569	0.51715		
22	0.36969	1.28309	0.51045		
23	0.36444	1.25402	0.50410		
24	0.35948	1.23178	0.49808		
25	0.35478	1.21382	0.49234		
26	0.35033	1.42004	0.48688		
27	0.34610	1.37053	0.48167		
28	0.34207	1.33600	0.47668		
29	0.33823	1.30915	0.47191		
30	0.33456	1.28720	0.46733		
31	0.33105	1.50277	0.46293		
32	0.32768	1.44758	0.45871		
33	0.32445	1.40857	0.45464		
34	0.32135	1.37794	0.45072		
35	0.31836	1.35268	0.44694		
36	0.31549	1.57688	0.44328		
37	0.31272	1.51684	0.43976		
38	0.31004	1.47402	0.43634		
39	0.30746	1.44016	0.43304		
40	0.30497	1.41210	0.42984		
41	0.30255	1.64430	0.42673		
42	0.30021	1.58002	0.42372		
43	0.29795	1.53386	0.42079		
44	0.29575	1.49719	0.41795		
45	0.29362	1.46667	0.41519		
46	0.29155	1.70636	0.41250		
47	0.28954	1.63828	0.40988		
48	0.28758	1.58915	0.40734		
49	0.28568	1.54998	0.40485		
50	0.28383	1.51727	0.40243		
51	0.28202	1.76399	0.40007		
52	0.28027	1.69247	0.39777		

53	0.27855	1.64066	0.39552
54	0.27677	1.59922	0.39332
55	0.27525	1.56455	0.39117
56	0.27366	1.81791	0.38907
57	0.27210	1.74324	0.38702
58	0.27058	1.68897	0.38501
59	0.26910	1.64547	0.38305
60	0.26765	1.60899	0.38113
61	0.26623	1.86865	0.37924
62	0.26484	1.79107	0.37740
63	0.26348	1.73454	0.37559
64	0.26214	1.68913	0.37382
65	0.26084	1.65099	0.37208
66	0.25956	1.91665	0.37037
67	0.25831	1.83636	0.36870
68	0.25708	1.77771	0.36706
69	0.25587	1.73054	0.36545
70	0.25469	1.69086	0.36386
71	0.25353	1.96224	0.36231
72	0.25239	1.87940	0.36078
73	0.25127	1.81878	0.35928
74	0.25017	1.76995	0.35781
75	0.24910	1.72883	0.35636
76	0.24804	2.00571	0.35493
77	0.24699	1.92046	0.35353
78	0.24597	1.85799	0.35215
79	0.24496	1.80760	0.35080
80	0.24397	1.76513	0.34946
81	0.24300	2.04727	0.34815
82	0.24204	1.95976	0.34685
83	0.24110	1.89553	0.34558
84	0.24017	1.84367	0.34432
85	0.23926	1.79991	0.34309
86	0.23836	2.08713	0.34187
87	0.23747	1.99746	0.34067
88	0.23660	1.93156	0.33949
89	0.23574	1.87831	0.33832
90	0.23490	1.83334	0.33717
91	0.23406	2.12545	0.33604
92	0.23324	2.03372	0.33492
93	0.23243	1.96623	0.33382
94	0.23163	1.91165	0.33273
95	0.23084	1.86553	0.33166
96	0.23007	2.16237	0.33060
97	0.22930	2.06866	0.32956
98	0.22854	1.99966	0.32853
99	0.22780	1.94381	0.32751
100	0.22706	1.89659	0.32650
101	0.22634	2.19800	0.32551
102	0.22562	2.10241	0.32453
103	0.22491	2.03196	0.32356
104	0.22421	1.97489	0.32261
105	0.22352	1.92662	0.32167
106	0.22284	2.23246	0.32073
107	0.22217	2.13505	0.31981
108	0.22151	2.06320	0.31890
109	0.22085	2.00497	0.31800
110	0.22020	1.95569	0.31711
111	0.21956	2.26583	0.31623
112	0.21893	2.16667	0.31537
113	0.21830	2.09348	0.31451

114	0.21708	2.03413	0.31366
115	0.21677	1.98388	0.31282
116	0.21647	2.29820	0.31199
117	0.21587	2.19735	0.31116
118	0.21528	2.12287	0.31035
119	0.21470	2.06243	0.30955
120	0.21412	2.01124	0.30875
121	0.21355	2.32964	0.30797
122	0.21298	2.22715	0.30719
123	0.21242	2.15142	0.30642
124	0.21187	2.08994	0.30565
125	0.21132	2.03785	0.30490
126	0.21078	2.36020	0.30415
127	0.21025	2.25614	0.30341
128	0.20972	2.17919	0.30268
129	0.20919	2.11671	0.30196
130	0.20867	2.06374	0.30124
131	0.20816	2.38996	0.30053
132	0.20765	2.28436	0.29982
133	0.20714	2.20624	0.29913
134	0.20665	2.14278	0.29844
135	0.20615	2.08897	0.29775
136	0.20566	2.41895	0.29708
137	0.20518	2.31186	0.29641
138	0.20470	2.23261	0.29574
139	0.20422	2.16820	0.29508
140	0.20375	2.11357	0.29443
141	0.20329	2.44723	0.29378
142	0.20282	2.33870	0.29314
143	0.20237	2.25834	0.29251
144	0.20191	2.19301	0.29188
145	0.20146	2.13758	0.29126
146	0.20102	2.47484	0.29064
147	0.20058	2.36490	0.29002
148	0.20014	2.28346	0.28942
149	0.19971	2.21724	0.28881
150	0.19928	2.16104	0.28822
151	0.19885	2.50181	0.28763
152	0.19843	2.39050	0.28704
153	0.19801	2.30802	0.28646
154	0.19759	2.24093	0.28588
155	0.19718	2.18397	0.28531
156	0.19678	2.52819	0.28474
157	0.19637	2.41554	0.28418
158	0.19597	2.33203	0.28362
159	0.19557	2.26410	0.28307
160	0.19518	2.20641	0.28252
161	0.19479	2.55400	0.28197
162	0.19440	2.44004	0.28143
163	0.19401	2.35554	0.28089
164	0.19363	2.28678	0.28036
165	0.19325	2.22837	0.27983
166	0.19288	2.57927	0.27931
167	0.19251	2.46404	0.27879
168	0.19214	2.37856	0.27827
169	0.19177	2.30699	0.27776
170	0.19141	2.24989	0.27725
171	0.19105	2.60403	0.27675
172	0.19069	2.48755	0.27625
173	0.19033	2.40113	0.27575
174	0.18998	2.33077	0.27526

175	0.189[illegible]	2.27099	0.27477
176	0.18[illegible]	2.62830	0.27428
177	0.18894	2.51060	0.27380
178	0.18859	2.42325	0.27332
179	0.18825	2.35212	0.27285
180	0.18792	2.29168	0.27238
181	0.18758	2.65211	0.27191
182	0.18725	2.53322	0.27144
183	0.18692	2.44496	0.27098
184	0.18659	2.37308	0.27052
185	0.18627	2.31198	0.27007
186	0.18594	2.67547	0.26961
187	0.18562	2.55542	0.26917
188	0.18530	2.46627	0.26872
189	0.18499	2.39365	0.26828
190	0.18467	2.33191	0.26784
191	0.18436	2.69842	0.26740
192	0.18405	2.57722	0.26696
193	0.18374	2.48720	0.26653
194	0.18344	2.41385	0.26611
195	0.18314	2.35149	0.26568
196	0.18283	2.72096	0.26526
197	0.18254	2.59863	0.26484
198	0.18224	2.50776	0.26442
199	0.18194	2.43371	0.26401
200	0.18165	2.37074	0.26359

MM	M	NSYS	FAILR	TIMP	CREWS	Q
100	50	10000	0.50000E-03	10.0000	10	0.80000

TI	ETR	IETR
1.00000	5.00000	5

IX	R(IX)	T(IX)	AVGT(IX)	J	ATTTP(J)
1	100.00000	1.00000	1.00000	1	0.74755
2	125.00000	0.80000	0.90000	2	0.60774
3	142.42908	0.70210	0.83403	3	0.60774
4	156.24998	0.64000	0.78553		
5	167.38737	0.59564	0.74755		
6	139.01822	0.71933	0.74284		
7	156.04721	0.64083	0.72827		
8	168.87079	0.59217	0.71126		
9	179.55525	0.55693	0.69411		
10	188.87326	0.52946	0.67765		
11	139.01822	0.71933	0.68143		
12	156.04721	0.64083	0.67805		
13	168.87079	0.59217	0.67144		
14	179.55525	0.55693	0.66327		
15	188.87326	0.52946	0.65434		
16	139.01822	0.71933	0.65841		
17	156.04721	0.64083	0.65737		
18	168.87079	0.59217	0.65375		
19	179.55525	0.55693	0.64865		
20	188.87326	0.52946	0.64269		
21	139.01822	0.71933	0.64634		
22	156.04721	0.64083	0.64609		
23	168.87079	0.59217	0.64375		
24	179.55525	0.55693	0.64013		
25	188.87326	0.52946	0.63570		
26	139.01822	0.71933	0.63892		
27	156.04721	0.64083	0.63899		
28	168.87079	0.59217	0.63732		
29	179.55525	0.55693	0.63455		
30	188.87326	0.52946	0.63104		
31	139.01822	0.71933	0.63389		
32	156.04721	0.64083	0.63411		
33	168.87079	0.59217	0.63284		
34	179.55525	0.55693	0.63060		
35	188.87326	0.52946	0.62771		
36	139.01822	0.71933	0.63026		
37	156.04721	0.64083	0.63054		
38	168.87079	0.59217	0.62953		
39	179.55525	0.55693	0.62767		
40	188.87326	0.52946	0.62522		
41	139.01822	0.71933	0.62751		
42	156.04721	0.64083	0.62783		
43	168.87079	0.59217	0.62700		
44	179.55525	0.55693	0.62541		
45	188.87326	0.52946	0.62328		
46	139.01822	0.71933	0.62536		
47	156.04721	0.64083	0.62569		
48	168.87079	0.59217	0.62499		
49	179.55525	0.55693	0.62360		
50	188.87326	0.52946	0.62172		
51	139.01822	0.71933	0.62364		
52	156.04721	0.64083	0.62397		

53	168.87079	0.59217	0.62337
54	179.55525	0.55693	0.62214
55	188.87326	0.52946	0.62045
56	139.01822	0.71933	0.62222
57	156.04721	0.64083	0.62254
58	168.87079	0.59217	0.62202
59	179.55525	0.55693	0.62092
60	188.87326	0.52946	0.61939
61	139.01822	0.71933	0.62103
62	156.04721	0.64083	0.62135
63	168.87079	0.59217	0.62089
64	179.55525	0.55693	0.61989
65	188.87326	0.52946	0.61849
66	139.01822	0.71933	0.62002
67	156.04721	0.64083	0.62033
68	168.87079	0.59217	0.61992
69	179.55525	0.55693	0.61901
70	188.87326	0.52946	0.61773
71	139.01822	0.71933	0.61916
72	156.04721	0.64083	0.61946
73	168.87079	0.59217	0.61908
74	179.55525	0.55693	0.61824
75	188.87326	0.52946	0.61706
76	139.01822	0.71933	0.61841
77	156.04721	0.64083	0.61870
78	168.87079	0.59217	0.61836
79	179.55525	0.55693	0.61758
80	188.87326	0.52946	0.61648
81	139.01822	0.71933	0.61775
82	156.04721	0.64083	0.61803
83	168.87079	0.59217	0.61772
84	179.55525	0.55693	0.61699
85	188.87326	0.52946	0.61596
86	139.01822	0.71933	0.61717
87	156.04721	0.64083	0.61744
88	168.87079	0.59217	0.61715
89	179.55525	0.55693	0.61647
90	188.87326	0.52946	0.61551
91	139.01822	0.71933	0.61665
92	156.04721	0.64083	0.61691
93	168.87079	0.59217	0.61664
94	179.55525	0.55693	0.61601
95	188.87326	0.52946	0.61510
96	139.01822	0.71933	0.61618
97	156.04721	0.64083	0.61644
98	168.87079	0.59217	0.61619
99	179.55525	0.55693	0.61559
100	188.87326	0.52946	0.61473
101	139.01822	0.71933	0.61577
102	156.04721	0.64083	0.61601
103	168.87079	0.59217	0.61578
104	179.55525	0.55693	0.61521
105	188.87326	0.52946	0.61440
106	139.01822	0.71933	0.61539
107	156.04721	0.64083	0.61563
108	168.87079	0.59217	0.61541
109	179.55525	0.55693	0.61487
110	188.87326	0.52946	0.61409
111	139.01822	0.71933	0.61504
112	156.04721	0.64083	0.61527
113	168.87079	0.59217	0.61507

114	179.55525	0.55693	0.61456
115	[illegible]	0.52946	0.61382
116	139.01822	0.71933	0.61473
117	156.04721	0.64083	0.61495
118	168.87079	0.59217	0.61476
119	179.55525	0.55693	0.61427
120	188.87326	0.52946	0.61357
121	139.01822	0.71933	0.61444
122	156.04721	0.64083	0.61466
123	168.87079	0.59217	0.61447
124	179.55525	0.55693	0.61401
125	188.87326	0.52946	0.61333
126	139.01822	0.71933	0.61417
127	156.04721	0.64083	0.61438
128	168.87079	0.59217	0.61421
129	179.55525	0.55693	0.61377
130	188.87326	0.52946	0.61312
131	139.01822	0.71933	0.61393
132	156.04721	0.64083	0.61413
133	168.87079	0.59217	0.61397
134	179.55525	0.55693	0.61354
135	188.87326	0.52946	0.61292
136	139.01822	0.71933	0.61370
137	156.04721	0.64083	0.61390
138	168.87079	0.59217	0.61374
139	179.55525	0.55693	0.61333
140	188.87326	0.52946	0.61273
141	139.01822	0.71933	0.61349
142	156.04721	0.64083	0.61368
143	168.87079	0.59217	0.61353
144	179.55525	0.55693	0.61314
145	188.87326	0.52946	0.61256
146	139.01822	0.71933	0.61329
147	156.04721	0.64083	0.61348
148	168.87079	0.59217	0.61334
149	179.55525	0.55693	0.61296
150	188.87326	0.52946	0.61240
151	139.01822	0.71933	0.61311
152	156.04721	0.64083	0.61329
153	168.87079	0.59217	0.61315
154	179.55525	0.55693	0.61279
155	188.87326	0.52946	0.61225
156	139.01822	0.71933	0.61294
157	156.04721	0.64083	0.61311
158	168.87079	0.59217	0.61298
159	179.55525	0.55693	0.61263
160	188.87326	0.52946	0.61211
161	139.01822	0.71933	0.61277
162	156.04721	0.64083	0.61295
163	168.87079	0.59217	0.61282
164	179.55525	0.55693	0.61248
165	188.87326	0.52946	0.61198
166	139.01822	0.71933	0.61262
167	156.04721	0.64083	0.61279
168	168.87079	0.59217	0.61267
169	179.55525	0.55693	0.61234
170	188.87326	0.52946	0.61185
171	139.01822	0.71933	0.61248
172	156.04721	0.64083	0.61264
173	168.87079	0.59217	0.61253
174	179.55525	0.55693	0.61221

175	188.87326	0.52946	0.61173
176	139.01822	0.71933	0.61235
177	156.04721	0.64083	0.61251
178	168.87079	0.59217	0.61239
179	179.55525	0.55693	0.61208
180	188.87326	0.52946	0.61162
181	139.01822	0.71933	0.61222
182	156.04721	0.64083	0.61238
183	168.87079	0.59217	0.61226
184	179.55525	0.55693	0.61196
185	188.87326	0.52946	0.61152
186	139.01822	0.71933	0.61210
187	156.04721	0.64083	0.61225
188	168.87079	0.59217	0.61214
189	179.55525	0.55693	0.61185
190	188.87326	0.52946	0.61142
191	139.01822	0.71933	0.61198
192	156.04721	0.64083	0.61213
193	168.87079	0.59217	0.61203
194	179.55525	0.55693	0.61175
195	188.87326	0.52946	0.61132
196	139.01822	0.71933	0.61188
197	156.04721	0.64083	0.61202
198	168.87079	0.59217	0.61192
199	179.55525	0.55693	0.61165
200	188.87326	0.52946	0.61123

MM	M	NSYS	FAILR	TIMP	CREWS	Q
100	50	10000	0.50000E-03	10.0000	10	0.80000

TI	ETR	IETR
1.00000	5.00000	5

IX	TN(IX)	TOTN(IX)	AVGTN(IX)	ATTPN(J)	ATDAN(J)
1	1.00000	1.00000	1.00000	0.74755	1.00000
2	0.80000	1.00000	0.90000	0.51553	1.17888
3	0.70210	1.00000	0.83403	0.43903	1.38428
4	0.64000	1.00000	0.78553		
5	0.59564	1.00000	0.74755		
6	0.56168	1.28067	0.71657		
7	0.53449	1.19896	0.69056		
8	0.51200	1.15658	0.66824		
9	0.49295	1.12979	0.64876		
10	0.47651	1.11111	0.63154		
11	0.46211	1.55662	0.61613		
12	0.44935	1.42614	0.60224		
13	0.43792	1.35224	0.58960		
14	0.42759	1.30248	0.57802		
15	0.41820	1.26604	0.56737		
16	0.40960	1.75618	0.55751		
17	0.40168	1.59536	0.54834		
18	0.39436	1.50159	0.53979		
19	0.38756	1.43704	0.53178		
20	0.38121	1.38889	0.52425		
21	0.37527	1.91685	0.51715		
22	0.36969	1.73343	0.51045		
23	0.36444	1.62489	0.50410		
24	0.35948	1.54928	0.49808		
25	0.35478	1.49233	0.49234		
26	0.35033	2.05328	0.48688		
27	0.34610	1.85157	0.48167		
28	0.34207	1.73111	0.47668		
29	0.33823	1.64660	0.47191		
30	0.33456	1.58254	0.46733		
31	0.33105	2.17290	0.46293		
32	0.32768	1.95566	0.45871		
33	0.32445	1.82515	0.45464		
34	0.32135	1.73312	0.45072		
35	0.31836	1.66306	0.44694		
36	0.31549	2.28006	0.44328		
37	0.31272	2.04924	0.43976		
38	0.31004	1.90995	0.43634		
39	0.30746	1.81138	0.43304		
40	0.30497	1.73611	0.42984		
41	0.30255	2.37754	0.42673		
42	0.30021	2.13458	0.42372		
43	0.29795	1.98749	0.42079		
44	0.29575	1.88311	0.41795		
45	0.29362	1.80320	0.41519		
46	0.29155	2.46727	0.41250		
47	0.28954	2.21329	0.40988		
48	0.28758	2.05913	0.40734		
49	0.28568	1.94950	0.40485		
50	0.28383	1.86542	0.40243		
51	0.28202	2.55060	0.40007		
52	0.28027	2.28651	0.39777		

53	0.27855	2.12588	0.39552
54	0.27[illegible]	2.01144	0.39332
55	0.27525	1.92354	0.39117
56	0.27366	2.62857	0.38907
57	0.27210	2.35510	0.38702
58	0.27058	2.18848	0.38501
59	0.26910	2.06961	0.38305
60	0.26765	1.97818	0.38113
61	0.26623	2.70194	0.37924
62	0.26484	2.41972	0.37740
63	0.26348	2.24752	0.37559
64	0.26214	2.12452	0.37382
65	0.26084	2.02982	0.37208
66	0.25956	2.77134	0.37037
67	0.25831	2.48090	0.36870
68	0.25708	2.30346	0.36706
69	0.25587	2.17660	0.36545
70	0.25469	2.07882	0.36386
71	0.25353	2.83727	0.36231
72	0.25239	2.53905	0.36078
73	0.25127	2.35668	0.35928
74	0.25017	2.22618	0.35781
75	0.24910	2.12551	0.35636
76	0.24804	2.90011	0.35493
77	0.24699	2.59453	0.35353
78	0.24597	2.40748	0.35215
79	0.24496	2.27353	0.35080
80	0.24397	2.17014	0.34946
81	0.24300	2.96021	0.34815
82	0.24204	2.64761	0.34685
83	0.24110	2.45612	0.34558
84	0.24017	2.31890	0.34432
85	0.23926	2.21291	0.34309
86	0.23836	3.01785	0.34187
87	0.23747	2.69854	0.34067
88	0.23660	2.50281	0.33949
89	0.23574	2.36246	0.33832
90	0.23490	2.25400	0.33717
91	0.23406	3.07325	0.33604
92	0.23324	2.74753	0.33492
93	0.23243	2.54774	0.33382
94	0.23163	2.40440	0.33273
95	0.23084	2.29358	0.33166
96	0.23007	3.12663	0.33060
97	0.22930	2.79474	0.32956
98	0.22854	2.59106	0.32853
99	0.22780	2.44485	0.32751
100	0.22706	2.33177	0.32650
101	0.22634	3.17815	0.32551
102	0.22562	2.84033	0.32453
103	0.22491	2.63290	0.32356
104	0.22421	2.48394	0.32261
105	0.22352	2.36868	0.32167
106	0.22284	3.22798	0.32073
107	0.22217	2.88443	0.31981
108	0.22151	2.67338	0.31890
109	0.22085	2.52177	0.31800
110	0.22020	2.40442	0.31711
111	0.21956	3.27623	0.31623
112	0.21893	2.92715	0.31537
113	0.21830	2.71262	0.31451

114	0.21761	2.55845	0.31366
115	0.21714	2.43909	0.31282
116	0.21667	3.32304	0.31199
117	0.21587	2.96859	0.31116
118	0.21523	2.75069	0.31035
119	0.21470	2.59405	0.30955
120	0.21412	2.47273	0.30875
121	0.21355	3.36849	0.30797
122	0.21298	3.00886	0.30719
123	0.21242	2.78769	0.30642
124	0.21187	2.62865	0.30565
125	0.21132	2.50544	0.30490
126	0.21078	3.41268	0.30415
127	0.21025	3.04802	0.30341
128	0.20972	2.82368	0.30268
129	0.20919	2.66232	0.30196
130	0.20867	2.53727	0.30124
131	0.20816	3.45571	0.30053
132	0.20765	3.08614	0.29982
133	0.20714	2.85873	0.29913
134	0.20665	2.69511	0.29844
135	0.20615	2.56829	0.29775
136	0.20566	3.49763	0.29708
137	0.20518	3.12330	0.29641
138	0.20470	2.89289	0.29574
139	0.20422	2.72708	0.29508
140	0.20375	2.59853	0.29443
141	0.20329	3.53852	0.29378
142	0.20282	3.15955	0.29314
143	0.20237	2.92623	0.29251
144	0.20191	2.75829	0.29188
145	0.20146	2.62805	0.29126
146	0.20102	3.57844	0.29064
147	0.20058	3.19495	0.29002
148	0.20014	2.95879	0.28942
149	0.19971	2.78876	0.28881
150	0.19928	2.65689	0.28822
151	0.19885	3.61744	0.28763
152	0.19843	3.22954	0.28704
153	0.19801	2.99060	0.28646
154	0.19759	2.81855	0.28588
155	0.19718	2.68509	0.28531
156	0.19678	3.65558	0.28474
157	0.19637	3.26336	0.28418
158	0.19597	3.02172	0.28362
159	0.19557	2.84769	0.28307
160	0.19518	2.71267	0.28252
161	0.19479	3.69290	0.28197
162	0.19440	3.29647	0.28143
163	0.19401	3.05218	0.28089
164	0.19363	2.87622	0.28036
165	0.19325	2.73968	0.27983
166	0.19288	3.72943	0.27931
167	0.19251	3.32889	0.27879
168	0.19214	3.08202	0.27827
169	0.19177	2.90416	0.27776
170	0.19141	2.76614	0.27725
171	0.19105	3.76524	0.27675
172	0.19069	3.36065	0.27625
173	0.19033	3.11125	0.27575
174	0.18998	2.93155	0.27526

175	0.18963	2.79207	0.27477
176	[illegible]	3.80033	0.27428
177	0.18894	3.39179	0.27380
178	0.18859	3.13992	0.27332
179	0.18825	2.95841	0.27285
180	0.18792	2.81751	0.27238
181	0.18758	3.83476	0.27191
182	0.18725	3.42235	0.27144
183	0.18692	3.16805	0.27098
184	0.18659	2.98476	0.27052
185	0.18627	2.84247	0.27007
186	0.18594	3.86855	0.26961
187	0.18562	3.45234	0.26917
188	0.18530	3.19566	0.26872
189	0.18499	3.01064	0.26828
190	0.18467	2.86698	0.26784
191	0.18436	3.90173	0.26740
192	0.18405	3.48179	0.26696
193	0.18374	3.22278	0.26653
194	0.18344	3.03605	0.26611
195	0.18314	2.89105	0.26568
196	0.18283	3.93432	0.26526
197	0.18254	3.51073	0.26484
198	0.18224	3.24942	0.26442
199	0.18194	3.06102	0.26401
200	0.18165	2.91471	0.26359

MM	M	NSYS	FAILR	TIMP	CREWS	Q
100	10	20000	0.50000E-03	10.0000	10	0.80000

TI	FTR	IFTR
1.00000	10.00000	10

IX	R(IX)	T(IX)	AVGT(IX)	J	ATTTP(J)
1	100.00000	1.00000	1.00000	1	0.63154
2	125.00000	0.80000	0.90000	2	0.43082
3	142.42908	0.70210	0.83403	3	0.37497
4	156.24998	0.64000	0.78553	4	0.34566
5	167.88737	0.59564	0.74755	5	0.32768
6	178.03636	0.56168	0.71657	6	0.31593
7	187.09436	0.53449	0.69056	7	0.30812
8	195.31244	0.51200	0.66824	8	0.30306
9	202.86049	0.49295	0.64876	9	0.30006
10	209.85918	0.47651	0.63154	10	0.29870
11	204.75832	0.48838	0.61852	11	0.29870
12	212.79089	0.46994	0.60614		
13	219.76195	0.45504	0.59452		
14	226.10617	0.44227	0.58364		
15	231.99716	0.43104	0.57347		
16	237.53018	0.42100	0.56394		
17	242.76642	0.41192	0.55500		
18	247.74925	0.40363	0.54659		
19	252.51114	0.39602	0.53866		
20	257.07739	0.38899	0.53118		
21	244.82135	0.40846	0.52534		
22	251.15273	0.39816	0.51956		
23	256.59521	0.38972	0.51391		
24	261.55713	0.38233	0.50843		
25	266.18994	0.37567	0.50312		
26	270.57202	0.36959	0.49798		
27	274.75024	0.36397	0.49302		
28	278.75635	0.35874	0.48822		
29	282.61353	0.35384	0.48359		
30	286.33862	0.34924	0.47911		
31	269.73804	0.37073	0.47561		
32	275.42700	0.36307	0.47210		
33	280.26758	0.35680	0.46860		
34	284.66309	0.35129	0.46515		
35	288.76221	0.34631	0.46176		
36	292.64038	0.34172	0.45842		
37	296.34204	0.33745	0.45515		
38	299.89648	0.33345	0.45195		
39	303.32471	0.32968	0.44881		
40	306.64160	0.32611	0.44575		
41	286.80786	0.34867	0.44338		
42	292.17944	0.34226	0.44097		
43	296.71655	0.33702	0.43855		
44	300.82202	0.33242	0.43614		
45	304.64380	0.32825	0.43374		
46	308.25610	0.32441	0.43137		
47	311.70264	0.32082	0.42901		
48	315.01172	0.31745	0.42669		
49	318.20435	0.31426	0.42440		
50	321.29492	0.31124	0.42213		
51	298.83691	0.33463	0.42042		
52	304.03320	0.32891	0.41866		

53	308.40137	0.32425	0.41688
54	312.[illegible]75	0.32016	0.41508
55	316.00781	0.31645	0.41329
56	319.46777	0.31302	0.41150
57	322.76660	0.30982	0.40972
58	325.93335	0.30681	0.40794
59	328.93779	0.30396	0.40618
60	331.94409	0.30126	0.40443
61	307.25244	0.32547	0.40314
62	312.34790	0.32016	0.40180
63	316.61816	0.31584	0.40043
64	320.46533	0.31205	0.39905
65	324.03711	0.30861	0.39766
66	327.40723	0.30543	0.39626
67	330.61865	0.30246	0.39486
68	333.70044	0.29967	0.39346
69	336.67187	0.29703	0.39206
70	339.54785	0.29451	0.39067
71	312.69648	0.31959	0.38967
72	317.93433	0.31453	0.38863
73	322.14844	0.31042	0.38755
74	325.94116	0.30680	0.38646
75	329.45947	0.30353	0.38536
76	332.77759	0.30050	0.38424
77	335.93823	0.29767	0.38312
78	338.97021	0.29501	0.38199
79	341.89331	0.29249	0.38085
80	344.72192	0.29009	0.37972
81	316.31470	0.31614	0.37893
82	321.32251	0.31121	0.37811
83	325.50708	0.30721	0.37725
84	329.27075	0.30370	0.37638
85	332.76074	0.30052	0.37549
86	336.05103	0.29757	0.37458
87	339.18457	0.29482	0.37366
88	342.18970	0.29224	0.37274
89	345.08667	0.28978	0.37180
90	347.88965	0.28745	0.37087
91	317.88599	0.31458	0.37025
92	322.88135	0.30971	0.36959
93	327.05396	0.30576	0.36890
94	330.30591	0.30229	0.36820
95	334.28418	0.29915	0.36747
96	337.56299	0.29624	0.36673
97	340.68579	0.29353	0.36597
98	343.68018	0.29097	0.36521
99	346.56592	0.28855	0.36443
100	349.35815	0.28624	0.36365
101	317.88599	0.31458	0.36316
102	322.88135	0.30971	0.36264
103	327.05396	0.30576	0.36209
104	330.30591	0.30229	0.36151
105	334.28418	0.29915	0.36092
106	337.56299	0.29624	0.36031
107	340.68579	0.29353	0.35968
108	343.68018	0.29097	0.35905
109	346.56592	0.28855	0.35840
110	349.35815	0.28624	0.35774
111	317.88599	0.31458	0.35736
112	322.88135	0.30971	0.35693
113	327.05396	0.3057[illegible]	[illegible]35648

A10.3

114	330.80591	0.30229	0.35600
115	[illegible]	0.29915	0.35551
116	337.56299	0.29624	0.35500
117	340.68579	0.29353	0.35447
118	343.68018	0.29097	0.35393
119	346.56592	0.28855	0.35338
120	349.35815	0.28624	0.35282
121	317.88599	0.31458	0.35251
122	322.88135	0.30971	0.35216
123	327.05396	0.30576	0.35178
124	330.80591	0.30229	0.35138
125	334.28418	0.29915	0.35096
126	337.56299	0.29624	0.35053
127	340.68579	0.29353	0.35008
128	343.68018	0.29097	0.34962
129	346.56592	0.28855	0.34914
130	349.35815	0.28624	0.34866
131	317.88599	0.31458	0.34840
132	322.88135	0.30971	0.34811
133	327.05396	0.30576	0.34779
134	330.80591	0.30229	0.34745
135	334.28418	0.29915	0.34709
136	337.56299	0.29624	0.34672
137	340.68579	0.29353	0.34633
138	343.68018	0.29097	0.34593
139	346.56592	0.28855	0.34551
140	349.35815	0.28624	0.34509
141	317.88599	0.31458	0.34487
142	322.88135	0.30971	0.34463
143	327.05396	0.30576	0.34436
144	330.80591	0.30229	0.34406
145	334.28418	0.29915	0.34375
146	337.56299	0.29624	0.34343
147	340.68579	0.29353	0.34309
148	343.68018	0.29097	0.34274
149	346.56592	0.28855	0.34237
150	349.35815	0.28624	0.34200
151	317.88599	0.31458	0.34182
152	322.88135	0.30971	0.34161
153	327.05396	0.30576	0.34137
154	330.80591	0.30229	0.34112
155	334.28418	0.29915	0.34085
156	337.56299	0.29624	0.34056
157	340.68579	0.29353	0.34026
158	343.68018	0.29097	0.33995
159	346.56592	0.28855	0.33963
160	349.35815	0.28624	0.33929
161	317.88599	0.31458	0.33914
162	322.88135	0.30971	0.33896
163	327.05396	0.30576	0.33875
164	330.80591	0.30229	0.33853
165	334.28418	0.29915	0.33829
166	337.56299	0.29624	0.33804
167	340.68579	0.29353	0.33777
168	343.68018	0.29097	0.33749
169	346.56592	0.28855	0.33720
170	349.35815	0.28624	0.33690
171	317.88599	0.31458	0.33677
172	322.88135	0.30971	0.33662
173	327.05396	0.30576	0.33644
174	330.80591	0.30229	0.33624

175	334.28418	0.29915	0.33603
176	337.56299	0.29624	0.33580
177	340.68579	0.29353	0.33556
178	343.68018	0.29097	0.33531
179	346.56592	0.28855	0.33505
180	349.35815	0.28624	0.33478
181	317.88599	0.31458	0.33467
182	322.88135	0.30971	0.33453
183	327.05396	0.30576	0.33437
184	330.80591	0.30229	0.33420
185	334.28418	0.29915	0.33401
186	337.56299	0.29624	0.33381
187	340.68579	0.29353	0.33359
188	343.68018	0.29097	0.33337
189	346.56592	0.28855	0.33313
190	349.35815	0.28624	0.33288
191	317.88599	0.31458	0.33279
192	322.88135	0.30971	0.33267
193	327.05396	0.30576	0.33253
194	330.80591	0.30229	0.33237
195	334.28418	0.29915	0.33220
196	337.56299	0.29624	0.33202
197	340.68579	0.29353	0.33182
198	343.68018	0.29097	0.33161
199	346.56592	0.28855	0.33140
200	349.35815	0.28624	0.33117

MM	M	NSYS	FAILR	TIMP	CREWS	Q
100	10	20000	0.50000E-03	10.0000	10	0.80000

TI	FTR	IETR
1.00000	10.00000	10

IX	TN(IX)	TOTN(IX)	AVGTN(IX)	ATTPN(J)	ATDAN(J)
1	1.00000	1.00000	1.00000	0.63154	1.00000
2	0.80000	1.00000	0.90000	0.41696	1.03326
3	0.70210	1.00000	0.83403	0.35350	1.06075
4	0.64000	1.00000	0.78553	0.31736	1.08919
5	0.59564	1.00000	0.74755	0.29283	1.11902
6	0.56168	1.00000	0.71657	0.27461	1.15047
7	0.53449	1.00000	0.69056	0.26030	1.18370
8	0.51200	1.00000	0.66824	0.24864	1.21889
9	0.49295	1.00000	0.64876	0.23886	1.25622
10	0.47651	1.00000	0.63154	0.23050	1.29590
11	0.46211	1.05685	0.61613	0.22322	1.33816
12	0.44935	1.04584	0.60224		
13	0.43792	1.03910	0.58960		
14	0.42759	1.03433	0.57802		
15	0.41820	1.03070	0.56737		
16	0.40960	1.02783	0.55751		
17	0.40168	1.02548	0.54834		
18	0.39436	1.02352	0.53979		
19	0.38756	1.02185	0.53178		
20	0.38121	1.02041	0.52425		
21	0.37527	1.08845	0.51715		
22	0.36969	1.07702	0.51045		
23	0.36444	1.06937	0.50410		
24	0.35948	1.06356	0.49808		
25	0.35478	1.05887	0.49234		
26	0.35033	1.05496	0.48688		
27	0.34610	1.05162	0.48167		
28	0.34207	1.04871	0.47668		
29	0.33823	1.04615	0.47191		
30	0.33456	1.04387	0.46733		
31	0.33105	1.11987	0.46293		
32	0.32768	1.10801	0.45871		
33	0.32445	1.09971	0.45464		
34	0.32135	1.09319	0.45072		
35	0.31836	1.08777	0.44694		
36	0.31549	1.08314	0.44328		
37	0.31272	1.07908	0.43976		
38	0.31004	1.07549	0.43634		
39	0.30746	1.07226	0.43304		
40	0.30497	1.06934	0.42984		
41	0.30255	1.15242	0.42673		
42	0.30021	1.14004	0.42372		
43	0.29795	1.13114	0.42079		
44	0.29575	1.12399	0.41795		
45	0.29362	1.11795	0.41519		
46	0.29155	1.11270	0.41250		
47	0.28954	1.10804	0.40988		
48	0.28758	1.10385	0.40734		
49	0.28568	1.10006	0.40485		
50	0.28383	1.09658	0.40243		
51	0.28202	1.18653	0.40007		
52	0.28027	1.17357	0.39777		

53	0.27855	1.16406	0.39552
54	0.276[illegible]	1.15631	0.39332
55	0.27525	1.14967	0.39117
56	0.27366	1.14384	0.38907
57	0.27210	1.13861	0.38702
58	0.27058	1.13388	0.38501
59	0.26910	1.12955	0.38305
60	0.26765	1.12557	0.38113
61	0.26623	1.22251	0.37924
62	0.26484	1.20888	0.37740
63	0.26348	1.19873	0.37559
64	0.26214	1.19036	0.37382
65	0.26084	1.18313	0.37208
66	0.25956	1.17672	0.37037
67	0.25831	1.17095	0.36870
68	0.25708	1.16568	0.36706
69	0.25587	1.16083	0.36545
70	0.25469	1.15634	0.36386
71	0.25353	1.26058	0.36231
72	0.25239	1.24621	0.36078
73	0.25127	1.23538	0.35928
74	0.25017	1.22636	0.35781
75	0.24910	1.21852	0.35636
76	0.24804	1.21152	0.35493
77	0.24699	1.20519	0.35353
78	0.24597	1.19938	0.35215
79	0.24496	1.19401	0.35080
80	0.24397	1.18902	0.34946
81	0.24300	1.30099	0.34815
82	0.24204	1.28579	0.34685
83	0.24110	1.27422	0.34558
84	0.24017	1.26452	0.34432
85	0.23926	1.25603	0.34309
86	0.23836	1.24843	0.34187
87	0.23747	1.24151	0.34067
88	0.23660	1.23514	0.33949
89	0.23574	1.22923	0.33832
90	0.23490	1.22372	0.33717
91	0.23406	1.34400	0.33604
92	0.23324	1.32787	0.33492
93	0.23243	1.31550	0.33382
94	0.23163	1.30506	0.33273
95	0.23084	1.29589	0.33166
96	0.23007	1.28764	0.33060
97	0.22930	1.28010	0.32956
98	0.22854	1.27314	0.32853
99	0.22780	1.26667	0.32751
100	0.22706	1.26062	0.32650
101	0.22634	1.38987	0.32551
102	0.22562	1.37272	0.32453
103	0.22491	1.35947	0.32356
104	0.22421	1.34824	0.32261
105	0.22352	1.33832	0.32167
106	0.22284	1.32938	0.32073
107	0.22217	1.32118	0.31981
108	0.22151	1.31359	0.31890
109	0.22085	1.30653	0.31800
110	0.22020	1.29990	0.31711
111	0.21956	1.43277	0.31623
112	0.21893	1.41468	0.31537
113	0.21830	1.40063	0.31451

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114	0.21765	1.38868	0.31366
115	0.21707	1.37810	0.31282
116	0.21647	1.36852	0.31199
117	0.21587	1.35973	0.31116
118	0.21528	1.35158	0.31035
119	0.21470	1.34397	0.30955
120	0.21412	1.33683	0.30875
121	0.21355	1.47311	0.30797
122	0.21298	1.45417	0.30719
123	0.21242	1.43939	0.30642
124	0.21187	1.42678	0.30565
125	0.21132	1.41559	0.30490
126	0.21078	1.40544	0.30415
127	0.21025	1.39611	0.30341
128	0.20972	1.38744	0.30268
129	0.20919	1.37934	0.30196
130	0.20867	1.37172	0.30124
131	0.20816	1.51125	0.30053
132	0.20765	1.49152	0.29982
133	0.20714	1.47607	0.29913
134	0.20665	1.46285	0.29844
135	0.20615	1.45110	0.29775
136	0.20566	1.44043	0.29708
137	0.20518	1.43059	0.29641
138	0.20470	1.42145	0.29574
139	0.20422	1.41290	0.29508
140	0.20375	1.40484	0.29443
141	0.20329	1.54747	0.29378
142	0.20282	1.52700	0.29314
143	0.20237	1.51093	0.29251
144	0.20191	1.49715	0.29188
145	0.20146	1.48487	0.29126
146	0.20102	1.47371	0.29064
147	0.20058	1.46341	0.29002
148	0.20014	1.45383	0.28942
149	0.19971	1.44485	0.28881
150	0.19928	1.43639	0.28822
151	0.19885	1.58198	0.28763
152	0.19843	1.56082	0.28704
153	0.19801	1.54417	0.28646
154	0.19759	1.52986	0.28588
155	0.19718	1.51710	0.28531
156	0.19678	1.50548	0.28474
157	0.19637	1.49475	0.28418
158	0.19597	1.48475	0.28362
159	0.19557	1.47538	0.28307
160	0.19518	1.46655	0.28252
161	0.19479	1.61498	0.28197
162	0.19440	1.59317	0.28143
163	0.19401	1.57596	0.28089
164	0.19363	1.56116	0.28036
165	0.19325	1.54794	0.27983
166	0.19288	1.53589	0.27931
167	0.19251	1.52476	0.27879
168	0.19214	1.51438	0.27827
169	0.19177	1.50464	0.27776
170	0.19141	1.49545	0.27725
171	0.19105	1.64662	0.27675
172	0.19069	1.62419	0.27625
173	0.19033	1.60646	0.27575
174	0.18998	1.59119	0.27526

175	0.18963	1.57754	0.27477
176	0.18[illegible]	1.56509	0.27428
177	0.18854	1.55357	0.27380
178	0.18859	1.54283	0.27332
179	0.18825	1.53275	0.27285
180	0.18792	1.52323	0.27238
181	0.18758	1.67702	0.27191
182	0.18725	1.65401	0.27144
183	0.18692	1.63579	0.27098
184	0.18659	1.62007	0.27052
185	0.18627	1.60602	0.27007
186	0.18594	1.59318	0.26961
187	0.18562	1.58130	0.26917
188	0.18530	1.57022	0.26872
189	0.18499	1.55981	0.26828
190	0.18467	1.54997	0.26784
191	0.18436	1.70631	0.26740
192	0.18405	1.68273	0.26696
193	0.18374	1.66405	0.26653
194	0.18344	1.64791	0.26611
195	0.18314	1.63347	0.26568
196	0.18283	1.62027	0.26526
197	0.18254	1.60805	0.26484
198	0.18224	1.59664	0.26442
199	0.18194	1.58591	0.26401
200	0.18165	1.57578	0.26359

MM	M	NSYS	FAILR	TIMP	CREWS	Q
100	20	20000	0.50000E-03	10.0000	10	0.80000

TI	ETR	IETR
1.00000	10.00000	10

IX	R(IX)	T(IX)	AVGT(IX)	J	ATTTP(J)
1	100.00000	1.00000	1.00000	1	0.63154
2	125.00000	0.80000	0.90000	2	0.44576
3	142.42908	0.70210	0.83403	3	0.39939
4	156.24998	0.64000	0.78553	4	0.37972
5	167.88737	0.59564	0.74755	5	0.37221
6	178.03636	0.56168	0.71657	6	0.37221
7	187.09436	0.53449	0.69056		
8	195.31244	0.51200	0.66824		
9	202.86049	0.49295	0.64876		
10	209.85918	0.47651	0.63154		
11	193.11952	0.51782	0.62120		
12	203.03636	0.49252	0.61048		
13	211.16942	0.47355	0.59994		
14	218.34438	0.45799	0.58980		
15	224.87386	0.44469	0.58013		
16	230.91975	0.43305	0.57094		
17	236.58063	0.42269	0.56222		
18	241.92294	0.41335	0.55395		
19	246.99440	0.40487	0.54610		
20	251.83105	0.39709	0.53865		
21	223.16583	0.44810	0.53434		
22	231.80775	0.43139	0.52966		
23	238.79453	0.41877	0.52484		
24	244.93269	0.40828	0.51998		
25	250.51860	0.39917	0.51515		
26	255.70117	0.39108	0.51038		
27	260.56860	0.38378	0.50569		
28	265.17822	0.37710	0.50110		
29	269.57104	0.37096	0.49661		
30	273.77686	0.36526	0.49223		
31	237.40404	0.42122	0.48994		
32	245.67889	0.40704	0.48735		
33	252.32158	0.39632	0.48459		
34	258.13599	0.38739	0.48173		
35	263.41675	0.37963	0.47881		
36	268.31152	0.37270	0.47587		
37	272.90674	0.36643	0.47291		
38	277.25830	0.36067	0.46995		
39	281.40601	0.35536	0.46702		
40	285.37866	0.35041	0.46410		
41	243.09402	0.41136	0.46281		
42	251.26303	0.39799	0.46127		
43	257.80444	0.38789	0.45956		
44	263.52222	0.37947	0.45774		
45	268.71069	0.37215	0.45584		
46	273.51665	0.36561	0.45388		
47	278.02686	0.35968	0.45187		
48	282.29688	0.35424	0.44984		
49	286.36597	0.34920	0.44779		
50	290.26294	0.34452	0.44572		
51	243.09402	0.41136	0.44505		
52	251.26303	0.39799	0.44414		

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53	257.80444	0.38789	0.44308
54	263.52222	0.37947	0.44190
55	268.71069	0.37215	0.44063
56	273.51685	0.36561	0.43929
57	278.02686	0.35968	0.43790
58	282.29688	0.35424	0.43646
59	286.36597	0.34920	0.43498
60	290.26294	0.34452	0.43347
61	243.09402	0.41136	0.43311
62	251.26303	0.39799	0.43254
63	257.80444	0.38789	0.43183
64	263.52222	0.37947	0.43101
65	268.71069	0.37215	0.43011
66	273.51685	0.36561	0.42913
67	278.02686	0.35968	0.42809
68	282.29688	0.35424	0.42701
69	286.36597	0.34920	0.42588
70	290.26294	0.34452	0.42472
71	243.09402	0.41136	0.42453
72	251.26303	0.39799	0.42416
73	257.80444	0.38789	0.42366
74	263.52222	0.37947	0.42307
75	268.71069	0.37215	0.42239
76	273.51685	0.36561	0.42164
77	278.02686	0.35968	0.42083
78	282.29688	0.35424	0.41998
79	286.36597	0.34920	0.41908
80	290.26294	0.34452	0.41815
81	243.09402	0.41136	0.41807
82	251.26303	0.39799	0.41782
83	257.80444	0.38789	0.41746
84	263.52222	0.37947	0.41701
85	268.71069	0.37215	0.41648
86	273.51685	0.36561	0.41589
87	278.02686	0.35968	0.41524
88	282.29688	0.35424	0.41455
89	286.36597	0.34920	0.41382
90	290.26294	0.34452	0.41305
91	243.09402	0.41136	0.41303
92	251.26303	0.39799	0.41286
93	257.80444	0.38789	0.41260
94	263.52222	0.37947	0.41224
95	268.71069	0.37215	0.41182
96	273.51685	0.36561	0.41134
97	278.02686	0.35968	0.41081
98	282.29688	0.35424	0.41023
99	286.36597	0.34920	0.40961
100	290.26294	0.34452	0.40896
101	243.09402	0.41136	0.40899
102	251.26303	0.39799	0.40888
103	257.80444	0.38789	0.40867
104	263.52222	0.37947	0.40839
105	268.71069	0.37215	0.40805
106	273.51685	0.36561	0.40765
107	278.02686	0.35968	0.40720
108	282.29688	0.35424	0.40671
109	286.36597	0.34920	0.40618
110	290.26294	0.34452	0.40562
111	243.09402	0.41136	0.40567
112	251.26303	0.39799	0.40560
113	257.80444	0.38789	0.40545

114	263.52222	0.37947	0.40522
115	[illegible]	0.37215	0.40493
116	273.51685	0.36561	0.40459
117	278.02686	0.35968	0.40421
118	282.29688	0.35424	0.40379
119	286.36597	0.34920	0.40333
120	290.26294	0.34452	0.40284
121	243.09402	0.41136	0.40291
122	251.26303	0.39799	0.40287
123	257.80444	0.38789	0.40274
124	263.52222	0.37947	0.40256
125	268.71069	0.37215	0.40231
126	273.51685	0.36561	0.40202
127	278.02686	0.35968	0.40169
128	282.29688	0.35424	0.40132
129	286.36597	0.34920	0.40091
130	290.26294	0.34452	0.40048
131	243.09402	0.41136	0.40056
132	251.26303	0.39799	0.40054
133	257.80444	0.38789	0.40045
134	263.52222	0.37947	0.40029
135	268.71069	0.37215	0.40008
136	273.51685	0.36561	0.39983
137	278.02686	0.35968	0.39954
138	282.29688	0.35424	0.39921
139	286.36597	0.34920	0.39885
140	290.26294	0.34452	0.39846
141	243.09402	0.41136	0.39855
142	251.26303	0.39799	0.39855
143	257.80444	0.38789	0.39847
144	263.52222	0.37947	0.39834
145	268.71069	0.37215	0.39816
146	273.51685	0.36561	0.39794
147	278.02686	0.35968	0.39768
148	282.29688	0.35424	0.39738
149	286.36597	0.34920	0.39706
150	290.26294	0.34452	0.39671
151	243.09402	0.41136	0.39681
152	251.26303	0.39799	0.39681
153	257.80444	0.38789	0.39676
154	263.52222	0.37947	0.39664
155	268.71069	0.37215	0.39649
156	273.51685	0.36561	0.39629
157	278.02686	0.35968	0.39605
158	282.29688	0.35424	0.39579
159	286.36597	0.34920	0.39550
160	290.26294	0.34452	0.39518
161	243.09402	0.41136	0.39528
162	251.26303	0.39799	0.39530
163	257.80444	0.38789	0.39525
164	263.52222	0.37947	0.39515
165	268.71069	0.37215	0.39501
166	273.51685	0.36561	0.39484
167	278.02686	0.35968	0.39463
168	282.29688	0.35424	0.39439
169	286.36597	0.34920	0.39412
170	290.26294	0.34452	0.39383
171	243.09402	0.41136	0.39393
172	251.26303	0.39799	0.39395
173	257.80444	0.38789	0.39392
174	263.52222	0.37947	0.39384

175	268.71069	0.37215	0.39371
176	273.51685	0.36561	0.39355
177	278.02686	0.35968	0.39336
178	282.29688	0.35424	0.39314
179	286.36597	0.34920	0.39289
180	290.26294	0.34452	0.39263
181	243.09402	0.41136	0.39273
182	251.26303	0.39799	0.39276
183	257.80444	0.38789	0.39273
184	263.52222	0.37947	0.39266
185	268.71069	0.37215	0.39255
186	273.51685	0.36561	0.39240
187	278.02686	0.35968	0.39223
188	282.29688	0.35424	0.39203
189	286.36597	0.34920	0.39180
190	290.26294	0.34452	0.39155
191	243.09402	0.41136	0.39165
192	251.26303	0.39799	0.39169
193	257.80444	0.38789	0.39167
194	263.52222	0.37947	0.39161
195	268.71069	0.37215	0.39151
196	273.51685	0.36561	0.39137
197	278.02686	0.35968	0.39121
198	282.29688	0.35424	0.39103
199	286.36597	0.34920	0.39082
200	290.26294	0.34452	0.39058

MM	M	NSYS	FAILR	TIMP	CREWS	Q
100	20	20000	0.50000E-03	10.0000	10	0.80000

TI	ETR	IETR
1.00000	10.00000	10

IX	TN(IX)	TDTN(IX)	AVGTN(IX)	ATTPN(J)	ATDAN(J)
1	1.00000	1.00000	1.00000	0.63154	1.00000
2	0.80000	1.00000	0.90000	0.41696	1.06909
3	0.70210	1.00000	0.83403	0.35350	1.12983
4	0.64000	1.00000	0.78553	0.31736	1.19650
5	0.59564	1.00000	0.74755	0.29283	1.27110
6	0.56168	1.00000	0.71657	0.27461	1.35543
7	0.53449	1.00000	0.69056		
8	0.51200	1.00000	0.66824		
9	0.49295	1.00000	0.64876		
10	0.47651	1.00000	0.63154		
11	0.46211	1.12055	0.61613		
12	0.44935	1.09609	0.60224		
13	0.43792	1.08138	0.58960		
14	0.42759	1.07110	0.57802		
15	0.41820	1.06335	0.56737		
16	0.40960	1.05725	0.55751		
17	0.40168	1.05229	0.54834		
18	0.39436	1.04817	0.53979		
19	0.38756	1.04467	0.53178		
20	0.38121	1.04167	0.52425		
21	0.37527	1.19407	0.51715		
22	0.36969	1.16690	0.51045		
23	0.36444	1.14909	0.50410		
24	0.35948	1.13575	0.49808		
25	0.35478	1.12511	0.49234		
26	0.35033	1.11631	0.48688		
27	0.34610	1.10885	0.48167		
28	0.34207	1.10241	0.47668		
29	0.33823	1.09676	0.47191		
30	0.33456	1.09177	0.46733		
31	0.33105	1.27240	0.46293		
32	0.32768	1.24217	0.45871		
33	0.32445	1.22151	0.45464		
34	0.32135	1.20553	0.45072		
35	0.31838	1.19244	0.44694		
36	0.31549	1.18135	0.44328		
37	0.31272	1.17175	0.43976		
38	0.31004	1.16330	0.43634		
39	0.30746	1.15578	0.43304		
40	0.30497	1.14902	0.42984		
41	0.30255	1.35964	0.42673		
42	0.30021	1.32569	0.42372		
43	0.29795	1.30187	0.42079		
44	0.29575	1.28309	0.41795		
45	0.29362	1.26745	0.41519		
46	0.29155	1.25402	0.41250		
47	0.28954	1.24225	0.40988		
48	0.28758	1.23178	0.40734		
49	0.28568	1.22236	0.40485		
50	0.28383	1.21382	0.40243		
51	0.28202	1.45861	0.40007		
52	0.28027	1.42004	0.39777		

53	0.27855	1.39252	0.39552
54	0.27685	1.37053	0.39332
55	0.27525	1.35203	0.39117
56	0.27366	1.33600	0.38907
57	0.27210	1.32184	0.38702
58	0.27058	1.30915	0.38501
59	0.26910	1.29767	0.38305
60	0.26765	1.28720	0.38113
61	0.26623	1.54516	0.37924
62	0.26484	1.50277	0.37740
63	0.26348	1.47220	0.37559
64	0.26214	1.44758	0.37382
65	0.26084	1.42673	0.37208
66	0.25956	1.40857	0.37037
67	0.25831	1.39244	0.36870
68	0.25708	1.37794	0.36706
69	0.25587	1.36476	0.36545
70	0.25469	1.35268	0.36386
71	0.25353	1.62255	0.36231
72	0.25239	1.57688	0.36078
73	0.25127	1.54371	0.35928
74	0.25017	1.51684	0.35781
75	0.24910	1.49400	0.35636
76	0.24804	1.47402	0.35493
77	0.24699	1.45622	0.35353
78	0.24597	1.44016	0.35215
79	0.24496	1.42553	0.35080
80	0.24397	1.41210	0.34946
81	0.24300	1.69286	0.34815
82	0.24204	1.64430	0.34685
83	0.24110	1.60885	0.34558
84	0.24017	1.58002	0.34432
85	0.23926	1.55542	0.34309
86	0.23836	1.53386	0.34187
87	0.23747	1.51460	0.34067
88	0.23660	1.49719	0.33949
89	0.23574	1.48130	0.33832
90	0.23490	1.46667	0.33717
91	0.23406	1.75750	0.33604
92	0.23324	1.70636	0.33492
93	0.23243	1.66886	0.33382
94	0.23163	1.63828	0.33273
95	0.23084	1.61213	0.33166
96	0.23007	1.58915	0.33060
97	0.22930	1.56859	0.32956
98	0.22854	1.54998	0.32853
99	0.22780	1.53295	0.32751
100	0.22706	1.51727	0.32650
101	0.22634	1.81749	0.32551
102	0.22562	1.76399	0.32453
103	0.22491	1.72464	0.32356
104	0.22421	1.69247	0.32261
105	0.22352	1.66492	0.32167
106	0.22284	1.64066	0.32073
107	0.22217	1.61893	0.31981
108	0.22151	1.59923	0.31890
109	0.22085	1.58119	0.31800
110	0.22020	1.56455	0.31711
111	0.21956	1.87358	0.31623
112	0.21893	1.81791	0.31537
113	0.21830	1.77686	0.31451

114	0.21[illegible]	1.74324	0.31366
115	0.21[illegible]	1.71440	0.31282
116	0.21647	1.68897	0.31199
117	0.21587	1.66617	0.31116
118	0.21528	1.64547	0.31035
119	0.21470	1.62650	0.30955
120	0.21412	1.60900	0.30875
121	0.21355	1.92634	0.30797
122	0.21298	1.86865	0.30719
123	0.21242	1.82603	0.30642
124	0.21187	1.79107	0.30565
125	0.21132	1.76104	0.30490
126	0.21078	1.73454	0.30415
127	0.21025	1.71075	0.30341
128	0.20972	1.68913	0.30268
129	0.20919	1.66931	0.30196
130	0.20867	1.65100	0.30124
131	0.20816	1.97622	0.30053
132	0.20765	1.91665	0.29982
133	0.20714	1.87256	0.29913
134	0.20665	1.83636	0.29844
135	0.20615	1.80522	0.29775
136	0.20566	1.77771	0.29708
137	0.20518	1.75301	0.29641
138	0.20470	1.73054	0.29574
139	0.20422	1.70992	0.29508
140	0.20375	1.69086	0.29443
141	0.20329	2.02358	0.29378
142	0.20282	1.96224	0.29314
143	0.20237	1.91678	0.29251
144	0.20191	1.87940	0.29188
145	0.20146	1.84723	0.29126
146	0.20102	1.81879	0.29064
147	0.20058	1.79322	0.29002
148	0.20014	1.76995	0.28942
149	0.19971	1.74859	0.28881
150	0.19928	1.72883	0.28822
151	0.19885	2.06871	0.28763
152	0.19843	2.00571	0.28704
153	0.19801	1.95895	0.28646
154	0.19759	1.92047	0.28588
155	0.19718	1.88731	0.28531
156	0.19678	1.85799	0.28474
157	0.19637	1.83162	0.28418
158	0.19597	1.80760	0.28362
159	0.19557	1.78554	0.28307
160	0.19518	1.76513	0.28252
161	0.19479	2.11186	0.28197
162	0.19440	2.04728	0.28143
163	0.19401	1.99929	0.28089
164	0.19363	1.95976	0.28036
165	0.19325	1.92568	0.27983
166	0.19288	1.89553	0.27931
167	0.19251	1.86839	0.27879
168	0.19214	1.84367	0.27827
169	0.19177	1.82095	0.27776
170	0.19141	1.79992	0.27725
171	0.19105	2.15323	0.27675
172	0.19069	2.08713	0.27625
173	0.19033	2.03798	0.27575
174	0.18998	1.99746	0.27526

175	0.18963	1.96251	0.27477
176	0.18928	1.93157	0.27428
177	0.18894	1.90370	0.27380
178	0.18859	1.87831	0.27332
179	0.18825	1.85496	0.27285
180	0.18792	1.83334	0.27238
181	0.18758	2.19298	0.27191
182	0.18725	2.12545	0.27144
183	0.18692	2.07518	0.27098
184	0.18659	2.03372	0.27052
185	0.18627	1.99793	0.27007
186	0.18594	1.96624	0.26961
187	0.18562	1.93768	0.26917
188	0.18530	1.91165	0.26872
189	0.18499	1.88771	0.26828
190	0.18467	1.86553	0.26784
191	0.18436	2.23128	0.26740
192	0.18405	2.16237	0.26696
193	0.18374	2.11103	0.26653
194	0.18344	2.06867	0.26611
195	0.18314	2.03208	0.26568
196	0.18283	1.99966	0.26526
197	0.18254	1.97045	0.26484
198	0.18224	1.94381	0.26442
199	0.18194	1.91930	0.26401
200	0.18165	1.89659	0.26359

MM	M	NSYS	FAILR	TIMP	CREWS	Q
100	50	20000	0.50000E-03	10.0000	10	0.80000

TI	ETR	IETR
1.00000	10.00000	10

IX	R(IX)	T(IX)	AVGT(IX)
1	100.00000	1.00000	1.00000
2	125.00000	0.80000	0.90000
3	142.42908	0.70210	0.83403
4	156.24998	0.64000	0.78553
5	167.68737	0.59564	0.74755
6	178.03636	0.56168	0.71657
7	187.09436	0.53449	0.69056
8	195.31244	0.51200	0.66824
9	202.86049	0.49295	0.64876
10	209.85918	0.47651	0.63154
11	158.19913	0.63211	0.63159
12	173.77277	0.57546	0.62691
13	185.39182	0.53940	0.62018
14	195.05899	0.51267	0.61250
15	203.50394	0.49139	0.60443
16	211.08847	0.47373	0.59626
17	218.02330	0.45867	0.58816
18	224.44403	0.44555	0.58024
19	230.44417	0.43394	0.57254
20	236.09163	0.42356	0.56509
21	158.19913	0.63211	0.56828
22	173.77277	0.57546	0.56861
23	185.39182	0.53940	0.56734
24	195.05899	0.51267	0.56506
25	203.50394	0.49139	0.56212
26	211.08847	0.47373	0.55872
27	218.02330	0.45867	0.55501
28	224.44403	0.44555	0.55110
29	230.44417	0.43394	0.54706
30	236.09163	0.42356	0.54294
31	158.19913	0.63211	0.54582
32	173.77277	0.57546	0.54675
33	185.39182	0.53940	0.54652
34	195.05899	0.51267	0.54553
35	203.50394	0.49139	0.54398
36	211.08847	0.47373	0.54203
37	218.02330	0.45867	0.53978
38	224.44403	0.44555	0.53730
39	230.44417	0.43394	0.53465
40	236.09163	0.42356	0.53187
41	158.19913	0.63211	0.53431
42	173.77277	0.57546	0.53529
43	185.39182	0.53940	0.53539
44	195.05899	0.51267	0.53487
45	203.50394	0.49139	0.53391
46	211.08847	0.47373	0.53260
47	218.02330	0.45867	0.53102
48	224.44403	0.44555	0.52924
49	230.44417	0.43394	0.52730
50	236.09163	0.42356	0.52522
51	158.19913	0.63211	0.52732
52	173.77277	0.57546	0.52824

J	ATTTP(J)
1	0.63154
2	0.49865
3	0.49865

53	185.39182	0.53940	0.52845
54	195.05899	0.51267	0.52816
55	203.50394	0.49139	0.52749
56	211.08847	0.47373	0.52653
57	218.02330	0.45867	0.52534
58	224.44403	0.44555	0.52397
59	230.44417	0.43394	0.52244
60	236.09163	0.42356	0.52079
61	158.19913	0.63211	0.52262
62	173.77277	0.57546	0.52347
63	185.39182	0.53940	0.52372
64	195.05899	0.51267	0.52355
65	203.50394	0.49139	0.52305
66	211.08847	0.47373	0.52231
67	218.02330	0.45867	0.52136
68	224.44403	0.44555	0.52024
69	230.44417	0.43394	0.51899
70	236.09163	0.42356	0.51763
71	158.19913	0.63211	0.51924
72	173.77277	0.57546	0.52002
73	185.39182	0.53940	0.52029
74	195.05899	0.51267	0.52018
75	203.50394	0.49139	0.51980
76	211.08847	0.47373	0.51919
77	218.02330	0.45867	0.51841
78	224.44403	0.44555	0.51747
79	230.44417	0.43394	0.51642
80	236.09163	0.42356	0.51525
81	158.19913	0.63211	0.51670
82	173.77277	0.57546	0.51741
83	185.39182	0.53940	0.51768
84	195.05899	0.51267	0.51762
85	203.50394	0.49139	0.51731
86	211.08847	0.47373	0.51680
87	218.02330	0.45867	0.51613
88	224.44403	0.44555	0.51533
89	230.44417	0.43394	0.51442
90	236.09163	0.42356	0.51341
91	158.19913	0.63211	0.51471
92	173.77277	0.57546	0.51537
93	185.39182	0.53940	0.51563
94	195.05899	0.51267	0.51560
95	203.50394	0.49139	0.51534
96	211.08847	0.47373	0.51491
97	218.02330	0.45867	0.51433
98	224.44403	0.44555	0.51363
99	230.44417	0.43394	0.51282
100	236.09163	0.42356	0.51193
101	158.19913	0.63211	0.51312
102	173.77277	0.57546	0.51373
103	185.39182	0.53940	0.51398
104	195.05899	0.51267	0.51397
105	203.50394	0.49139	0.51375
106	211.08847	0.47373	0.51338
107	218.02330	0.45867	0.51286
108	224.44403	0.44555	0.51224
109	230.44417	0.43394	0.51152
110	236.09163	0.42356	0.51072
111	158.19913	0.63211	0.51182
112	173.77277	0.57546	0.51239
113	185.39182	0.53940	0.51262

114	195.05899	0.51267	0.51262
115	203.50394	0.49139	0.51244
116	211.08847	0.47373	0.51211
117	218.02330	0.45867	0.51165
118	224.44403	0.44555	0.51109
119	230.44417	0.43394	0.51044
120	236.09163	0.42356	0.50972
121	158.19913	0.63211	0.51073
122	173.77277	0.57546	0.51126
123	185.39182	0.53940	0.51149
124	195.05899	0.51267	0.51150
125	203.50394	0.49139	0.51134
126	211.08847	0.47373	0.51104
127	218.02330	0.45867	0.51062
128	224.44403	0.44555	0 51012
129	230.44417	0.43394	0.50953
130	236.09163	0.42356	0.50886
131	158.19913	0.63211	0.50981
132	173.77277	0.57546	0.51030
133	185.39182	0.53940	0.51052
134	195.05899	0.51267	0.51054
135	203.50394	0.49139	0.51040
136	211.08847	0.47373	0.51013
137	218.02330	0.45867	0.50975
138	224.44403	0.44555	0.50928
139	230.44417	0.43394	0.50874
140	236.09163	0.42356	0.50813
141	158.19913	0.63211	0.50901
142	173.77277	0.57546	0.50948
143	185.39182	0.53940	0.50969
144	195.05899	0.51267	0.50971
145	203.50394	0.49139	0.50958
146	211.08847	0.47373	0.50934
147	218.02330	0.45867	0.50899
148	224.44403	0.44555	0.50857
149	230.44417	0.43394	0.50806
150	236.09163	0.42356	0.50750
151	158.19913	0.63211	0.50833
152	173.77277	0.57546	0.50877
153	185.39182	0.53940	0.50897
154	195.05899	0.51267	0.50899
155	203.50394	0.49139	0.50888
156	211.08847	0.47373	0.50865
157	218.02330	0.45867	0.50833
158	224.44403	0.44555	0.50794
159	230.44417	0.43394	0.50747
160	236.09163	0.42356	0.50695
161	158.19913	0.63211	0.50772
162	173.77277	0.57546	0.50814
163	185.39182	0.53940	0.50833
164	195.05899	0.51267	0.50836
165	203.50394	0.49139	0.50826
166	211.08847	0.47373	0.50805
167	218.02330	0.45867	0.50775
168	224.44403	0.44555	0.50738
169	230.44417	0.43394	0.50695
170	236.09163	0.42356	0.50646
171	158.19913	0.63211	0.50719
172	173.77277	0.57546	0.50759
173	185.39182	0.53940	0.50777
174	195.05899	0.51267	0.50780

175	203.50394	0.49139	0.50771
176	211.[illegible]	0.47373	0.50752
177	218.02330	0.45867	0.50724
178	224.44403	0.44555	0.50689
179	230.44417	0.43394	0.50649
180	236.09163	0.42356	0.50602
181	158.19913	0.63211	0.50672
182	173.77277	0.57546	0.50710
183	185.39182	0.53940	0.50728
184	195.05899	0.51267	0.50730
185	203.50394	0.49139	0.50722
186	211.08847	0.47373	0.50704
187	218.02330	0.45867	0.50678
188	224.44403	0.44555	0.50645
189	230.44417	0.43394	0.50607
190	236.09163	0.42356	0.50564
191	158.19913	0.63211	0.50630
192	173.77277	0.57546	0.50666
193	185.39182	0.53940	0.50683
194	195.05899	0.51267	0.50686
195	203.50394	0.49139	0.50678
196	211.08847	0.47373	0.50661
197	218.02330	0.45867	0.50637
198	224.44403	0.44555	0.50606
199	230.44417	0.43394	0.50570
200	236.09163	0.42356	0.50529

A12.5

MM	M	NSYS	FAILR	TIMP	CREWS	Q
100	50	20000	0.50000E-03	10.0000	10	0.80000

TI	ETR	IETR
1.00000	10.00000	10

IX	TN(IX)	TDTN(IX)	AVGTN(IX)	ATTPN(J)	ATDAN(J)
1	1.00000	1.00000	1.00000	0.63154	1.00000
2	0.80000	1.00000	0.90000	0.41696	1.19592
3	0.70210	1.00000	0.83403	0.35350	1.41062
4	0.64000	1.00000	0.78553		
5	0.59564	1.00000	0.74755		
6	0.56168	1.00000	0.71657		
7	0.53449	1.00000	0.69056		
8	0.51200	1.00000	0.66824		
9	0.49295	1.00000	0.64876		
10	0.47651	1.00000	0.63154		
11	0.46211	1.36788	0.61613		
12	0.44935	1.28067	0.60224		
13	0.43792	1.23174	0.58960		
14	0.42759	1.19896	0.57802		
15	0.41820	1.17502	0.56737		
16	0.40960	1.15658	0.55751		
17	0.40168	1.14186	0.54834		
18	0.39436	1.12979	0.53979		
19	0.38756	1.11970	0.53178		
20	0.38121	1.11111	0.52425		
21	0.37527	1.68444	0.51715		
22	0.36969	1.55662	0.51045		
23	0.36444	1.48009	0.50410		
24	0.35948	1.42614	0.49808		
25	0.35478	1.38504	0.49234		
26	0.35033	1.35224	0.48688		
27	0.34610	1.32523	0.48167		
28	0.34207	1.30248	0.47668		
29	0.33823	1.28298	0.47191		
30	0.33456	1.26604	0.46733		
31	0.33105	1.90944	0.46293		
32	0.32768	1.75618	0.45871		
33	0.32445	1.66250	0.45464		
34	0.32135	1.59536	0.45072		
35	0.31836	1.54350	0.44694		
36	0.31549	1.50159	0.44328		
37	0.31272	1.46671	0.43976		
38	0.31004	1.43704	0.43634		
39	0.30746	1.41138	0.43304		
40	0.30497	1.38889	0.42984		
41	0.30255	2.08928	0.42673		
42	0.30021	1.91685	0.42372		
43	0.29795	1.81038	0.42079		
44	0.29575	1.73343	0.41795		
45	0.29362	1.67356	0.41519		
46	0.29155	1.62489	0.41250		
47	0.28954	1.58414	0.40988		
48	0.28758	1.54928	0.40734		
49	0.28568	1.51899	0.40485		
50	0.28383	1.49233	0.40243		
51	0.28202	2.24135	0.40007		
52	0.28027	2.05328	0.39777		

53	0.27855	1.93643	0.39552
54	0.27[illegible]	[illegible].85157	0.39332
55	0.27525	1.78525	0.39117
56	0.27366	1.73112	0.38907
57	0.27210	1.68563	0.38702
58	0.27058	1.64660	0.38501
59	0.26910	1.61258	0.38305
60	0.26765	1.58254	0.38113
61	0.26623	2.37434	0.37924
62	0.26484	2.17290	0.37740
63	0.26348	2.04723	0.37559
64	0.26214	1.95566	0.37382
65	0.26084	1.88389	0.37208
66	0.25956	1.82515	0.37037
67	0.25831	1.77567	0.36870
68	0.25708	1.73312	0.36706
69	0.25587	1.69594	0.36545
70	0.25469	1.66306	0.36386
71	0.25353	2.49326	0.36231
72	0.25239	2.28006	0.36078
73	0.25127	2.14667	0.35928
74	0.25017	2.04924	0.35781
75	0.24910	1.97270	0.35636
76	0.24804	1.90995	0.35493
77	0.24699	1.85700	0.35353
78	0.24597	1.81138	0.35215
79	0.24496	1.77147	0.35080
80	0.24397	1.73611	0.34946
81	0.24300	2.60130	0.34815
82	0.24204	2.37754	0.34685
83	0.24110	2.23725	0.34558
84	0.24017	2.13458	0.34432
85	0.23926	2.05381	0.34309
86	0.23836	1.98749	0.34187
87	0.23747	1.93145	0.34067
88	0.23660	1.88311	0.33949
89	0.23574	1.84076	0.33832
90	0.23490	1.80320	0.33717
91	0.23406	2.70064	0.33604
92	0.23324	2.46727	0.33492
93	0.23243	2.32070	0.33382
94	0.23163	2.21329	0.33273
95	0.23084	2.12869	0.33166
96	0.23007	2.05913	0.33060
97	0.22930	2.00030	0.32956
98	0.22854	1.94950	0.32853
99	0.22780	1.90496	0.32751
100	0.22706	1.86541	0.32650
101	0.22634	2.79282	0.32551
102	0.22562	2.55060	0.32453
103	0.22491	2.39827	0.32356
104	0.22421	2.28651	0.32261
105	0.22352	2.19839	0.32167
106	0.22284	2.12588	0.32073
107	0.22217	2.06449	0.31981
108	0.22151	2.01144	0.31890
109	0.22085	1.96489	0.31800
110	0.22020	1.92354	0.31711
111	0.21956	2.87901	0.31623
112	0.21893	2.62856	0.31537
113	0.21830	2.47089	0.31451

114	[illegible]	2.35510	0.31366
115	[illegible]	2.26372	0.31282
116	0.21647	2.18848	0.31199
117	0.21587	2.12473	0.31116
118	0.21528	2.06961	0.31035
119	0.21470	2.02121	0.30955
120	0.21412	1.97818	0.30875
121	0.21355	2.96008	0.30797
122	0.21298	2.70194	0.30719
123	0.21242	2.53927	0.30642
124	0.21187	2.41972	0.30565
125	0.21132	2.32531	0.30490
126	0.21078	2.24752	0.30415
127	0.21025	2.18158	0.30341
128	0.20972	2.12452	0.30268
129	0.20919	2.07440	0.30196
130	0.20867	2.02982	0.30124
131	0.20816	3.03672	0.30053
132	0.20765	2.77134	0.29982
133	0.20714	2.60397	0.29913
134	0.20665	2.48090	0.29844
135	0.20615	2.38364	0.29775
136	0.20566	2.30346	0.29708
137	0.20518	2.23546	0.29641
138	0.20470	2.17660	0.29574
139	0.20422	2.12486	0.29508
140	0.20375	2.07882	0.29443
141	0.20329	3.10949	0.29378
142	0.20282	2.83727	0.29314
143	0.20237	2.66546	0.29251
144	0.20191	2.53905	0.29188
145	0.20146	2.43911	0.29126
146	0.20102	2.35668	0.29064
147	0.20058	2.28674	0.29002
148	0.20014	2.22618	0.28942
149	0.19971	2.17292	0.28881
150	0.19928	2.12551	0.28822
151	0.19885	3.17885	0.28763
152	0.19843	2.90011	0.28704
153	0.19801	2.72410	0.28646
154	0.19759	2.59453	0.28588
155	0.19718	2.49205	0.28531
156	0.19678	2.40749	0.28474
157	0.19637	2.33571	0.28418
158	0.19597	2.27353	0.28362
159	0.19557	2.21884	0.28307
160	0.19518	2.17014	0.28252
161	0.19479	3.24515	0.28197
162	0.19440	2.96021	0.28143
163	0.19401	2.78019	0.28089
164	0.19363	2.64761	0.28036
165	0.19325	2.54271	0.27983
166	0.19288	2.45612	0.27931
167	0.19251	2.38260	0.27879
168	0.19214	2.31890	0.27827
169	0.19177	2.26284	0.27776
170	0.19141	2.21291	0.27725
171	0.19105	3.30872	0.27675
172	0.19069	3.01785	0.27625
173	0.19033	2.83399	0.27575
174	0.18998	2.69854	0.27526

175	0.18963	2.59134	0.27477
176	0.18929	2.50262	0.27428
177	0.18894	2.42763	0.27380
178	0.18859	2.36246	0.27332
179	0.18825	2.30510	0.27285
180	0.18792	2.25401	0.27238
181	0.18758	3.36981	0.27191
182	0.18725	3.07326	0.27144
183	0.18692	2.88573	0.27098
184	0.18659	2.74753	0.27052
185	0.18627	2.63811	0.27007
186	0.18594	2.54774	0.26961
187	0.18562	2.47096	0.26917
188	0.18530	2.40440	0.26872
189	0.18499	2.34580	0.26828
190	0.18467	2.29358	0.26784
191	0.18436	3.42866	0.26740
192	0.18405	3.12663	0.26696
193	0.18374	2.93558	0.26653
194	0.18344	2.79474	0.26611
195	0.18314	2.68320	0.26568
196	0.18283	2.59106	0.26526
197	0.18254	2.51275	0.26484
198	0.18224	2.44485	0.26442
199	0.18194	2.38506	0.26401
200	0.18165	2.33177	0.26359

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MM	M	NSYS	FAILR	TIMP	CREWS	Q
100	10	10000	0.50000E-03	10.0000	10	0.95000

TI	ETR	IETR
1.00000	5.00000	5

IX	R(IX)	T(IX)	AVGT(IX)	J	ATTTP(J)
1	100.00000	1.00000	1.00000	1	0.93243
2	105.26315	0.95000	0.97500	2	0.86527
3	108.46938	0.92192	0.95731	3	0.83991
4	110.80330	0.90250	0.94360	4	0.82547
5	112.64816	0.88772	0.93243	5	0.81625
6	112.76047	0.88684	0.92483	6	0.81012
7	114.46570	0.87362	0.91751	7	0.80602
8	115.81848	0.86342	0.91075	8	0.80337
9	116.97081	0.85491	0.90455	9	0.80182
10	117.98412	0.84757	0.89885	10	0.80112
11	116.95087	0.85506	0.89487	11	0.80112
12	118.22528	0.84584	0.89078		
13	119.23178	0.83870	0.88678		
14	120.09917	0.83265	0.88291		
15	120.87354	0.82731	0.87920		
16	119.30107	0.83822	0.87664		
17	120.42192	0.83041	0.87392		
18	121.29456	0.82444	0.87117		
19	122.04410	0.81938	0.86845		
20	122.71391	0.81490	0.86577		
21	120.79845	0.82783	0.86396		
22	121.84726	0.82070	0.86200		
23	122.65477	0.81530	0.85996		
24	123.34509	0.81073	0.85791		
25	123.96083	0.80671	0.85586		
26	121.79623	0.82104	0.85453		
27	122.80704	0.81429	0.85303		
28	123.57938	0.80920	0.85147		
29	124.23715	0.80491	0.84986		
30	124.82265	0.80114	0.84824		
31	122.46315	0.81657	0.84722		
32	123.45288	0.81003	0.84605		
33	124.20551	0.80512	0.84481		
34	124.84479	0.80099	0.84352		
35	125.41289	0.79737	0.84221		
36	122.89352	0.81371	0.84141		
37	123.87164	0.80729	0.84049		
38	124.61331	0.80248	0.83949		
39	125.24219	0.79845	0.83844		
40	125.80045	0.79491	0.83735		
41	123.14566	0.81205	0.83673		
42	124.11787	0.80569	0.83599		
43	124.85387	0.80094	0.83518		
44	125.47736	0.79696	0.83431		
45	126.03047	0.79346	0.83340		
46	123.25824	0.81130	0.83292		
47	124.22806	0.80497	0.83233		
48	124.96182	0.80024	0.83166		
49	125.58318	0.79628	0.83094		
50	126.13422	0.79281	0.83017		
51	123.25824	0.81130	0.82980		
52	124.22806	0.80497	0.82932		

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53	124.96182	0.80024	0.82878
54	125.58318	0.79628	0.82817
55	126.13422	0.79281	0.82753
56	123.25824	0.81130	0.82724
57	124.22806	0.80497	0.82685
58	124.96182	0.80024	0.82639
59	125.58318	0.79628	0.82588
60	126.13422	0.79281	0.82533
61	123.25824	0.81130	0.82510
62	124.22806	0.80497	0.82477
63	124.96182	0.80024	0.82439
64	125.58318	0.79628	0.82395
65	126.13422	0.79281	0.82347
66	123.25824	0.81130	0.82328
67	124.22806	0.80497	0.82301
68	124.96182	0.80024	0.82267
69	125.58318	0.79628	0.82229
70	126.13422	0.79281	0.82187
71	123.25824	0.81130	0.82172
72	124.22806	0.80497	0.82149
73	124.96182	0.80024	0.82120
74	125.58318	0.79628	0.82086
75	126.13422	0.79281	0.82049
76	123.25824	0.81130	0.82037
77	124.22806	0.80497	0.82017
78	124.96182	0.80024	0.81991
79	125.58318	0.79628	0.81961
80	126.13422	0.79281	0.81928
81	123.25824	0.81130	0.81918
82	124.22806	0.80497	0.81900
83	124.96182	0.80024	0.81878
84	125.58318	0.79628	0.81851
85	126.13422	0.79281	0.81821
86	123.25824	0.81130	0.81813
87	124.22806	0.80497	0.81798
88	124.96182	0.80024	0.81777
89	125.58318	0.79628	0.81753
90	126.13422	0.79281	0.81726
91	123.25824	0.81130	0.81719
92	124.22806	0.80497	0.81706
93	124.96182	0.80024	0.81688
94	125.58318	0.79628	0.81666
95	126.13422	0.79281	0.81641
96	123.25824	0.81130	0.81635
97	124.22806	0.80497	0.81624
98	124.96182	0.80024	0.81607
99	125.58318	0.79628	0.81587
100	126.13422	0.79281	0.81564
101	123.25824	0.81130	0.81560
102	124.22806	0.80497	0.81550
103	124.96182	0.80024	0.81535
104	125.58318	0.79628	0.81516
105	126.13422	0.79281	0.81495
106	123.25824	0.81130	0.81492
107	124.22806	0.80497	0.81482
108	124.96182	0.80024	0.81469
109	125.58318	0.79628	0.81452
110	126.13422	0.79281	0.81432
111	123.25824	0.81130	0.81430
112	124.22806	0.80497	0.81421
113	124.96182	0.80024	0.81409

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114	125.58318	0.79628	0.81393
115	126.13422	0.79281	0.81375
116	123.25824	0.81130	0.81373
117	124.22806	0.80497	0.81365
118	124.96182	0.80024	0.81354
119	125.58318	0.79628	0.81339
120	126.13422	0.79281	0.81322
121	123.25824	0.81130	0.81321
122	124.22806	0.80497	0.81314
123	124.96182	0.80024	0.81303
124	125.58318	0.79628	0.81290
125	126.13422	0.79281	0.81274
126	123.25824	0.81130	0.81273
127	124.22806	0.80497	0.81266
128	124.96182	0.80024	0.81257
129	125.58318	0.79628	0.81244
130	126.13422	0.79281	0.81229
131	123.25824	0.81130	0.81228
132	124.22806	0.80497	0.81223
133	124.96182	0.80024	0.81214
134	125.58318	0.79628	0.81202
135	126.13422	0.79281	0.81188
136	123.25824	0.81130	0.81187
137	124.22806	0.80497	0.81182
138	124.96182	0.80024	0.81174
139	125.58318	0.79628	0.81163
140	126.13422	0.79281	0.81149
141	123.25824	0.81130	0.81149
142	124.22806	0.80497	0.81144
143	124.96182	0.80024	0.81137
144	125.58318	0.79628	0.81126
145	126.13422	0.79281	0.81113
146	123.25824	0.81130	0.81114
147	124.22806	0.80497	0.81109
148	124.96182	0.80024	0.81102
149	125.58318	0.79628	0.81092
150	126.13422	0.79281	0.81080
151	123.25824	0.81130	0.81080
152	124.22806	0.80497	0.81076
153	124.96182	0.80024	0.81070
154	125.58318	0.79628	0.81060
155	126.13422	0.79281	0.81049
156	123.25824	0.81130	0.81049
157	124.22806	0.80497	0.81046
158	124.96182	0.80024	0.81039
159	125.58318	0.79628	0.81030
160	126.13422	0.79281	0.81019
161	123.25824	0.81130	0.81020
162	124.22806	0.80497	0.81017
163	124.96182	0.80024	0.81011
164	125.58318	0.79628	0.81002
165	126.13422	0.79281	0.80992
166	123.25824	0.81130	0.80993
167	124.22806	0.80497	0.80990
168	124.96182	0.80024	0.80984
169	125.58318	0.79628	0.80976
170	126.13422	0.79281	0.80966
171	123.25824	0.81130	0.80967
172	124.22806	0.80497	0.80964
173	124.96182	0.80024	0.80959
174	125.58318	0.79628	0.80951

175	126.13422	0.79281	0.80942
176	[illegible]	0.81130	0.80943
177	124.22806	0.80497	0.80940
178	124.96182	0.80024	0.80935
179	125.58318	0.79628	0.80928
180	126.13422	0.79281	0.80919
181	123.25824	0.81130	0.80920
182	124.22806	0.80497	0.80917
183	124.96182	0.80024	0.80913
184	125.58318	0.79628	0.80906
185	126.13422	0.79281	0.80897
186	123.25824	0.81130	0.80898
187	124.22806	0.80497	0.80896
188	124.96182	0.80024	0.80891
189	125.58318	0.79628	0.80885
190	126.13422	0.79281	0.80876
191	123.25824	0.81130	0.80877
192	124.22806	0.80497	0.80875
193	124.96182	0.80024	0.80871
194	125.58318	0.79628	0.80865
195	126.13422	0.79281	0.80856
196	123.25824	0.81130	0.80858
197	124.22806	0.80497	0.80856
198	124.96182	0.80024	0.80852
199	125.58318	0.79628	0.80846
200	126.13422	0.79281	0.80838

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MM	M	NSYS	FAILR	TIMP	CREWS	Q
100	10	10000	0.50000E-03	10.0000	10	0.95000

TI	ETR	IETR
1.00000	5.00000	5

IX	TN(IX)	TDTN(IX)	AVGTN(IX)	ATTPN(J)	ATDAN(J)
1	1.00000	1.00000	1.00000	0.93243	1.00000
2	0.95000	1.00000	0.97500	0.85847	1.00792
3	0.92192	1.00000	0.95731	0.82751	1.01499
4	0.90260	1.00000	0.94360	0.80764	1.02208
5	0.88772	1.00000	0.93243	0.79304	1.02927
6	0.87582	1.01257	0.92299	0.78154	1.03656
7	0.86589	1.00893	0.91484	0.77208	1.04396
8	0.85738	1.00705	0.90765	0.76405	1.05147
9	0.84993	1.00586	0.90124	0.75708	1.05909
10	0.84333	1.00502	0.89545	0.75094	1.06683
11	0.83741	1.02108	0.89017	0.74544	1.07469
12	0.83203	1.01660	0.88533		
13	0.82712	1.01400	0.88085		
14	0.82259	1.01222	0.87669		
15	0.81841	1.01088	0.87280		
16	0.81451	1.02911	0.86915		
17	0.81086	1.02411	0.86573		
18	0.80744	1.02106	0.86249		
19	0.80421	1.01885	0.85942		
20	0.80117	1.01715	0.85651		
21	0.79828	1.03701	0.85374		
22	0.79554	1.03163	0.85109		
23	0.79292	1.02821	0.84856		
24	0.79043	1.02569	0.84614		
25	0.78805	1.02368	0.84382		
26	0.78576	1.04490	0.84158		
27	0.78357	1.03920	0.83943		
28	0.78147	1.03549	0.83736		
29	0.77944	1.03268	0.83537		
30	0.77749	1.03042	0.83344		
31	0.77560	1.05282	0.83157		
32	0.77378	1.04684	0.82976		
33	0.77202	1.04287	0.82801		
34	0.77032	1.03962	0.82632		
35	0.76867	1.03734	0.82467		
36	0.76707	1.06081	0.82307		
37	0.76551	1.05457	0.82151		
38	0.76400	1.05036	0.82000		
39	0.76254	1.04710	0.81853		
40	0.76111	1.04441	0.81709		
41	0.75972	1.06888	0.81569		
42	0.75837	1.06240	0.81433		
43	0.75705	1.05797	0.81299		
44	0.75576	1.05451	0.81169		
45	0.75450	1.05163	0.81042		
46	0.75328	1.07703	0.80918		
47	0.75208	1.07033	0.80796		
48	0.75091	1.06570	0.80678		
49	0.74976	1.06205	0.80561		
50	0.74864	1.05899	0.80447		
51	0.74755	1.08529	0.80336		
52	0.74647	1.07836	0.80226		

53	0.745[illegible]	1.07354	0.80119
[illegible]	0.[illegible]	1.06771	0.80014
55	0.743[illegible]	1.06648	0.79911
56	0.74239	1.09282	0.79809
57	0.74142	1.08571	0.79710
58	0.74047	1.08073	0.79612
59	0.73953	1.07674	0.79516
60	0.73861	1.07337	0.79422
61	0.73771	1.09976	0.79329
62	0.73682	1.09249	0.79238
63	0.73595	1.08736	0.79149
64	0.73509	1.08324	0.79061
65	0.73425	1.07975	0.78974
66	0.73342	1.10619	0.78888
67	0.73260	1.09878	0.78804
68	0.73180	1.09353	0.78722
69	0.73101	1.08929	0.78640
70	0.73023	1.08569	0.78560
71	0.72947	1.11219	0.78481
72	0.72871	1.10465	0.78403
73	0.72797	1.09928	0.78326
74	0.72724	1.09495	0.78251
75	0.72651	1.09125	0.78176
76	0.72580	1.11760	0.78102
77	0.72510	1.11015	0.78030
78	0.72441	1.10468	0.77958
79	0.72373	1.10026	0.77887
80	0.72305	1.09647	0.77817
81	0.72239	1.12309	0.77749
82	0.72173	1.11533	0.77681
83	0.72109	1.10978	0.77613
84	0.72045	1.10526	0.77547
85	0.71982	1.10140	0.77482
86	0.71919	1.12807	0.77417
87	0.71858	1.12023	0.77353
88	0.71797	1.11459	0.77290
89	0.71737	1.11000	0.77227
90	0.71678	1.10607	0.77166
91	0.71619	1.13280	0.77105
92	0.71561	1.12487	0.77045
93	0.71504	1.11916	0.76985
94	0.71448	1.11450	0.76926
95	0.71392	1.11050	0.76868
96	0.71336	1.13729	0.76810
97	0.71282	1.12928	0.76753
98	0.71228	1.12350	0.76697
99	0.71174	1.11878	0.76641
100	0.71121	1.11473	0.76586
101	0.71069	1.14158	0.76531
102	0.71017	1.13349	0.76477
103	0.70966	1.12765	0.76424
104	0.70915	1.12287	0.76371
105	0.70865	1.11876	0.76318
106	0.70815	1.14567	0.76266
107	0.70766	1.13751	0.76215
108	0.70717	1.13161	0.76164
109	0.70669	1.12678	0.76113
110	0.70621	1.12262	0.76064
111	0.70574	1.14958	0.76014
112	0.70527	1.14136	0.75965
113	0.70481	1.13541	0.75917

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114	0.70[illegible]	1.13053	0.75868
115	[illegible]	1.12561	0.75821
116	0.70344	1.15333	0.75774
117	0.70300	1.14506	0.75727
118	0.70255	1.13905	0.75680
119	0.70212	1.13412	0.75634
120	0.70168	1.12937	0.75589
121	0.70125	1.15694	0.75544
122	0.70082	1.14861	0.75499
123	0.70040	1.14255	0.75455
124	0.69998	1.13758	0.75411
125	0.69956	1.13329	0.75367
126	0.69915	1.16041	0.75324
127	0.69874	1.15203	0.75281
128	0.69834	1.14593	0.75238
129	0.69794	1.14091	0.75196
130	0.69754	1.13658	0.75154
131	0.69714	1.16376	0.75113
132	0.69675	1.15532	0.75071
133	0.69636	1.14918	0.75030
134	0.69597	1.14413	0.74990
135	0.69559	1.13976	0.74950
136	0.69521	1.16699	0.74910
137	0.69483	1.15851	0.74870
138	0.69446	1.15232	0.74831
139	0.69409	1.14724	0.74792
140	0.69372	1.14283	0.74753
141	0.69336	1.17011	0.74715
142	0.69299	1.16158	0.74677
143	0.69263	1.15536	0.74639
144	0.69228	1.15024	0.74601
145	0.69192	1.14580	0.74564
146	0.69157	1.17313	0.74527
147	0.69122	1.16456	0.74490
148	0.69087	1.15831	0.74453
149	0.69053	1.15315	0.74417
150	0.69019	1.14868	0.74381
151	0.68985	1.17606	0.74345
152	0.68951	1.16745	0.74310
153	0.68918	1.16116	0.74275
154	0.68885	1.15597	0.74240
155	0.68852	1.15147	0.74205
156	0.68819	1.17890	0.74170
157	0.68786	1.17025	0.74136
158	0.68754	1.16392	0.74102
159	0.68722	1.15870	0.74068
160	0.68690	1.15418	0.74035
161	0.68658	1.18165	0.74001
162	0.68627	1.17297	0.73968
163	0.68596	1.16661	0.73935
164	0.68565	1.16136	0.73902
165	0.68534	1.15681	0.73870
166	0.68503	1.18433	0.73837
167	0.68473	1.17561	0.73805
168	0.68443	1.16922	0.73773
169	0.68412	1.16395	0.73742
170	0.68383	1.15937	0.73710
171	0.68353	1.18693	0.73679
172	0.68323	1.17818	0.73648
173	0.68294	1.17176	0.73617
174	0.68265	1.16646	0.73586

175	0.68233	1.16186	0.73555
176	0.68206	1.18947	0.73525
177	0.68179	1.18068	0.73495
178	0.68150	1.17423	0.73465
179	0.68122	1.16891	0.73435
180	0.68094	1.16428	0.73405
181	0.68066	1.19194	0.73376
182	0.68038	1.18311	0.73346
183	0.68011	1.17664	0.73317
184	0.67983	1.17129	0.73288
185	0.67956	1.16665	0.73259
186	0.67929	1.19434	0.73231
187	0.67902	1.18549	0.73202
188	0.67875	1.17899	0.73174
189	0.67849	1.17362	0.73146
190	0.67822	1.16895	0.73118
191	0.67796	1.19669	0.73090
192	0.67770	1.18781	0.73062
193	0.67743	1.18129	0.73035
194	0.67718	1.17589	0.73007
195	0.67692	1.17120	0.72980
196	0.67666	1.19898	0.72953
197	0.67641	1.19007	0.72926
198	0.67615	1.18352	0.72899
199	0.67590	1.17811	0.72872
200	0.67565	1.17340	0.72846

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MM	M	NSYS	FAILR	TIMP	CREWS	Q
100	20	10000	0.50000E-03	10.0000	10	0.95000

TI	ETR	IETR
1.00000	5.00000	5

IX	R(IX)	T(IX)	AVGT(IX)	J	ATTTP(J)
1	100.00000	1.00000	1.00000	1	0.93243
2	105.26315	0.95000	0.97500	2	0.87220
3	108.46938	0.92192	0.95731	3	0.85271
4	110.80330	0.90250	0.94360	4	0.84414
5	112.64816	0.88772	0.93243	5	0.84090
6	111.34264	0.89813	0.92671	6	0.84090
7	113.44319	0.88150	0.92025		
8	115.00192	0.86955	0.91391		
9	116.28554	0.85995	0.90792		
10	117.39124	0.85185	0.90231		
11	114.48541	0.87347	0.89969		
12	116.26283	0.86012	0.89639		
13	117.56190	0.85062	0.89287		
14	118.63181	0.84294	0.88930		
15	119.55829	0.83641	0.88578		
16	115.82841	0.86335	0.88438		
17	117.51811	0.85093	0.88241		
18	118.74062	0.84217	0.88017		
19	119.74319	0.83512	0.87780		
20	120.60992	0.82912	0.87537		
21	116.32755	0.85964	0.87462		
22	117.99321	0.84751	0.87339		
23	119.19402	0.83897	0.87189		
24	120.17685	0.83211	0.87023		
25	121.02557	0.82627	0.86847		
26	116.32755	0.85964	0.86813		
27	117.99321	0.84751	0.86737		
28	119.19402	0.83897	0.86635		
29	120.17685	0.83211	0.86517		
30	121.02557	0.82627	0.86388		
31	116.32755	0.85964	0.86374		
32	117.99321	0.84751	0.86323		
33	119.19402	0.83897	0.86250		
34	120.17685	0.83211	0.86160		
35	121.02557	0.82627	0.86059		
36	116.32755	0.85964	0.86057		
37	117.99321	0.84751	0.86021		
38	119.19402	0.83897	0.85965		
39	120.17685	0.83211	0.85895		
40	121.02557	0.82627	0.85813		
41	116.32755	0.85964	0.85817		
42	117.99321	0.84751	0.85791		
43	119.19402	0.83897	0.85747		
44	120.17685	0.83211	0.85689		
45	121.02557	0.82627	0.85621		
46	116.32755	0.85964	0.85629		
47	117.99321	0.84751	0.85610		
48	119.19402	0.83897	0.85574		
49	120.17685	0.83211	0.85526		
50	121.02557	0.82627	0.85468		
51	116.32755	0.85964	0.85478		
52	117.99321	0.84751	0.85464		

53	119.19402	0.83897	0.85434
54	[illegible]	0.83211	0.85393
55	121.02557	0.82627	0.85343
56	116.32755	0.85964	0.85354
57	117.99321	0.84751	0.85343
58	119.19402	0.83897	0.85318
59	120.17685	0.83211	0.85283
60	121.02557	0.82627	0.85238
61	116.32755	0.85964	0.85250
62	117.99321	0.84751	0.85242
63	119.19402	0.83897	0.85221
64	120.17685	0.83211	0.85189
65	121.02557	0.82627	0.85150
66	116.32755	0.85964	0.85162
67	117.99321	0.84751	0.85156
68	119.19402	0.83897	0.85138
69	120.17685	0.83211	0.85110
70	121.02557	0.82627	0.85074
71	116.32755	0.85964	0.85087
72	117.99321	0.84751	0.85082
73	119.19402	0.83897	0.85066
74	120.17685	0.83211	0.85041
75	121.02557	0.82627	0.85008
76	116.32755	0.85964	0.85021
77	117.99321	0.84751	0.85017
78	119.19402	0.83897	0.85003
79	120.17685	0.83211	0.84980
80	121.02557	0.82627	0.84951
81	116.32755	0.85964	0.84963
82	117.99321	0.84751	0.84961
83	119.19402	0.83897	0.84948
84	120.17685	0.83211	0.84927
85	121.02557	0.82627	0.84900
86	116.32755	0.85964	0.84913
87	117.99321	0.84751	0.84911
88	119.19402	0.83897	0.84899
89	120.17685	0.83211	0.84880
90	121.02557	0.82627	0.84855
91	116.32755	0.85964	0.84867
92	117.99321	0.84751	0.84866
93	119.19402	0.83897	0.84856
94	120.17685	0.83211	0.84838
95	121.02557	0.82627	0.84815
96	116.32755	0.85964	0.84827
97	117.99321	0.84751	0.84826
98	119.19402	0.83897	0.84817
99	120.17685	0.83211	0.84800
100	121.02557	0.82627	0.84779
101	116.32755	0.85964	0.84790
102	117.99321	0.84751	0.84790
103	119.19402	0.83897	0.84781
104	120.17685	0.83211	0.84766
105	121.02557	0.82627	0.84746
106	116.32755	0.85964	0.84757
107	117.99321	0.84751	0.84757
108	119.19402	0.83897	0.84749
109	120.17685	0.83211	0.84735
110	121.02557	0.82627	0.84716
111	116.32755	0.85964	0.84727
112	117.99321	0.84751	0.84727
113	119.19402	0.83897	0.84720

114	120.17685	0.83211	0.84707
115	[illegible]	0.82627	0.84689
116	116.32755	0.85964	0.84700
117	117.99321	0.84751	0.84700
118	119.19402	0.83897	0.84693
119	120.17685	0.83211	0.84681
120	121.02557	0.82627	0.84664
121	116.32755	0.85964	0.84674
122	117.99321	0.84751	0.84675
123	119.19402	0.83897	0.84669
124	120.17685	0.83211	0.84657
125	121.02557	0.82627	0.84641
126	116.32755	0.85964	0.84651
127	117.99321	0.84751	0.84652
128	119.19402	0.83897	0.84646
129	120.17685	0.83211	0.84635
130	121.02557	0.82627	0.84619
131	116.32755	0.85964	0.84630
132	117.99321	0.84751	0.84631
133	119.19402	0.83897	0.84625
134	120.17685	0.83211	0.84615
135	121.02557	0.82627	0.84600
136	116.32755	0.85964	0.84610
137	117.99321	0.84751	0.84611
138	119.19402	0.83897	0.84605
139	120.17685	0.83211	0.84596
140	121.02557	0.82627	0.84582
141	116.32755	0.85964	0.84591
142	117.99321	0.84751	0.84592
143	119.19402	0.83897	0.84588
144	120.17685	0.83211	0.84578
145	121.02557	0.82627	0.84565
146	116.32755	0.85964	0.84574
147	117.99321	0.84751	0.84575
148	119.19402	0.83897	0.84571
149	120.17685	0.83211	0.84563
150	121.02557	0.82627	0.84549
151	116.32755	0.85964	0.84558
152	117.99321	0.84751	0.84559
153	119.19402	0.83897	0.84555
154	120.17685	0.83211	0.84546
155	121.02557	0.82627	0.84534
156	116.32755	0.85964	0.84543
157	117.99321	0.84751	0.84544
158	119.19402	0.83897	0.84540
159	120.17685	0.83211	0.84532
160	121.02557	0.82627	0.84520
161	116.32755	0.85964	0.84529
162	117.99321	0.84751	0.84530
163	119.19402	0.83897	0.84526
164	120.17685	0.83211	0.84519
165	121.02557	0.82627	0.84507
166	116.32755	0.85964	0.84516
167	117.99321	0.84751	0.84517
168	119.19402	0.83897	0.84513
169	120.17685	0.83211	0.84506
170	121.02557	0.82627	0.84495
171	116.32755	0.85964	0.84503
172	117.99321	0.84751	0.84505
173	119.19402	0.83897	0.84501
174	120.17685	0.83211	0.84494

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175	121.02557	0.82627	0.84483
176	[illegible]	0.85964	0.84491
177	117.99321	0.84751	0.84493
178	119.19402	0.83897	0.84490
179	120.17685	0.83211	0.84482
180	121.02557	0.82627	0.84472
181	116.32755	0.85964	0.84480
182	117.99321	0.84751	0.84482
183	119.19402	0.83897	0.84479
184	120.17685	0.83211	0.84472
185	121.02557	0.82627	0.84462
186	116.32755	0.85964	0.84470
187	117.99321	0.84751	0.84471
188	119.19402	0.83897	0.84468
189	120.17685	0.83211	0.84462
190	121.02557	0.82627	0.84452
191	116.32755	0.85964	0.84460
192	117.99321	0.84751	0.84461
193	119.19402	0.83897	0.84458
194	120.17685	0.83211	0.84452
195	121.02557	0.82627	0.84443
196	116.32755	0.85964	0.84450
197	117.99321	0.84751	0.84452
198	119.19402	0.83897	0.84449
199	120.17685	0.83211	0.84443
200	121.02557	0.82627	0.84434

MM	M	NTS	FAILR	TIMP	CREWS	Q
100	20	10000	0.50000E-03	10.0000	10	0.95000

TI	STR	IETR
1.00000	5.00000	5

IX	TN(IX)	TOTN(IX)	AVGTN(IX)	ATTPN(J)	ATDAN(J)
1	1.00000	1.00000	1.00000	0.93243	1.00000
2	0.95000	1.00000	0.97500	0.85847	1.01599
3	0.92192	1.00000	0.95731	0.82751	1.03045
4	0.90250	1.00000	0.94360	0.80764	1.04519
5	0.88772	1.00000	0.93243	0.79304	1.06034
6	0.87582	1.02547	0.92299	0.78154	1.07594
7	0.86589	1.01903	0.91484		
8	0.85738	1.01420	0.90765		
9	0.84993	1.01179	0.90124		
10	0.84333	1.01010	0.89545		
11	0.83741	1.04407	0.89017		
12	0.83203	1.03376	0.88533		
13	0.82712	1.02841	0.88085		
14	0.82259	1.02474	0.87669		
15	0.81841	1.02200	0.87280		
16	0.81451	1.05996	0.86916		
17	0.81086	1.04942	0.86573		
18	0.80744	1.04302	0.86249		
19	0.80421	1.03843	0.85942		
20	0.80117	1.03489	0.85651		
21	0.79826	1.07687	0.85374		
22	0.79554	1.06533	0.85109		
23	0.79292	1.05807	0.84856		
24	0.79043	1.05273	0.84614		
25	0.78805	1.04851	0.84382		
26	0.78576	1.09422	0.84158		
27	0.78357	1.08159	0.83943		
28	0.78147	1.07356	0.83736		
29	0.77944	1.06757	0.83537		
30	0.77749	1.06275	0.83344		
31	0.77560	1.10835	0.83157		
32	0.77376	1.09528	0.82976		
33	0.77202	1.08672	0.82801		
34	0.77032	1.08021	0.82632		
35	0.76867	1.07494	0.82467		
36	0.76707	1.12069	0.82307		
37	0.76551	1.10711	0.82151		
38	0.76400	1.09812	0.82000		
39	0.76254	1.09124	0.81853		
40	0.76111	1.08562	0.81709		
41	0.75972	1.13153	0.81569		
42	0.75837	1.11754	0.81433		
43	0.75705	1.10821	0.81299		
44	0.75576	1.10102	0.81169		
45	0.75450	1.09512	0.81042		
46	0.75328	1.14120	0.80919		
47	0.75208	1.12688	0.80796		
48	0.75091	1.11727	0.80678		
49	0.74976	1.10982	0.80561		
50	0.74864	1.10369	0.80447		
51	0.74755	1.14995	0.80336		
52	0.74647	1.13535	0.80226		

A14.6

53	0.74[illegible]	1.12549	0.80119
[illegible]	0.[illegible]	[illegible]	0.800[illegible]4
55	0.74[illegible]	1.11150	0.79911
56	0.74239	1.15794	0.79809
57	0.74142	1.14308	0.79710
58	0.74047	1.13303	0.79612
59	0.73953	1.12518	0.79516
60	0.73861	1.11868	0.79422
61	0.73771	1.16529	0.79329
62	0.73682	1.15022	0.79238
63	0.73595	1.13998	0.79149
64	0.73509	1.13198	0.79061
65	0.73425	1.12533	0.78974
66	0.73342	1.17210	0.78888
67	0.73260	1.15684	0.78804
68	0.73180	1.14644	0.78722
69	0.73101	1.13830	0.78640
70	0.73023	1.13152	0.78560
71	0.72947	1.17845	0.78481
72	0.72871	1.16302	0.78403
73	0.72797	1.15248	0.78326
74	0.72724	1.14420	0.78251
75	0.72651	1.13731	0.78176
76	0.72580	1.18440	0.78102
77	0.72510	1.16881	0.78030
78	0.72441	1.15814	0.77958
79	0.72373	1.14975	0.77887
80	0.72305	1.14275	0.77817
81	0.72239	1.19000	0.77749
82	0.72173	1.17426	0.77681
83	0.72109	1.16348	0.77613
84	0.72045	1.15499	0.77547
85	0.71982	1.14789	0.77482
86	0.71919	1.19528	0.7741[illegible]
87	0.71858	1.17942	0.77353
88	0.71797	1.16853	0.77290
89	0.71737	1.15994	0.77227
90	0.71678	1.15276	0.77166
91	0.71619	1.20029	0.77105
92	0.71561	1.18431	0.77045
93	0.71504	1.17331	0.76985
94	0.71448	1.16464	0.76926
95	0.71392	1.15738	0.76868
96	0.71336	1.20505	0.76810
97	0.71282	1.18895	0.76753
98	0.71228	1.17787	0.76697
99	0.71174	1.16911	0.76641
100	0.71121	1.16178	0.76586
101	0.71069	1.20959	0.76531
102	0.71017	1.19338	0.76477
103	0.70966	1.18221	0.76424
104	0.70915	1.17338	0.76371
105	0.70865	1.16598	0.76318
106	0.70815	1.21392	0.76266
107	0.70766	1.19762	0.76215
108	0.70717	1.18637	0.76164
109	0.70669	1.17747	0.76113
110	0.70621	1.17000	0.76064
111	0.70574	1.21807	0.76014
112	0.70527	1.20167	0.75965
113	0.70481	1.19055	0.75917

A14.7

114	[illegible]	1.16138	0.75868
115	[illegible]	[illegible]	0.75821
116	[illegible]	1.22205	0.75774
117	0.70300	1.20556	0.75727
118	0.70255	1.19417	0.75680
119	0.70212	1.18514	0.75634
120	0.70168	1.17756	0.75589
121	0.70125	1.22587	0.75544
122	0.70082	1.20930	0.75499
123	0.70040	1.19784	0.75455
124	0.69998	1.18876	0.75411
125	0.69956	1.18112	0.75367
126	0.69915	1.22955	0.75324
127	0.69874	1.21290	0.75281
128	0.69834	1.20138	0.75238
129	0.69794	1.19224	0.75196
130	0.69754	1.18456	0.75154
131	0.69714	1.23310	0.75113
132	0.69675	1.21637	0.75071
133	0.69636	1.20479	0.75030
134	0.69597	1.19560	0.74990
135	0.69559	1.18787	0.74950
136	0.69521	1.23652	0.74910
137	0.69483	1.21972	0.74870
138	0.69446	1.20809	0.74831
139	0.69409	1.19885	0.74792
140	0.69372	1.19107	0.74753
141	0.69336	1.23983	0.74715
142	0.69299	1.22296	0.74677
143	0.69263	1.21127	0.74639
144	0.69228	1.20198	0.74601
145	0.69192	1.19417	0.74564
146	0.69157	1.24303	0.74527
147	0.69122	1.22610	0.74490
148	0.69087	1.21436	0.74453
149	0.69053	1.20502	0.74417
150	0.69019	1.19717	0.74381
151	0.68985	1.24613	0.74345
152	0.68951	1.22914	0.74310
153	0.68918	1.21735	0.74275
154	0.68885	1.20797	0.74240
155	0.68852	1.20008	0.74205
156	0.68819	1.24914	0.74170
157	0.68786	1.23208	0.74136
158	0.68754	1.22025	0.74102
159	0.68722	1.21083	0.74068
160	0.68690	1.20290	0.74035
161	0.68658	1.25206	0.74001
162	0.68627	1.23495	0.73968
163	0.68596	1.22306	0.73935
164	0.68565	1.21361	0.73902
165	0.68534	1.20564	0.73870
166	0.65503	1.25489	0.73837
167	0.68473	1.23773	0.73805
168	0.68443	1.22580	0.73773
169	0.68412	1.21631	0.73742
170	0.68383	1.20831	0.73710
171	0.68353	1.25765	0.73679
172	0.68323	1.24043	0.73648
173	0.68294	1.22846	0.73617
174	0.68265	1.21894	0.73586

175	0.6823[illegible]	1.21090	0.73555
[illegible]	[illegible]	1.26034	0.73525
177	0.68129	1.24307	0.73495
178	0.68100	1.23106	0.73465
179	0.68122	1.22149	0.73435
180	0.68094	1.21343	0.73405
181	0.68066	1.26295	0.73376
182	0.68038	1.24563	0.73346
183	0.68011	1.23358	0.73317
184	0.67983	1.22399	0.73288
185	0.67956	1.21589	0.73259
186	0.67929	1.26550	0.73231
187	0.67902	1.24813	0.73202
188	0.67875	1.23604	0.73174
189	0.67849	1.22642	0.73146
190	0.67822	1.21829	0.73118
191	0.67796	1.26799	0.73090
192	0.67770	1.25057	0.73062
193	0.67743	1.23845	0.73035
194	0.67718	1.22879	0.73007
195	0.67692	1.22064	0.72980
196	0.67666	1.27041	0.72953
197	0.67641	1.25295	0.72926
198	0.67615	1.24079	0.72899
199	0.67590	1.23111	0.72872
200	0.67565	1.22293	0.72846

A15.1

MM	N	[illegible]	FAILR	TIMP	CREWS	Q
100	50	10000	0.50000E-03	10.0000	10	0.95000

T1	CTR	ISTA
1.00000	1.00000	5

IX	P(IX)	T(IX)	AVGT(IX)	J	ATTTP(J)
1	100.00000	1.00000	1.00000	1	0.93243
2	105.26315	0.95000	0.97500	2	0.89373
3	108.46938	0.92132	0.95731	3	0.89373
4	110.82330	0.90250	0.94360		
5	112.64816	0.88772	0.93243		
6	107.08914	0.93380	0.93266		
7	110.37567	0.90600	0.92885		
8	112.55222	0.88848	0.92380		
9	114.22971	0.87543	0.91843		
10	115.61258	0.86496	0.91308		
11	107.08914	0.93380	0.91496		
12	110.37567	0.90600	0.91422		
13	112.55222	0.88848	0.91224		
14	114.22971	0.87543	0.90961		
15	115.61258	0.86496	0.90663		
16	107.08914	0.93380	0.90833		
17	110.37567	0.90600	0.90819		
18	112.55222	0.88848	0.90710		
19	114.22971	0.87543	0.90543		
20	115.61258	0.86496	0.90340		
21	107.08914	0.93380	0.90485		
22	110.37567	0.90600	0.90490		
23	112.55222	0.88848	0.90419		
24	114.22971	0.87543	0.90299		
25	115.61258	0.86496	0.90147		
26	107.08914	0.93380	0.90271		
27	110.37567	0.90600	0.90283		
28	112.55222	0.88848	0.90232		
29	114.22971	0.87543	0.90139		
30	115.61258	0.86496	0.90018		
31	107.08914	0.93380	0.90126		
32	110.37567	0.90600	0.90141		
33	112.55222	0.88848	0.90102		
34	114.22971	0.87543	0.90027		
35	115.61258	0.86496	0.89926		
36	107.08914	0.93380	0.90022		
37	110.37567	0.90600	0.90037		
38	112.55222	0.88848	0.90006		
39	114.22971	0.87543	0.89943		
40	115.61258	0.86496	0.89857		
41	107.08914	0.93380	0.89942		
42	110.37567	0.90600	0.89959		
43	112.55222	0.88848	0.89932		
44	114.22971	0.87543	0.89878		
45	115.61258	0.86496	0.89803		
46	107.08914	0.93380	0.89881		
47	110.37567	0.90600	0.89896		
48	112.55222	0.88848	0.89874		
49	114.22971	0.87543	0.89826		
50	115.61258	0.86496	0.89760		
51	107.08914	0.93380	0.89831		
52	110.37567	0.90600	0.89845		

A-15.2

53	112.[illegible]	0.88848	0.89827
54	[illegible]	0.[illegible]543	0.89784
55	115.[illegible]	0.86496	0.89725
56	107.08914	0.93380	0.89790
57	110.37567	0.90600	0.89804
58	112.55222	0.88848	0.89788
59	114.22971	0.87543	0.89749
60	115.61258	0.86496	0.89695
61	107.08914	0.93380	0.89756
62	110.37567	0.90600	0.89769
63	112.55222	0.88848	0.89755
64	114.22971	0.87543	0.89720
65	115.61258	0.86496	0.89670
66	107.08914	0.93380	0.89727
67	110.37567	0.90600	0.89740
68	112.55222	0.88848	0.89726
69	114.22971	0.87543	0.89695
70	115.61258	0.86496	0.89649
71	107.08914	0.93380	0.89702
72	110.37567	0.90600	0.89714
73	112.55222	0.88848	0.89702
74	114.22971	0.87543	0.89673
75	115.61258	0.86496	0.89631
76	107.08914	0.93380	0.89680
77	110.37567	0.90600	0.89692
78	112.55222	0.88848	0.89681
79	114.22971	0.87543	0.89654
80	115.61258	0.86496	0.89615
81	107.08914	0.93380	0.89661
82	110.37567	0.90600	0.89672
83	112.55222	0.88848	0.89663
84	114.22971	0.87543	0.89637
85	115.61258	0.86496	0.89600
86	107.08914	0.93380	0.89644
87	110.37567	0.90600	0.89655
88	112.55222	0.88848	0.89646
89	114.22971	0.87543	0.89622
90	115.61258	0.86496	0.89588
91	107.08914	0.93380	0.89629
92	110.37567	0.90600	0.89640
93	112.55222	0.88848	0.89631
94	114.22971	0.87543	0.89609
95	115.61258	0.86496	0.89576
96	107.08914	0.93380	0.89616
97	110.37567	0.90600	0.89626
98	112.55222	0.88848	0.89618
99	114.22971	0.87543	0.89597
100	115.61258	0.86496	0.89566
101	107.08914	0.93380	0.89604
102	110.37567	0.90600	0.89614
103	112.55222	0.88848	0.89606
104	114.22971	0.87543	0.89586
105	115.61258	0.86496	0.89557
106	107.08914	0.93380	0.89593
107	110.37567	0.90600	0.89602
108	112.55222	0.88848	0.89595
109	114.22971	0.87543	0.89577
110	115.61258	0.86496	0.89549
111	107.08914	0.93380	0.89583
112	110.37567	0.90600	0.89592
113	112.55222	0.88848	0.89586

114	114.22971	0.87543	0.89568
115	[illegible]	[illegible]	0.89[illegible]
116	[illegible]	0.93380	0.89574
117	110.37567	0.90600	0.89583
118	112.55222	0.88848	0.89577
119	114.22971	0.87543	0.89559
120	115.61258	0.86496	0.89534
121	107.08914	0.93380	0.89566
122	110.37567	0.90600	0.89574
123	112.55222	0.88848	0.89568
124	114.22971	0.87543	0.89552
125	115.61258	0.86496	0.89527
126	107.08914	0.93380	0.89558
127	110.37567	0.90600	0.89566
128	112.55222	0.88848	0.89561
129	114.22971	0.87543	0.89545
130	115.61258	0.86496	0.89521
131	107.08914	0.93380	0.89551
132	110.37567	0.90600	0.89559
133	112.55222	0.88848	0.89554
134	114.22971	0.87543	0.89539
135	115.61258	0.86496	0.89516
136	107.08914	0.93380	0.89544
137	110.37567	0.90600	0.89552
138	112.55222	0.88848	0.89547
139	114.22971	0.87543	0.89533
140	115.61258	0.86496	0.89511
141	107.08914	0.93380	0.89538
142	110.37567	0.90600	0.89546
143	112.55222	0.88848	0.89541
144	114.22971	0.87543	0.89527
145	115.61258	0.86496	0.89505
146	107.08914	0.93380	0.89533
147	110.37567	0.90600	0.89540
148	112.55222	0.88848	0.89535
149	114.22971	0.87543	0.89522
150	115.61258	0.86496	0.89502
151	107.08914	0.93380	0.89527
152	110.37567	0.90600	0.89534
153	112.55222	0.88848	0.89530
154	114.22971	0.87543	0.89517
155	115.61258	0.86496	0.89497
156	107.08914	0.93380	0.89522
157	110.37567	0.90600	0.89529
158	112.55222	0.88848	0.89525
159	114.22971	0.87543	0.89512
160	115.61258	0.86496	0.89494
161	107.08914	0.93380	0.89518
162	110.37567	0.90600	0.89524
163	112.55222	0.88848	0.89520
164	114.22971	0.87543	0.89508
165	115.61258	0.86496	0.89490
166	107.08914	0.93380	0.89513
167	110.37567	0.90600	0.89520
168	112.55222	0.88848	0.89516
169	114.22971	0.87543	0.89504
170	115.61258	0.86496	0.89486
171	107.08914	0.93380	0.89509
172	110.37567	0.90600	0.89516
173	112.55222	0.88848	0.89512
174	114.22971	0.87543	0.89500

175	115.61258	0.86496	0.89483
176	[illegible]	0.93380	0.89505
177	110.37567	0.90600	0.89511
178	112.55222	0.88848	0.89508
179	114.22971	0.87543	0.89497
180	115.61258	0.86496	0.89480
181	107.08914	0.93380	0.89502
182	110.37567	0.90600	0.89508
183	112.55222	0.88848	0.89504
184	114.22971	0.87543	0.89493
185	115.61258	0.86496	0.89477
186	107.08914	0.93380	0.89498
187	110.37567	0.90600	0.89504
188	112.55222	0.88848	0.89501
189	114.22971	0.87543	0.89490
190	115.61258	0.86496	0.89474
191	107.08914	0.93380	0.89495
192	110.37567	0.90600	0.89501
193	112.55222	0.88848	0.89497
194	114.22971	0.87543	0.89487
195	115.61258	0.86496	0.89472
196	107.08914	0.93380	0.89492
197	110.37567	0.90600	0.89497
198	112.55222	0.88848	0.89494
199	114.22971	0.87543	0.89484
200	115.61258	0.86496	0.89469

MM	M	NSYS	FAILR	TIMP	CREWS	Q
100	50	10000	0.50000E-03	10.0000	10	0.95000

T1	ETR	IETR
1.00000	5.00000	5

IX	TN(IX)	TDTN(IX)	AVGTN(IX)	ATTPN(J)	ATDAN(J)
1	1.00000	1.00000	1.00000	0.93243	1.00000
2	0.95000	1.00000	0.97500	0.85847	1.04107
3	0.92192	1.00000	0.95731	0.82751	1.08002
4	0.90250	1.00000	0.94360		
5	0.88772	1.00000	0.93243		
6	0.87582	1.06620	0.92299		
7	0.86589	1.04632	0.91484		
8	0.85738	1.03627	0.90765		
9	0.84993	1.02999	0.90124		
10	0.84333	1.02564	0.89545		
11	0.83741	1.11511	0.89017		
12	0.83203	1.08890	0.88533		
13	0.82712	1.07418	0.88085		
14	0.82259	1.06423	0.87669		
15	0.81841	1.05688	0.87280		
16	0.81451	1.14646	0.86916		
17	0.81086	1.11733	0.86573		
18	0.80744	1.10036	0.86249		
19	0.80421	1.08855	0.85942		
20	0.80117	1.07962	0.85651		
21	0.79828	1.16977	0.85374		
22	0.79554	1.13885	0.85109		
23	0.79292	1.12051	0.84856		
24	0.79042	1.10753	0.84614		
25	0.78805	1.09760	0.84382		
26	0.78576	1.18840	0.84158		
27	0.78357	1.15624	0.83943		
28	0.78147	1.13694	0.83736		
29	0.77944	1.12315	0.83537		
30	0.77749	1.11251	0.83344		
31	0.77560	1.20397	0.83157		
32	0.77378	1.17087	0.82976		
33	0.77202	1.15084	0.82801		
34	0.77032	1.13645	0.82632		
35	0.76867	1.12527	0.82467		
36	0.76707	1.21737	0.82307		
37	0.76551	1.18352	0.82151		
38	0.76400	1.16292	0.82000		
39	0.76254	1.14805	0.81853		
40	0.76111	1.13644	0.81709		
41	0.75972	1.22914	0.81569		
42	0.75837	1.19467	0.81433		
43	0.75705	1.17361	0.81299		
44	0.75576	1.15834	0.81169		
45	0.75450	1.14639	0.81042		
46	0.75328	1.23965	0.80918		
47	0.75208	1.20465	0.80796		
48	0.75091	1.18320	0.80678		
49	0.74976	1.16761	0.80561		
50	0.74864	1.15537	0.80447		
51	0.74755	1.24915	0.80336		
52	0.74647	1.21370	0.80226		

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53	0.74569	1.19191	0.80119
54	[illegible]	1.17603	0.80014
55	0.74363	1.16354	0.79911
56	0.74239	1.25783	0.79809
57	0.74142	1.22197	0.79710
58	0.74047	1.19989	0.79612
59	0.73953	1.18376	0.79516
60	0.73861	1.17106	0.79422
61	0.73771	1.26581	0.79329
62	0.73682	1.22960	0.79238
63	0.73595	1.20725	0.79149
64	0.73509	1.19091	0.79061
65	0.73425	1.17802	0.78974
66	0.73342	1.27321	0.78888
67	0.73260	1.23668	0.78804
68	0.73180	1.21409	0.78722
69	0.73101	1.19756	0.78640
70	0.73023	1.18449	0.78560
71	0.72947	1.28011	0.78481
72	0.72871	1.24328	0.78403
73	0.72797	1.22049	0.78326
74	0.72724	1.20377	0.78251
75	0.72651	1.19056	0.78176
76	0.72580	1.28658	0.78102
77	0.72510	1.24948	0.78030
78	0.72441	1.22648	0.77958
79	0.72373	1.20961	0.77887
80	0.72305	1.19626	0.77817
81	0.72239	1.29266	0.77749
82	0.72173	1.25531	0.77681
83	0.72109	1.23214	0.77613
84	0.72045	1.21512	0.77547
85	0.71982	1.20164	0.77482
86	0.71919	1.29340	0.77417
87	0.71858	1.26082	0.77353
88	0.71797	1.23748	0.77290
89	0.71737	1.22033	0.77227
90	0.71678	1.20673	0.77166
91	0.71619	1.30384	0.77105
92	0.71561	1.26604	0.77045
93	0.71504	1.24255	0.76985
94	0.71448	1.22527	0.76926
95	0.71392	1.21157	0.76868
96	0.71336	1.30901	0.76810
97	0.71282	1.27101	0.76753
98	0.71228	1.24738	0.76697
99	0.71174	1.22998	0.76641
100	0.71121	1.21617	0.76586
101	0.71069	1.31394	0.76531
102	0.71017	1.27575	0.76477
103	0.70966	1.25198	0.76424
104	0.70915	1.23448	0.76371
105	0.70865	1.22057	0.76318
106	0.70815	1.31865	0.76266
107	0.70766	1.28027	0.76215
108	0.70717	1.25638	0.76164
109	0.70669	1.23877	0.76113
110	0.70621	1.22478	0.76064
111	0.70574	1.32315	0.76014
112	0.70527	1.28461	0.75965
113	0.70481	1.26059	0.75917

114	[illegible]	1.24289	0.75868
115	[illegible]	[illegible]	0.75821
116	0.70344	1.32747	0.75774
117	0.70300	1.28876	0.75727
118	0.70255	1.25464	0.75680
119	0.70212	1.24684	0.75634
120	0.70168	1.23269	0.75589
121	0.70125	1.33162	0.75544
122	0.70082	1.29276	0.75499
123	0.70040	1.26853	0.75455
124	0.69998	1.25065	0.75411
125	0.69956	1.23642	0.75367
126	0.69915	1.33562	0.75324
127	0.69874	1.29861	0.75281
128	0.69834	1.27227	0.75238
129	0.69794	1.25431	0.75196
130	0.69754	1.24002	0.75154
131	0.69714	1.33947	0.75113
132	0.69675	1.30032	0.75071
133	0.69636	1.27589	0.75030
134	0.69597	1.25785	0.74990
135	0.69559	1.24348	0.74950
136	0.69521	1.34319	0.74910
137	0.69483	1.30340	0.74870
138	0.69446	1.27938	0.74831
139	0.69409	1.26126	0.74792
140	0.69372	1.24684	0.74753
141	0.69336	1.34678	0.74715
142	0.69299	[illegible]	0.74677
143	0.69263	1.28275	0.74639
144	0.69228	1.26456	0.74601
145	0.69192	1.25008	0.74564
146	0.69157	1.35026	0.74527
147	0.69122	1.31072	0.74490
148	0.69087	1.28602	0.74453
149	0.69053	1.26776	0.74417
150	0.69019	1.25322	0.74381
151	0.68985	1.35363	0.74345
152	0.68951	1.31397	0.74310
153	0.68918	1.28918	0.74275
154	0.68885	1.27086	0.74240
155	0.68852	1.25626	0.74205
156	0.68819	1.35690	0.74170
157	0.68786	1.31712	0.74136
158	0.68754	1.29225	0.74102
159	0.68722	1.27387	0.74068
160	0.68690	1.25922	0.74035
161	0.68658	1.36007	0.74001
162	0.68627	1.32018	0.73968
163	0.68596	1.29524	0.73935
164	0.68565	1.27679	0.73902
165	0.68534	1.26209	0.73870
166	0.68503	1.36315	0.73837
167	0.68473	1.32315	0.73805
168	0.68443	1.29813	0.73773
169	0.68412	1.27963	0.73742
170	0.68383	1.26488	0.73710
171	0.68353	1.36615	0.73679
172	0.68323	1.32604	0.73648
173	0.68294	1.30096	0.73617
174	0.68265	1.28240	0.73586

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175	0.68234	1.26760	0.73555
176	[illegible]	1.36902	0.73525
177	0.68177	1.32886	0.73495
178	0.68150	1.30370	0.73465
179	0.68122	1.28509	0.73435
180	0.68094	1.27024	0.73405
181	0.68066	1.37190	0.73376
182	0.68038	1.33160	0.73346
183	0.68011	1.30638	0.73317
184	0.67983	1.28771	0.73288
185	0.67956	1.27282	0.73259
186	0.67929	1.37467	0.73231
187	0.67902	1.33427	0.73202
188	0.67875	1.30898	0.73174
189	0.67849	1.29027	0.73146
190	0.67822	1.27533	0.73118
191	0.67796	1.37737	0.73090
192	0.67770	1.33688	0.73062
193	0.67743	1.31153	0.73035
194	0.67718	1.29276	0.73007
195	0.67692	1.27779	0.72980
196	0.67666	1.38001	0.72953
197	0.67641	1.33942	0.72926
198	0.67615	1.31401	0.72899
199	0.67590	1.29520	0.72872
200	0.67565	1.28018	0.72846

APPENDIX B

This appendix contains the computer program used to generate the values tabled in Appendix A in such a manner that they could be plotted by the Calcomp Plotter and the nineteen families of curves which were plotted.

```
C
C
C     ***********************************************************************
C     ***********************************************************************
C     ***********************************************************************
C
C
      DIMENSION T(1000),R(1000),AVGT(1000),ATTIP(1000),
     CTN(1000),AVGTN(1000),ATTPN(1000),ATDAN(1000),TDTN(1000),MM(5),
     CM(5),IETR(5),IFAT(5),PERCNT(5),ZETR(5)
      CALL ERRSET (207,256,0,2,0,1)
      CALL ERRSET (208,256,0,2,0,1)
      CALL ERRSET (209,256,0,2,0,1)
1     DO 60 III=1,5
      READ (5,6) MM(III),M(III),NSYS,TIMP,NCRUS,FAILR,G,TI
6     FORMAT (2I3,I6,F10.4,I3,3(E12.5))
      IF(MM(III).EQ.987) GO TO 1000
      IF (III.NE.1) GO TO 2
      L1=1
      L2=200
      GO TO 7
2     IF (III.NE.2) GO TO 3
      L2=400
      L1=201
      GO TO 7
3     IF (III.NE.3) GO TO 4
      L1=401
      L2=600
      GO TO 7
4     IF (III.NE.4) GO TO 5
      L1=601
      L2=800
      GO TO 7
5     IF (III.NE.5) GO TO 7
      L1=801
      L2=1000
```

```
7       F=ALOG(X)/ALOG(2.0)
        XMM=MM(III)
        XM=M(III)
        XR=XMM/XM
        XIR=MM(III)/M(III)
        PERCNT(III)=(100*M(III))/MM(III)
        XNSYS=NSYS
        XCRUS=NCRUS
        ETR=XNSYS*FAILR*TIMP/XCRUS
        XETR=ETR+.5
        IETR(III)=XETR
        ZETR(III)=IETR(III)
        INDEX= 200
        SUMM=0.0
        SUMMN=0.0
        DO 40 IX=L1,L2
        B=0.0
        X=IX-L1+1
C
C
C       CHECK TO SEE IF STEADY STATE HAS BEEN REACHED.  IF SO, GO TO 31.
C       OTHERWISE, GO TO 33.
C
C
        IF(((IX-1)-200*(III-1))/IETR(III)-MM(III)/M(III)) 31,33,33
31      IT=(IX-1-200*(III-1))/IETR(III)
        W=IT
        A=(XMM-W*XM)/(X**F)
        IF(IT-1) 32,321,321
321     DO 322 N=1,IT
        W=N
        B=B+XM/((X-W*ETR)**F)
322     CONTINUE
32      R(IX)=A+B
        GO TO 35
33      J=IX-IETR(III)
```

```
      R(IX)=R(J)
35    T(IX)=XMM/R(IX)
      SUMM=SUMM+T(IX)
      AVGT(IX)=SUMM/X
      TN(IX)=T1*X**F
      SUMMN=SUMMN+TN(IX)
      AVGTN(IX)=SUMMN/X
      TOTN(IX)=T(IX)/TN(IX)
40    CONTINUE
      IRAT(III)=MM(III)/M(III)+1
      ICK=IRAT(III)*IETR(III)
      IF (ICK.LE.INDEX) GO TO 41
      IRAT(III)=INDEX/IETR(III)
41    KNR=L1+IRAT(III)-1
      DO 51 J=L1,KNR
      K=(J-L1+1)*IETR(III)+L1-1
      L=(J-L1+1)*IETR(III)-IETR(III)+L1
      SUM=0.0
      SUMN=0.0
      DO 50 IX=L,K
      SUM=SUM+T(IX)
      SUMN=SUMN+TN(IX)
50    CONTINUE
      ATTTP(J)=SUM/ETR
      ATTPN(J)=SUMN/ETR
      ATDAN(J)=ATTTP(J)/ATTPN(J)
51    CONTINUE
60    CONTINUE
      CALL FACTOR (0.9)
      DO 114 I=1,5
      IF (I.NE.1) GO TO 1091
      L1=1
      L2=200
      GO TO 110
1091  IF (I.NE.2) GO TO 1092
      L1=201
```

```
      L2=400
      GO TO 112
1092  IF (I.NE.3) GO TO 1093
      L1=401
      L2=600
      GO TO 112
1093  IF (I.NE.4) GO TO 1094
      L1=601
      L2=800
      GO TO 112
1094  IF (I.NE.5) GO TO 112
      L1=801
      L2=1000
      GO TO 112
C
C     ALIGNING ZERO OF Y-AXIS TWO INCHES ABOVE BOTTOM OF PAPER
C
110   CALL PLOT (13.,11.,-3)
      CALL PLOT(0.0,11.0,3)
      CALL PLOT(0.0,-12.0,-2)
      CALL PLOT(2.5,2.0,-3)
C
      CALL LINE1 (200.,0.,1.,0.,20.,.2)
      CALL AXIS1 (0.,0.,30H CUMULATIVE AVERAGE TASK TIME ,30,5.,90.,0.,
     0.2,10.0)
      CALL AXIS1 (0.,0.,19H REPETITION NUMBER ,-19,10.,0.,0.,20.,10.)
      CALL SYMBOL (0.0,-1.0,0.10,57HFIGURE        PLOT OF CUMULATIVE AVER
     CAGE TASK TIME WITH Q=,0.0,57)
      CALL WHERE (XZ,YZ,FACTOR)
      XZ=XZ+.10
      YZ=YZ-.05
      CALL NUMBER (XZ,YZ,0.10,Q,0.,2)
      CALL SYMBOL (1.114,-1.20,0.10,5HIETR=,0.,5)
      CALL WHERE (XZ,YZ,FACTOR)
      XZ=XZ+.10
      YZ=YZ-.05
```

```
      CALL NUMBER (XZ,YZ,0.10,ZETR(I),0.,-1)
      CALL LINE2 (1.,1.,1,0,1,0)
      DO 111 IX=L1,L2
      XX=IX-L1+1
      CALL LINE2 (XX,AVGTN(IX),1,0,0,0)
111   CONTINUE
112   CALL PLOT(0.,0.,3)
      CALL LINE2 (1.,1.,1,0,1,0)
      DO 113 IX=L1,L2
      XX=IX-L1+1
      CALL LINE2 (XX,AVGT(IX),1,0,0,0)
113   CONTINUE
      CALL WHERE (XZ,YZ,FACTOR)
      XZ=XZ+.10
      YZ=YZ-.05
      CALL NUMBER (XZ,YZ,0.10,PERCNT(I),0.,-1)
      CALL PLOT (0.,0.,3)
114   CONTINUE
      CALL PLOT (0.0,0.0,-99)
      DO 124 I=1,5
      IF (I.NE.1) GO TO 224
      L1=1
      L2=200
      GO TO 120
224   IF (I.NE.2) GO TO 225
      L1=201
      L2=400
      GO TO 122
225   IF (I.NE.3) GO TO 226
      L1=401
      L2=600
      GO TO 122
226   IF (I.NE.4) GO TO 227
      L1=601
      L2=800
      GO TO 122
```

```
227   IF (I.NE.5) GO TO 122
      L1=801
      L2=1000
      GO TO 122
C
C     ALIGNING ZERO OF Y-AXIS TWO INCHES ABOVE BOTTOM OF PAPER
C
120   CALL PLOT (13.,11.,-3)
      CALL PLOT(0.0,11.0,3)
      CALL PLOT(0.0,-12.0,-2)
      CALL PLOT(2.5,2.0,-3)
C
      CALL LINE1 (20.,0.,1.0,0.,2.,.2)
      CALL AXIS1 (0.,0.,35H AVERAGE TASK TIME PER TIME PERIOD ,35,
     C5.,90.,0.,.2,10.0)
      CALL AXIS1 (0.,0.,15H PERIOD NUMBER ,-15,10.,0.,0.,2.,10.)
      CALL SYMBOL (0.0,-1.0,0.1,62HFIGURE        PLOT OF AVERAGE TASK TIM
     CE PER TIME PERIOD WITH Q=,0.0,62)
      CALL WHERE (XZ,YZ,FACTOR)
      YZ=YZ-.05
      XZ=XZ+.10
      CALL NUMBER (XZ,YZ,0.10,Q,0.,2)
      CALL SYMBOL (1.114,-1.20,0.10,5HIETR=,0.,5)
      CALL WHERE (XZ,YZ,FACTOR)
      XZ=XZ+.10
      YZ=YZ-.05
      CALL NUMBER (XZ,YZ,0.10,ZETR(I),0.,-1)
      CALL LINE2 (1.,1.,1,0,1,0)
      KNR=L1+IRAT(I)-1
      DO 121 IX=L1,KNR
      XX=IX-L1+1
      CALL LINE2 (XX,ATTPN(IX),1,0,0,0)
121   CONTINUE
122   CALL PLOT(0.,0.,3)
      CALL LINE2 (1.,1.,1,0,1,0)
      KNR=L1+IRAT(I)-1
```

```
      DO 123 IX=L1,KNK
      XX=IX-L1+1
      CALL LINE2 (XX,ATTTP(IX),1,0,0,0)
123   CONTINUE
      CALL WHERE (XZ,YZ,FACTOR)
      XZ=XZ+.10
      YZ=YZ-.05
      CALL NUMBER (XZ,YZ,0.10,PERCNT(I),0.,-1)
      CALL PLOT (0.,0.,3)
124   CONTINUE
      CALL PLOT (0.0,0.0,-99)
      DO 134 I=1,5
      IF (I.NE.1) GO TO 234
      L1=1
      L2=200
      GO TO 130
234   IF (I.NE.2) GO TO 235
      L1=201
      L2=400
      GO TO 132
235   IF (I.NE.3) GO TO 236
      L1=401
      L2=600
      GO TO 132
236   IF (I.NE.4) GO TO 237
      L1=601
      L2=800
      GO TO 132
237   IF (I.NE.5) GO TO 132
      L1=801
      L2=1000
      GO TO 132
C
C     ALIGNING ZERO OF Y-AXIS TWO INCHES ABOVE BOTTOM OF PAPER
C
130   CALL PLOT (13.,11.,-3)
```

```
      CALL PLOT(0.0,11.0,3)
      CALL PLOT(0.0,-12.0,-2)
      CALL PLOT(2.5,2.0,-3)
C
      CALL LINE1 (20.,0.,2.,1.,2.,.2)
      CALL AXIS1 (0.,0.,21H ATTTP(IX)/ATTPN(IX) ,21,5.,90.,1.,.2,10.0)
      CALL AXIS1 (0.,0.,15H PERIOD NUMBER ,-15,10.,0.,0.,2.,10.)
      CALL SYMBOL (0.0,-1.0,0.1,100HFIGURE        PLOT OF RATIO OF AVERAG
     CE TASK TIME PER TIME PERIOD FOR DIFFERENT TURNOVER RATES TO THE ,
     C0.0,100)
      CALL SYMBOL (1.114,-1.20,0.10,77HAVERAGE TASK TIME PER TIME PERIOD
     C WITH NO TURNOVER WITH W=       AND IETR=    .,0.0,77)
      CALL NUMBER (6.171,-1.20,0.10,Q,0.,2)
      CALL NUMBER (7.028,-1.20,0.10,ZETR(I),0.,-1)
132   CALL LINE2 (1.,1.,1,0,1,0)
      KNR=L1+IRAT(I)-1
      DO 131 IX=L1,KNR
      XX=IX-L1+1
      CALL LINE2 (XX,ATDAN(IX  ,0,0,0)
131   CONTINUE
      CALL WHERE (XZ,YZ,FACTOR)
      XZ=XZ+.10
      YZ=YZ-.05
      CALL NUMBER (XZ,YZ,0.10,PERCNT(I),0.,-1)
      CALL PLOT (0.,0.,3)
134   CONTINUE
      CALL PLOT (0.,0.,-99)
1000  STOP
      END
C
C
C
C
C
C
C
```

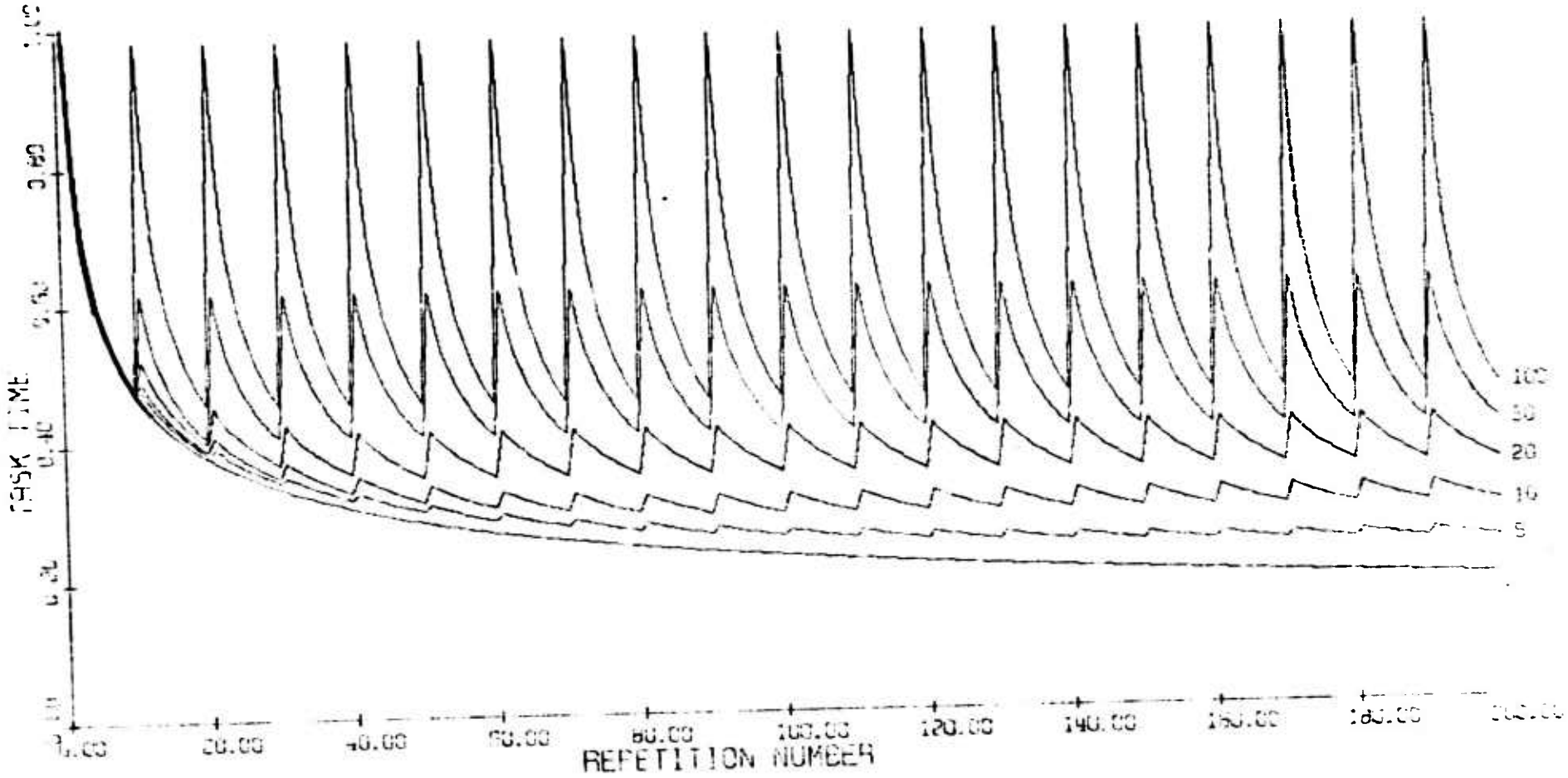

FIGURE B1 : PLOT OF T(IX) AND TN(IX) FOR DIFFERENT TURNOVER RATES WITH G=0.35
IETR=10

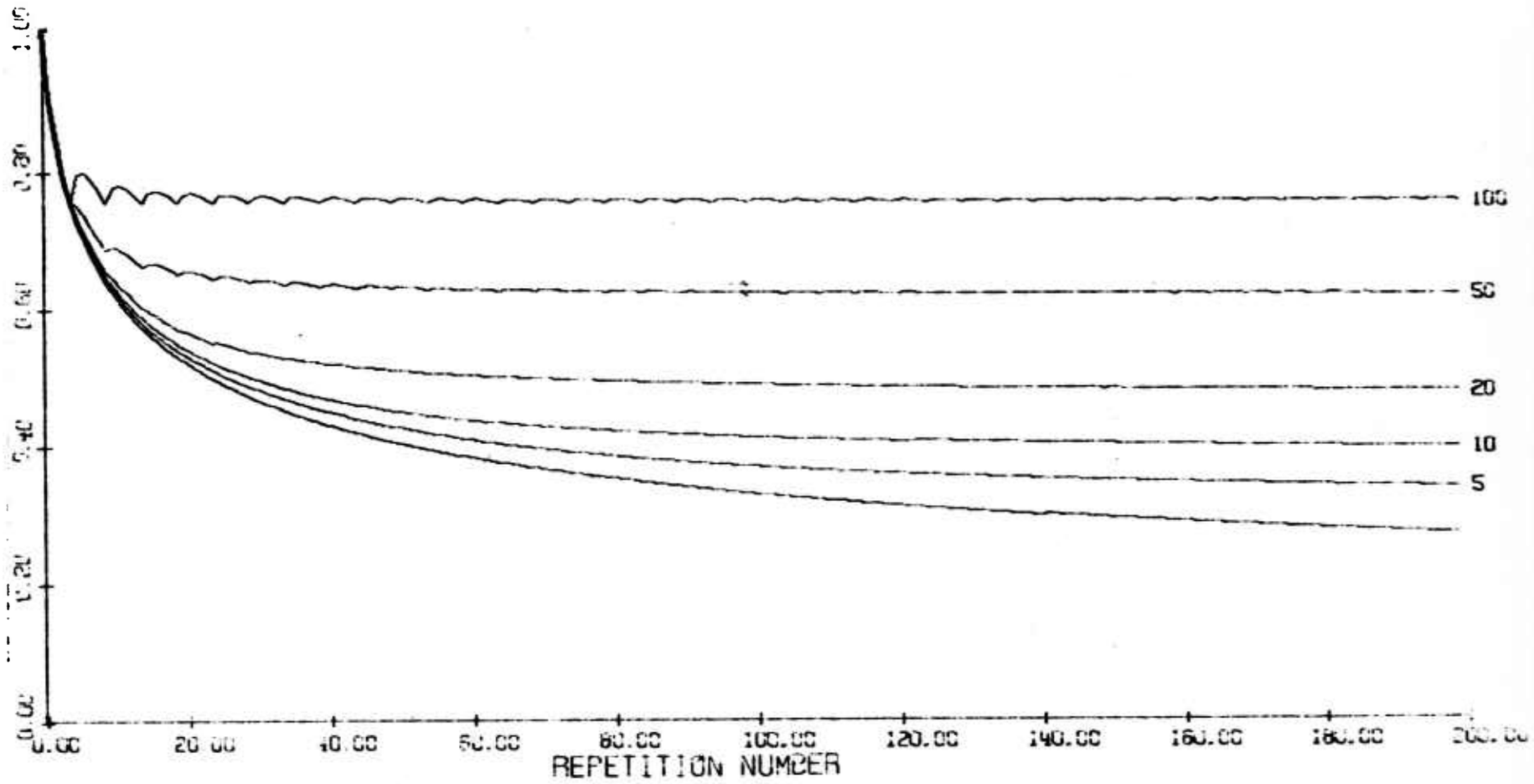

FIGURE B2 : PLOT OF CUMULATIVE AVERAGE TASK TIME WITH G=0.90
TETA=5

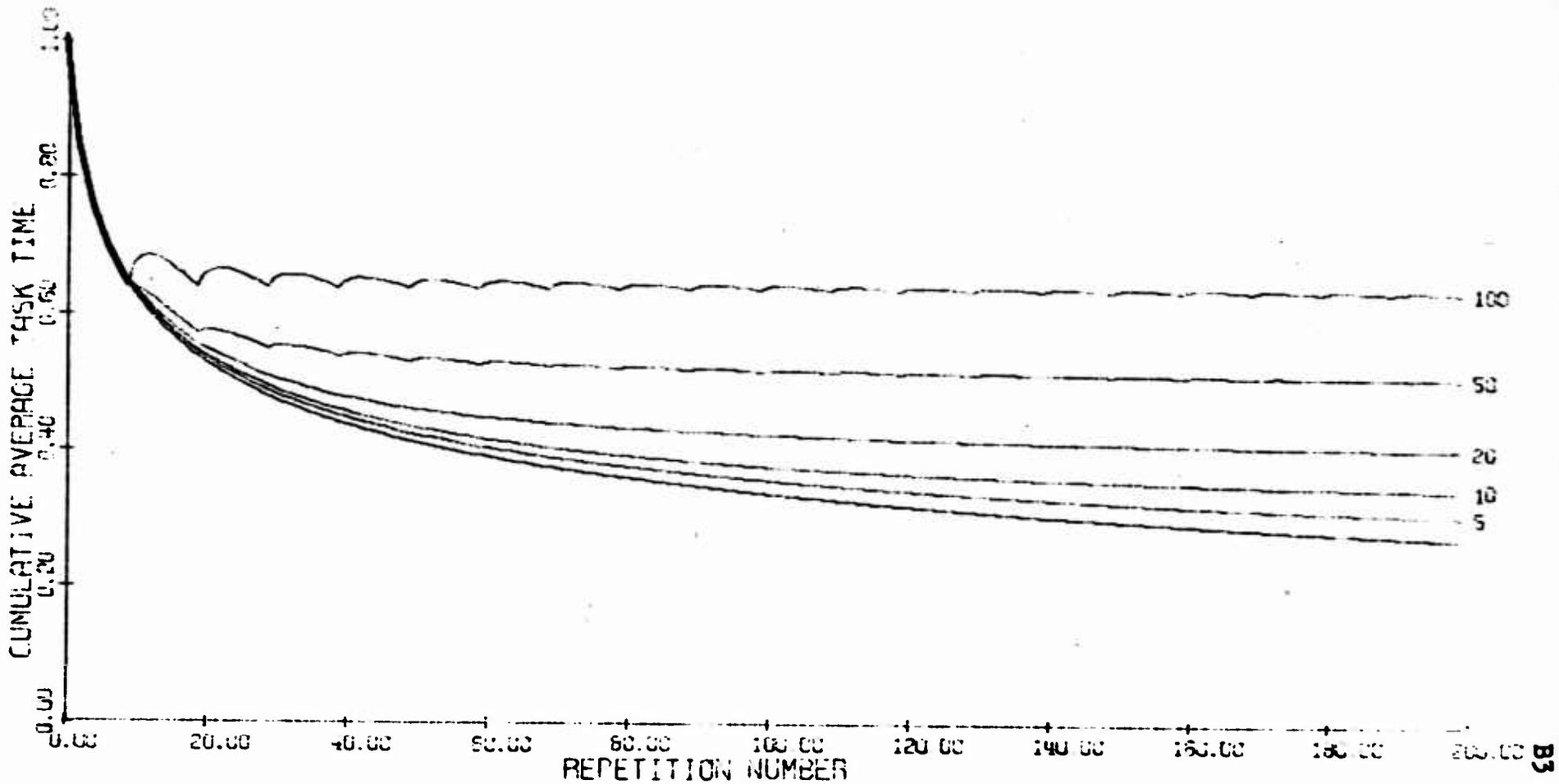

FIGURE B3 : PLOT OF CUMULATIVE AVERAGE TASK/TIME WITH O 0.80
TEMP=10

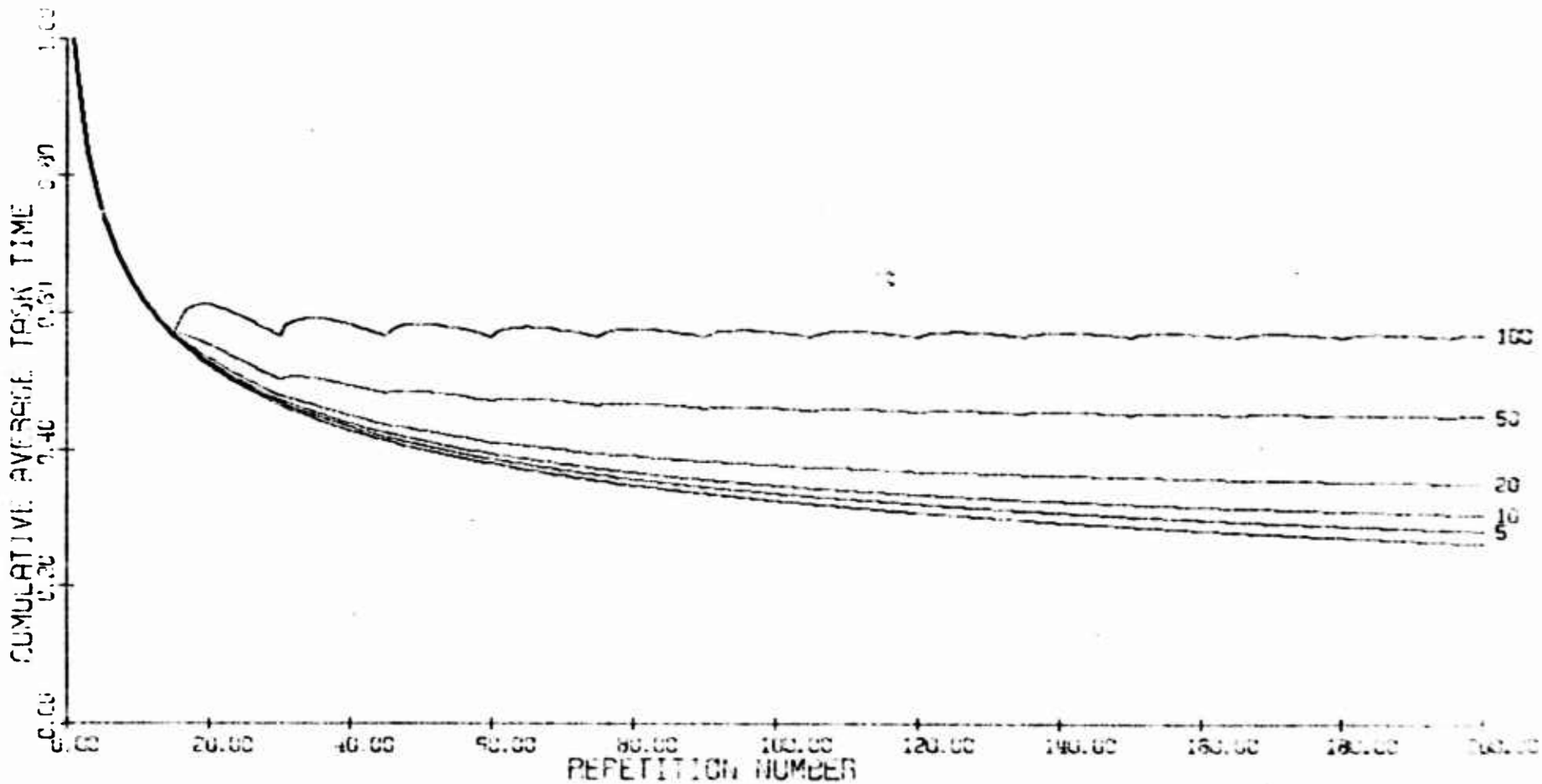

FIGURE B4 : PLOT OF CUMULATIVE AVERAGE TASK TIME WITH G=0.30
TETA-15

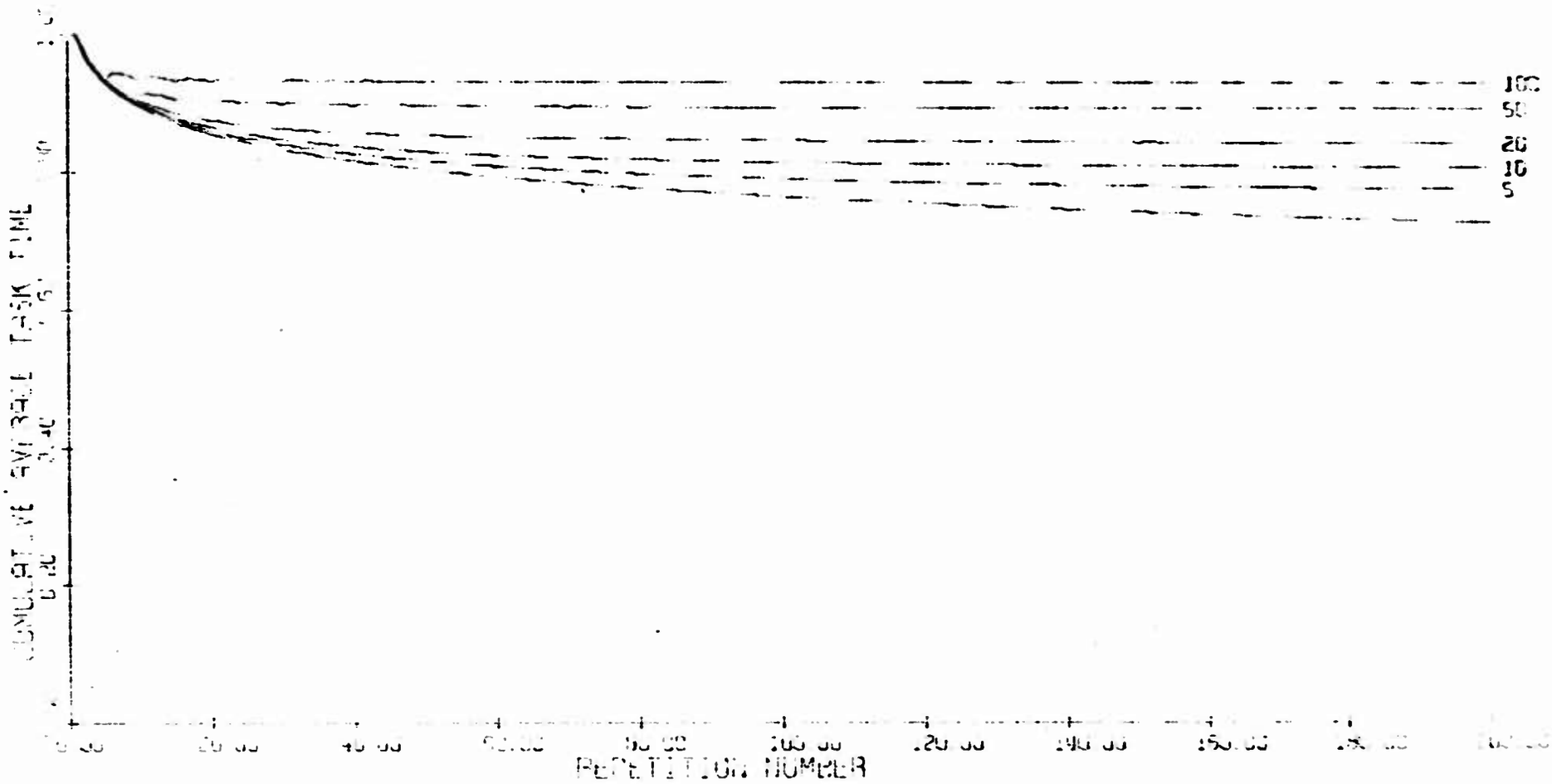

FIGURE B5 - PLOT OF CUMULATIVE AVERAGE TASK TIME WITH 0-0 95
IETR-5

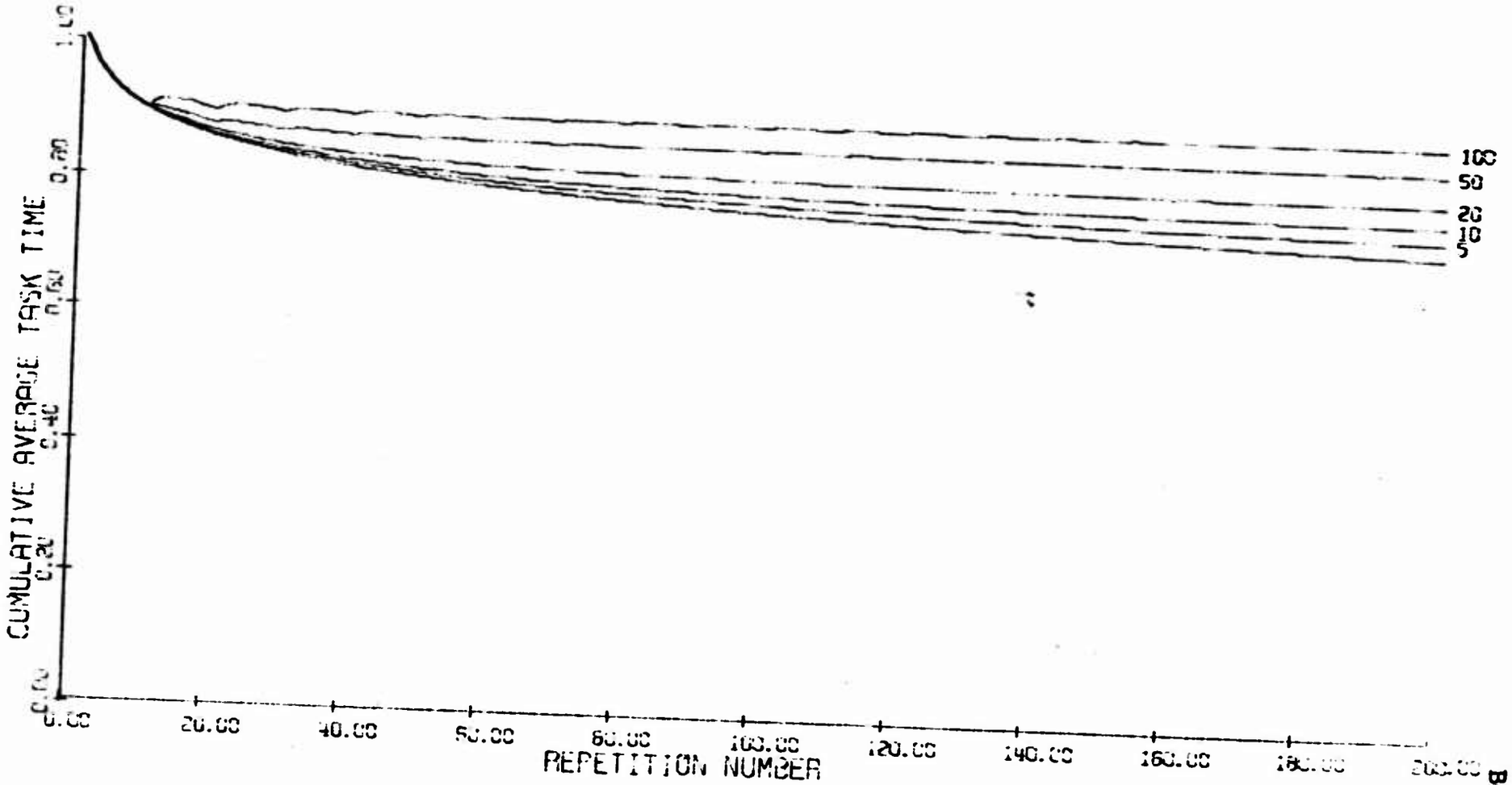

FIGURE B6: PLOT OF CUMULATIVE AVERAGE TASK TIME WITH G-0.95
IETA-10

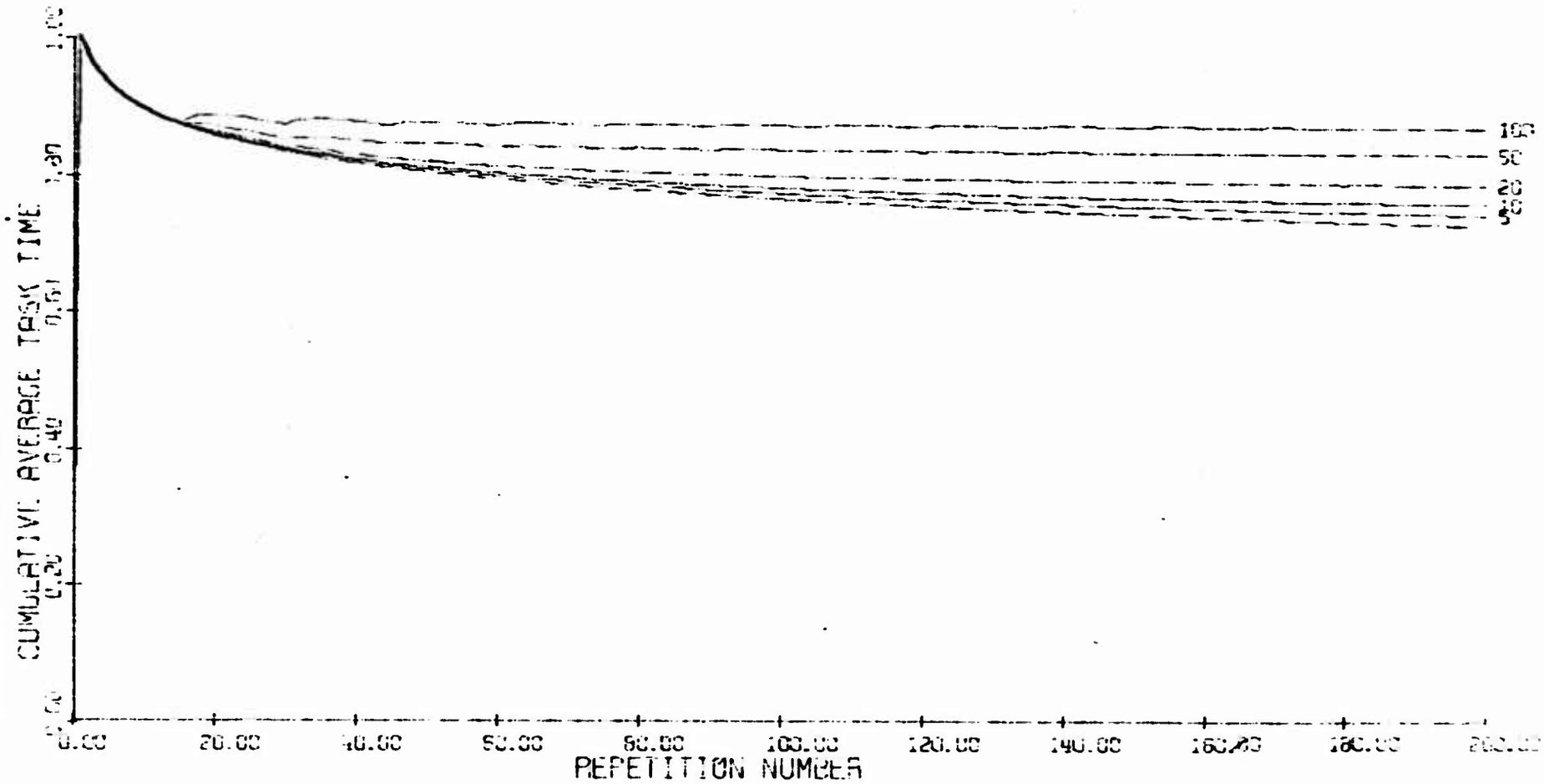

FIGURE B7 : PLOT OF CUMULATIVE AVERAGE TASK TIME WITH Q-0.95
TETA-15

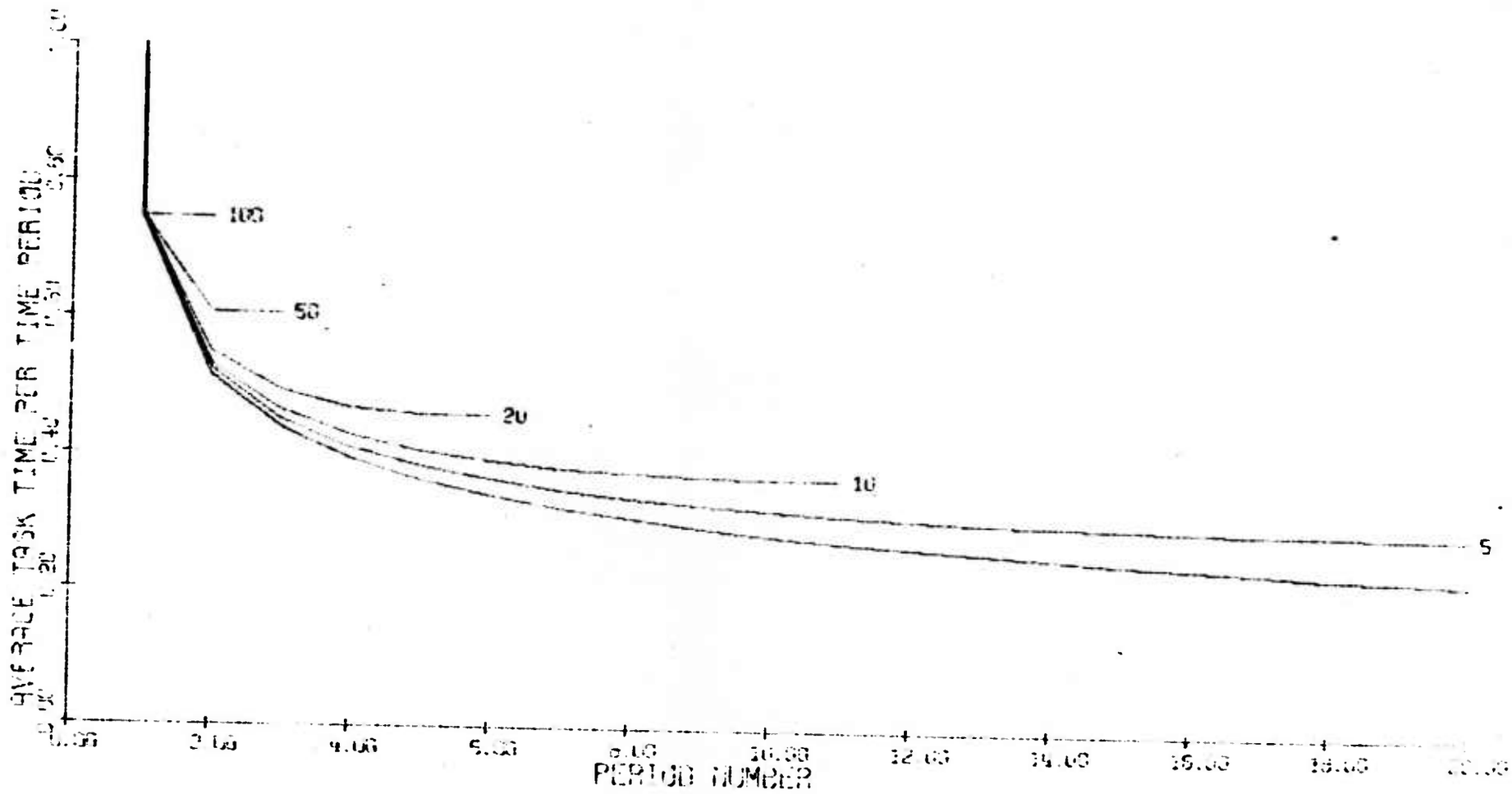

FIGURE B8 : PLOT OF AVERAGE TASK TIME PER TIME PERIOD WITH D=0.90
ISTR-3

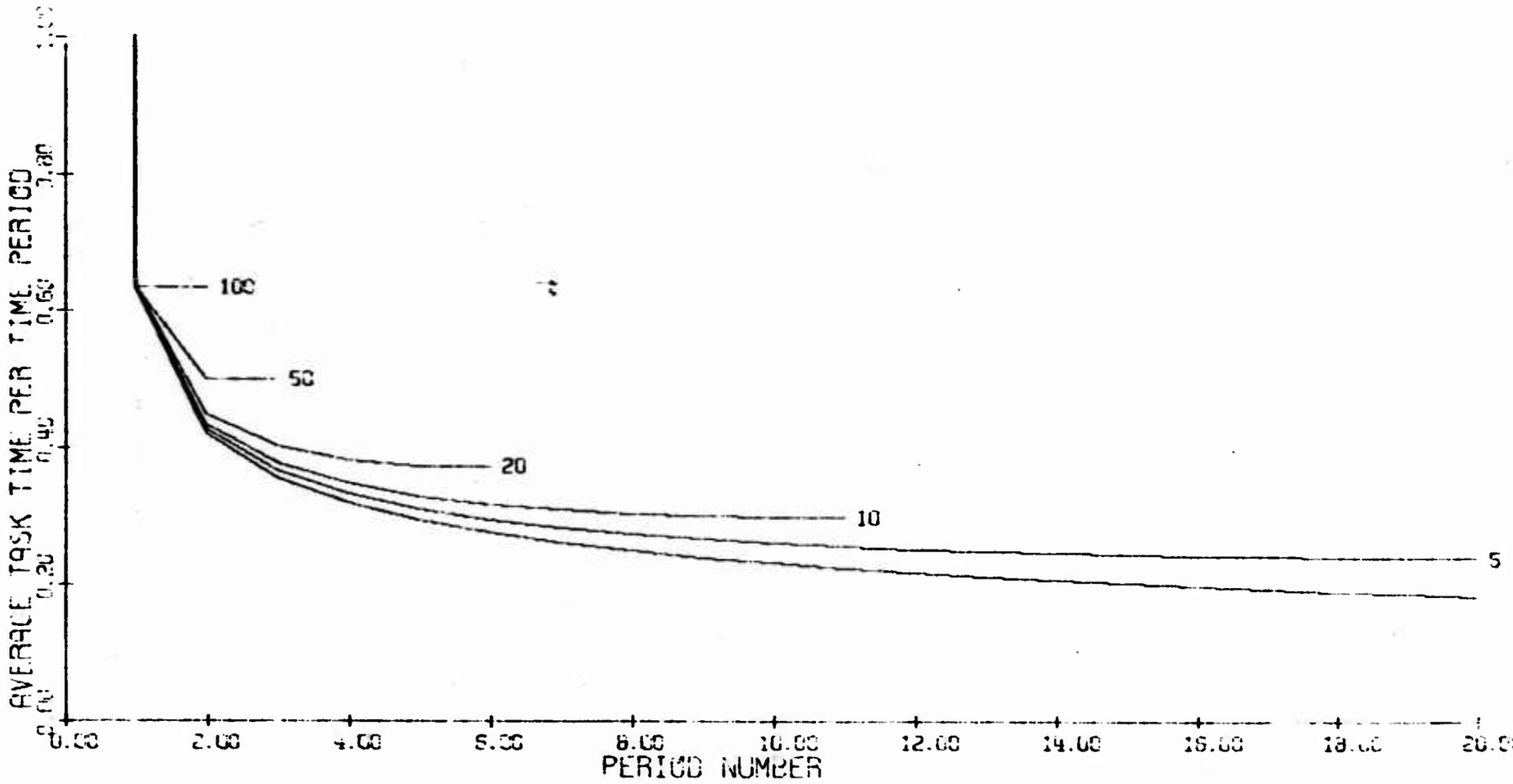

FIGURE B9 : PLOT OF AVERAGE TASK TIME PER TIME PERIOD WITH Q=0.30
TETA=10

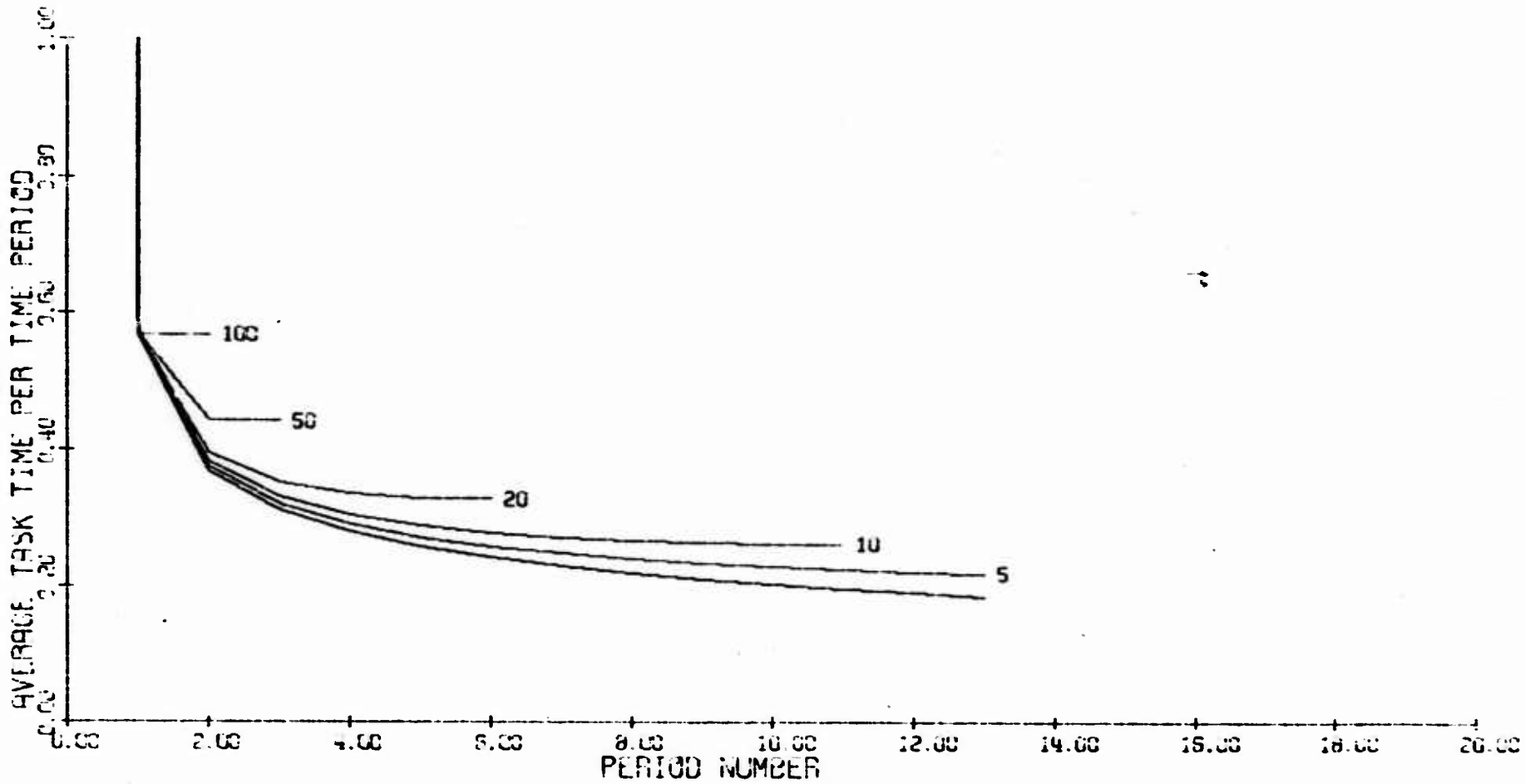

FIGURE B10: PLOT OF AVERAGE TASK TIME PER TIME PERIOD WITH G=0.50
TETR-15

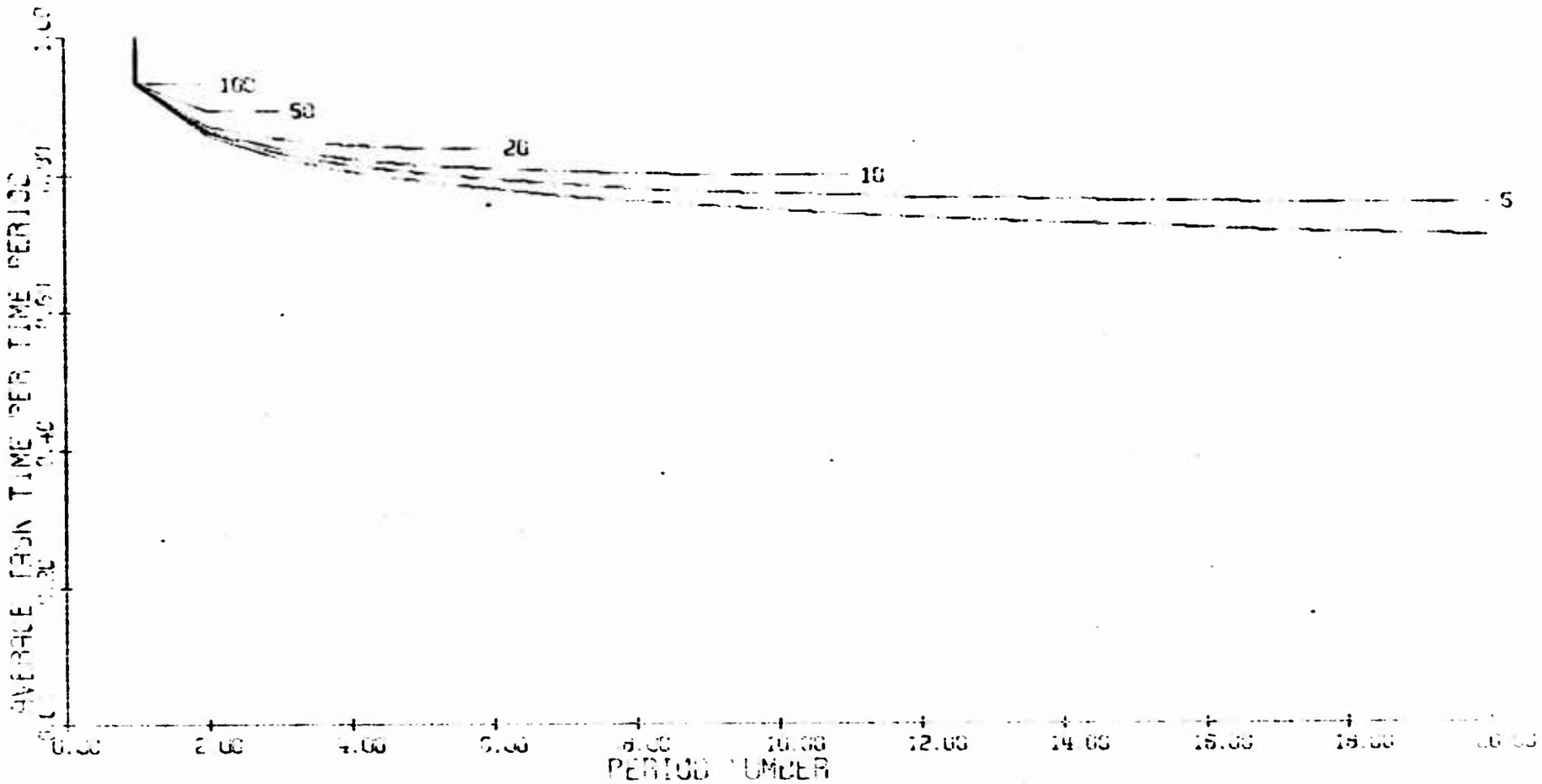

FIGURE B11: PLOT OF AVERAGE TASK TIME PER TIME PERIOD WITH U=0.95
TETR-5

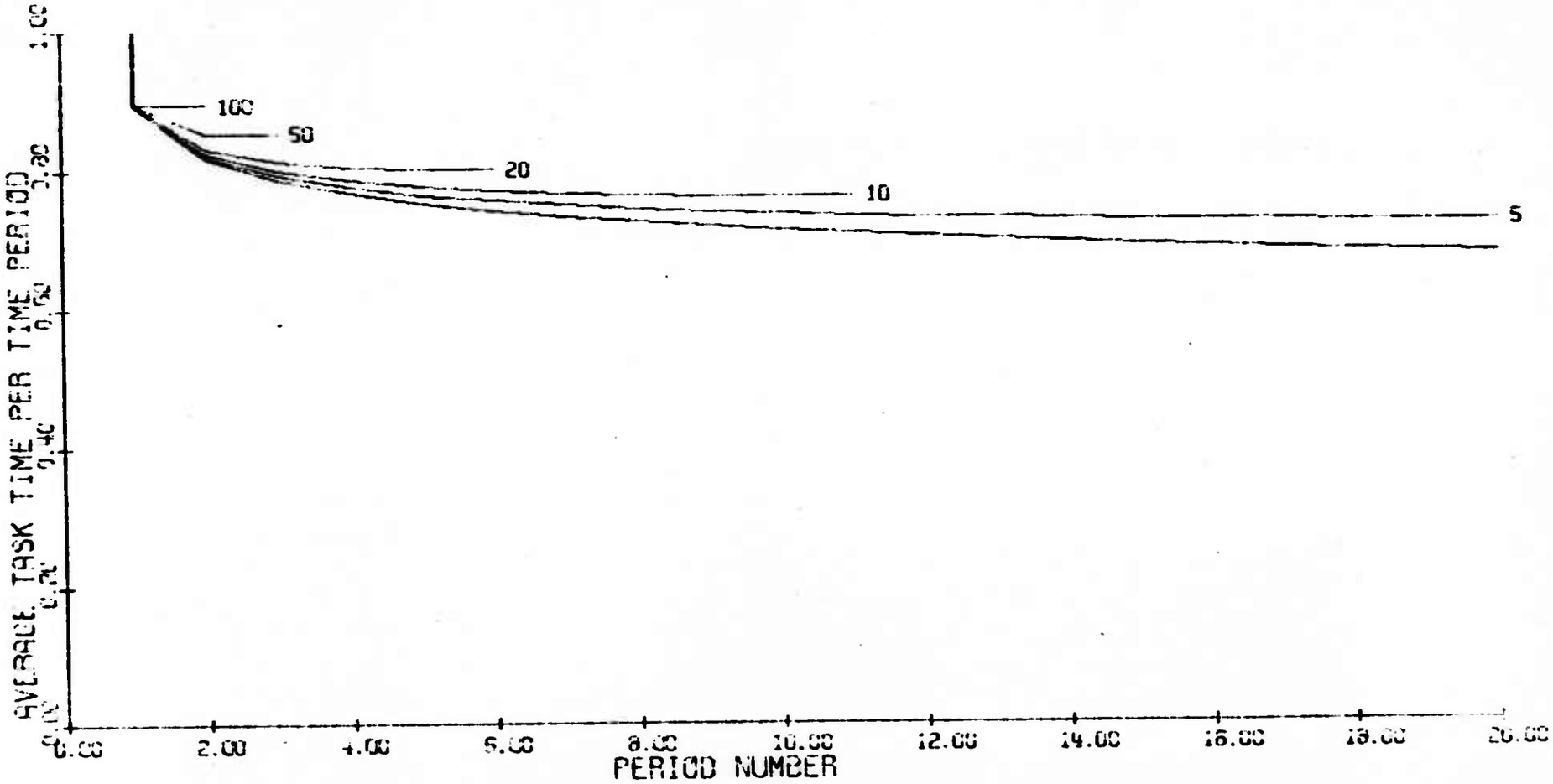

FIGURE B12 : PLOT OF AVERAGE TASK TIME PER TIME PERIOD WITH G=0.95
IETR=10

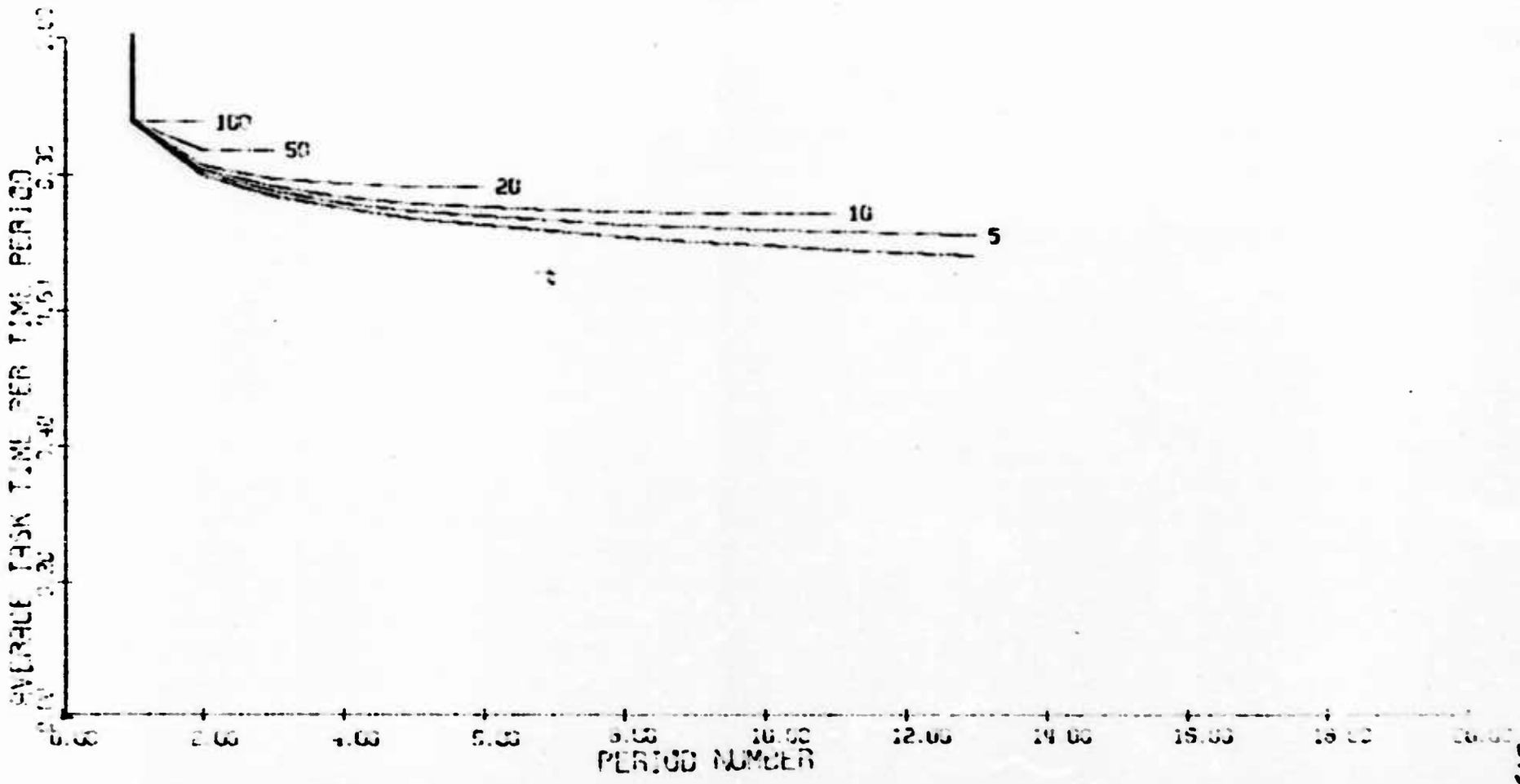

FIGURE B13 : PLOT OF AVERAGE TASK TIME PER TIME PERIOD WITH 0-0.95
ISTP-15

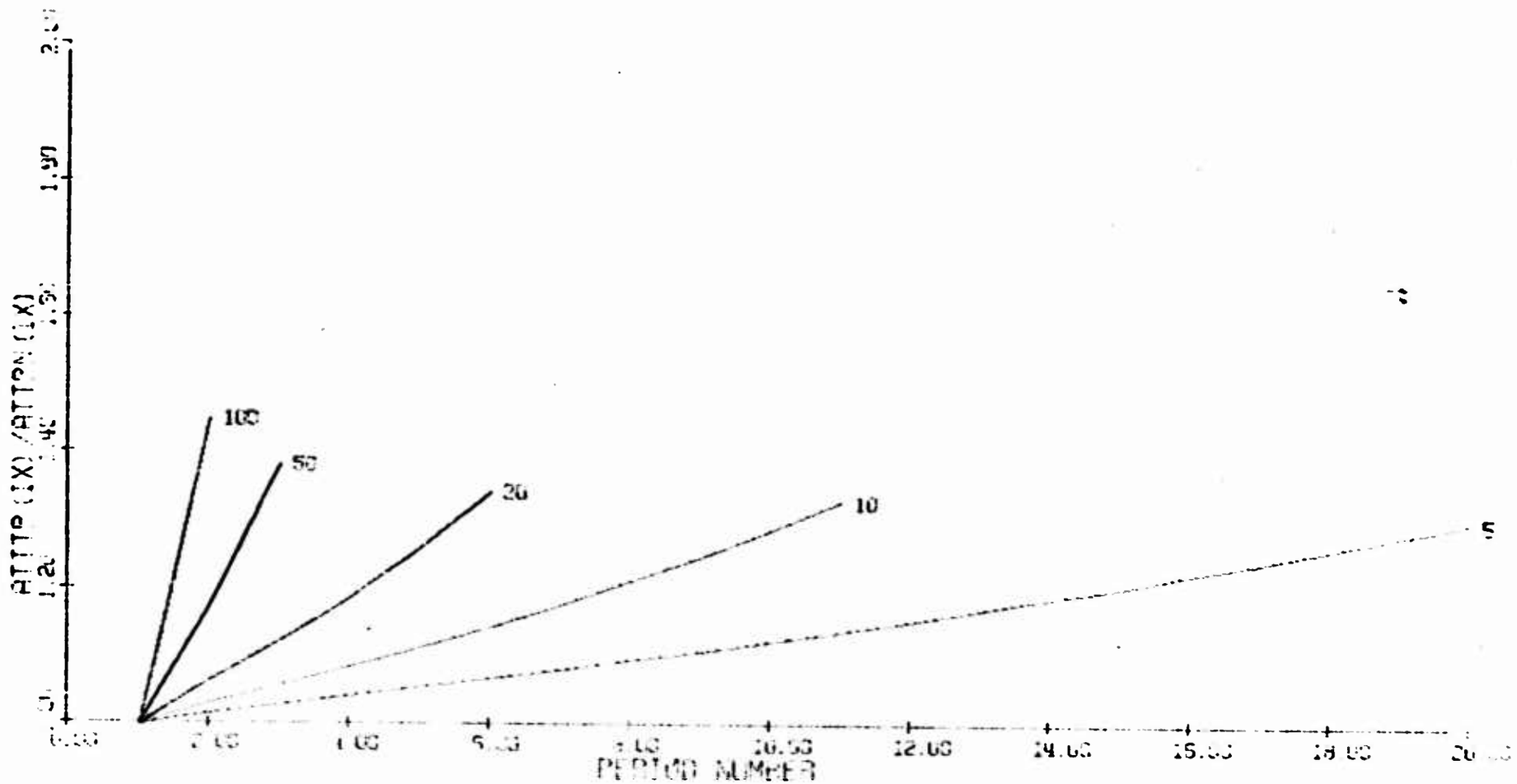

FIGURE B14 : PLOT OF RATIO OF AVERAGE TASK TIME PER TIME PERIOD FOR DIFFERENT TURNOVER RATES TO THE AVERAGE TASK TIME PER TIME PERIOD WITH NO TURNOVER WITH U= 0.50 AND ISTD=5

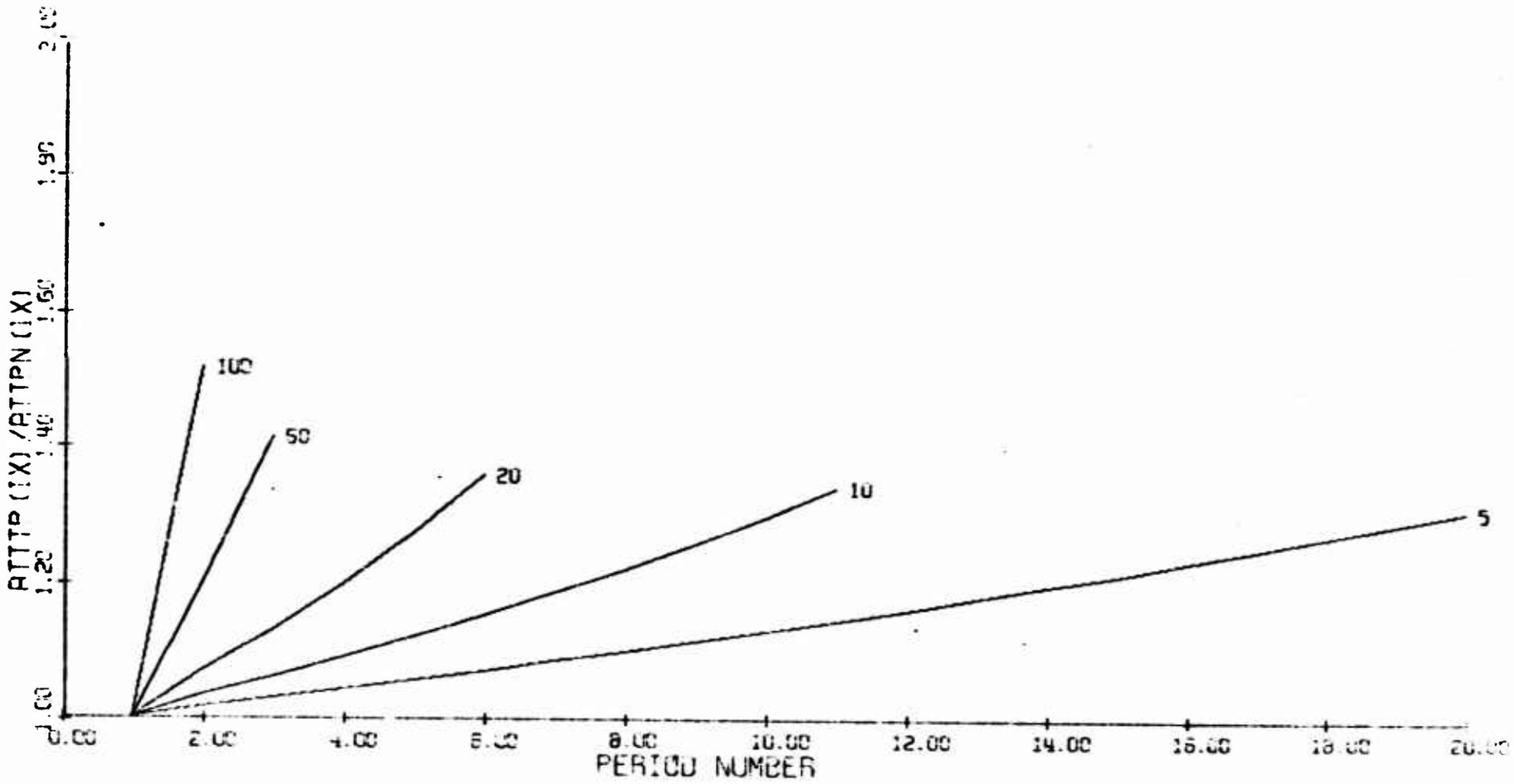

FIGURE B15: PLOT OF RATIO OF AVERAGE TASK TIME PER TIME PERIOD FOR DIFFERENT TURNOVER RATES TO THE AVERAGE TASK TIME PER TIME PERIOD WITH NO TURNOVER WITH G= 0.50AND IETA= .10

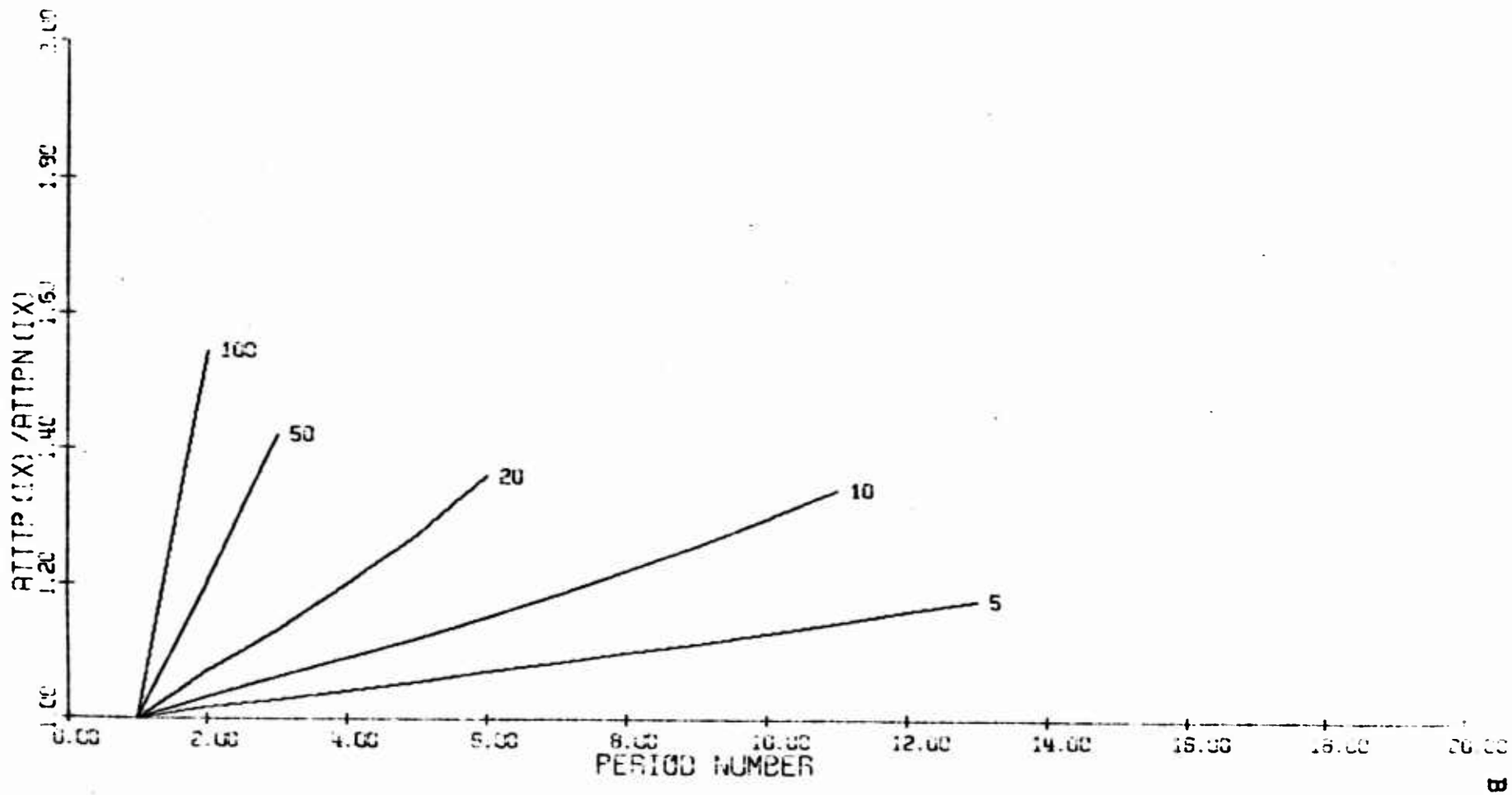

FIGURE B16: PLOT OF RATIO OF AVERAGE TASK TIME PER TIME PERIOD FOR DIFFERENT TURNOVER RATES TO THE AVERAGE TASK TIME PER TIME PERIOD WITH NO TURNOVER WITH Q= 0.50 AND IEIR=15 .

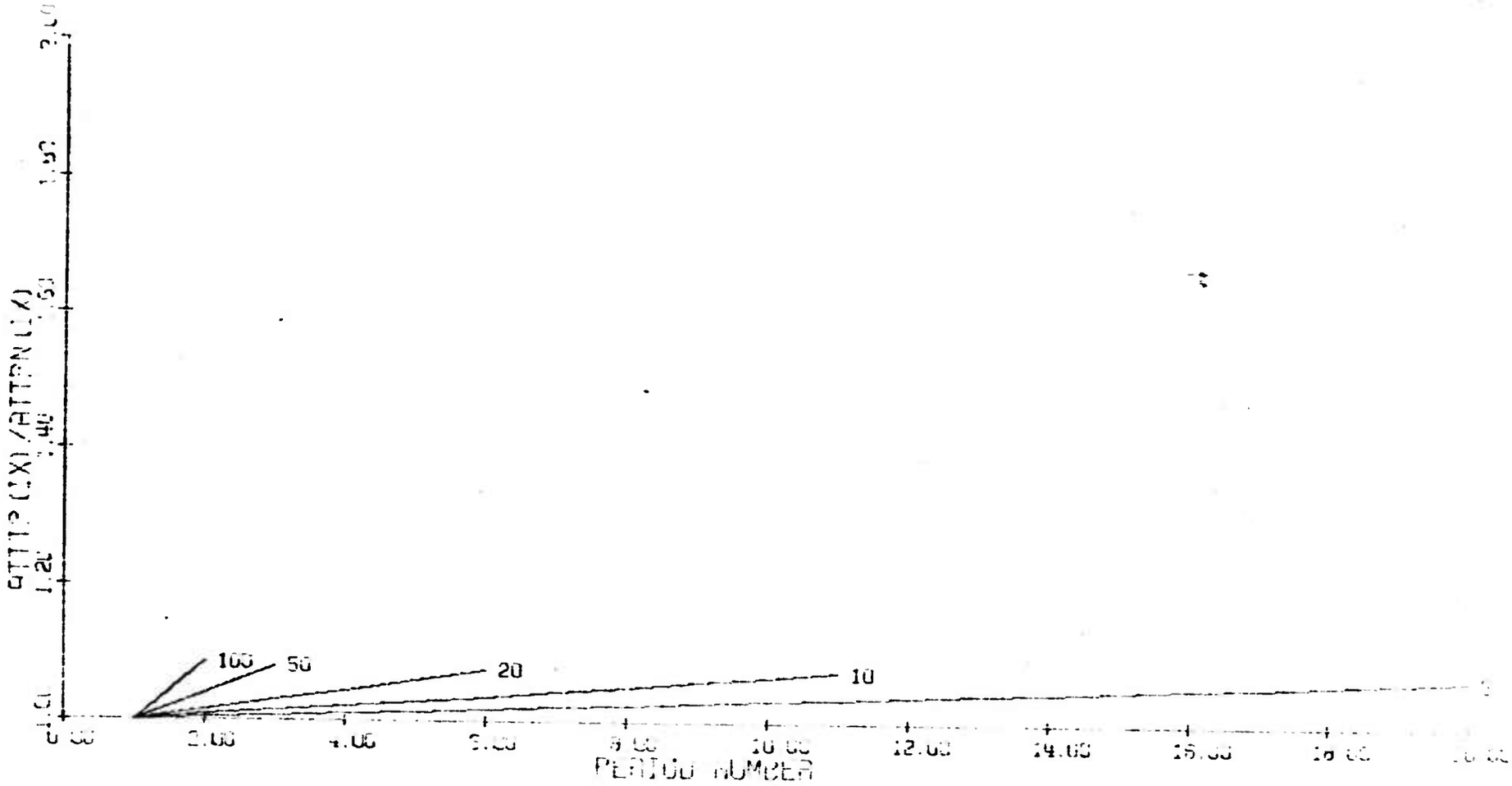

FIGURE B17- PLOT OF RATIO OF AVERAGE TASK TIME PER TIME PERIOD FOR DIFFERENT TURNOVER RATES TO THE AVERAGE TASK TIME PER TIME PERIOD WITH NO TURNOVER WITH G= 0.95 AND TSTR=5

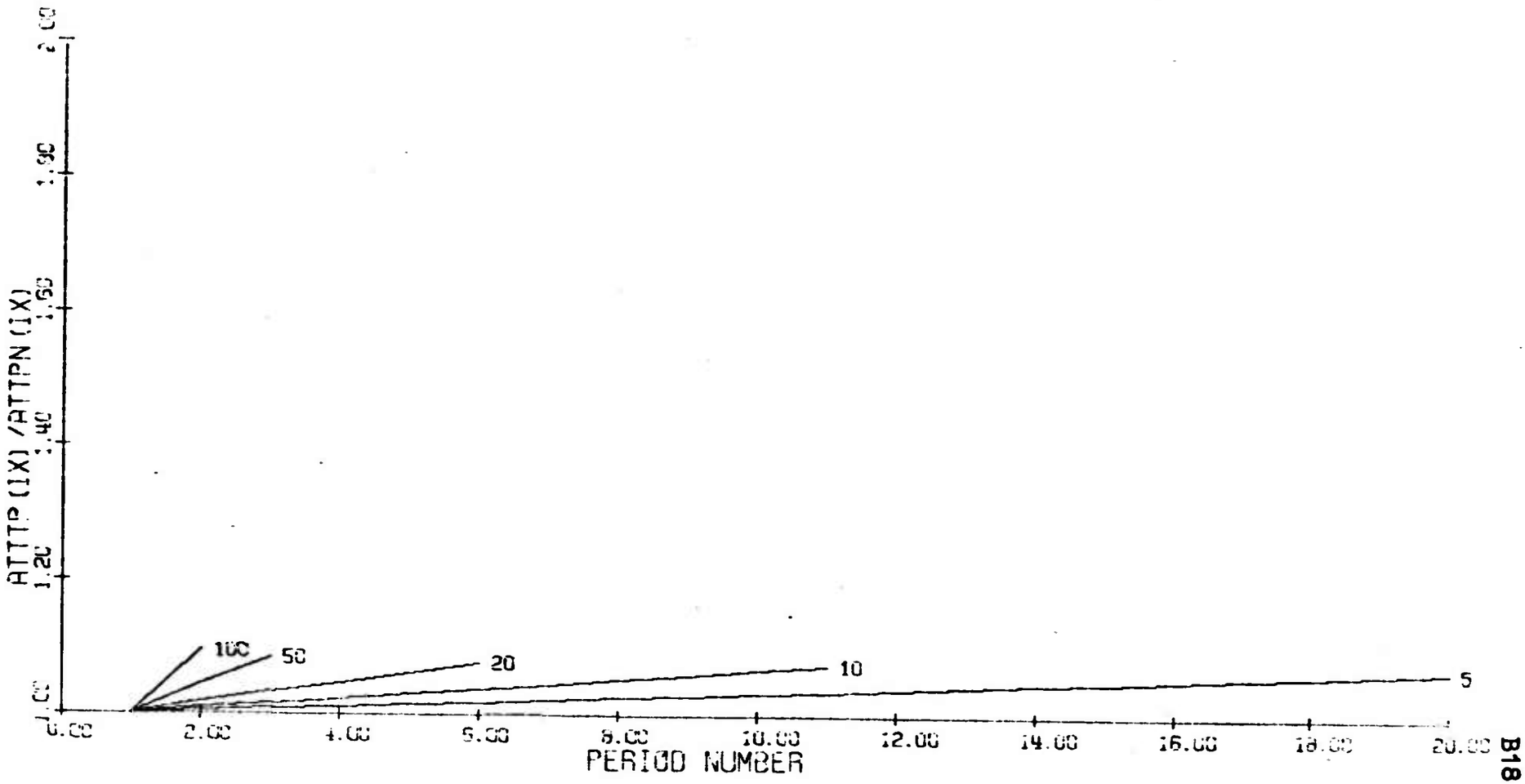

FIGURE B18: PLOT OF RATIO OF AVERAGE TASK TIME PER TIME PERIOD FOR DIFFERENT TURNOVER RATES TO THE AVERAGE TASK TIME PER TIME PERIOD WITH NO TURNOVER WITH Q= 0.95 AND IEGR= 10.

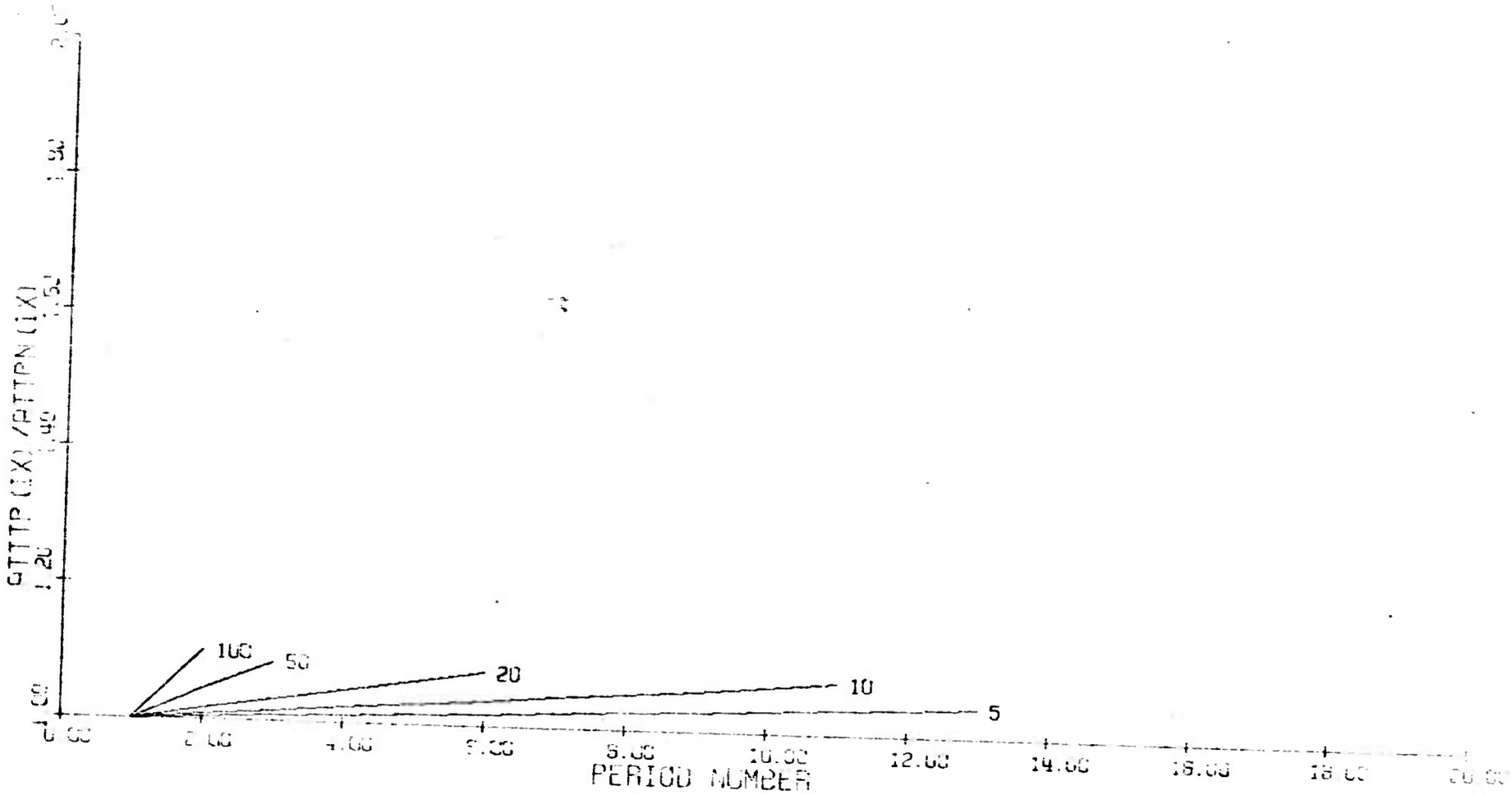

FIGURE 819 : PLOT OF RATIO OF AVERAGE TASK TIME PER TIME PERIOD FOR DIFFERENT TURNOVER RATES TO THE AVERAGE TASK TIME PER TIME PERIOD WITH NO TURNOVER WITH G= 0.95 AND TIR=15.