A Sampling Design for the 1980 Commercial and Multifamily Residential Building Survey

**W.M. Bowen
A. R. Olsen
A. L. Nieves**

June 1981

**Prepared for the U.S. Department of Energy
under Contract DE-AC06-76RLO 1830**

**Pacific Northwest Laboratory
Operated for the U.S. Department of Energy
by Battelle Memorial Institute**

NOTICE

This report was prepared as an account of work sponsored by the United States Government. Neither the United States nor the Department of Energy, nor any of their employees, nor any of their contractors, subcontractors, or their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness or usefulness of any information, apparatus, product or process disclosed, or represents that its use would not infringe privately owned rights.

The views, opinions and conclusions contained in this report are those of the contractor and do not necessarily represent those of the United States Government or the United States Department of Energy.

PACIFIC NORTHWEST LABORATORY
operated by
BATTELLE
for the
UNITED STATES DEPARTMENT OF ENERGY
Under Contract DE-AC06-76RLO 1830

Printed in the United States of America
Available from
National Technical Information Service
United States Department of Commerce
5285 Port Royal Road
Springfield, Virginia 22151

Price: Printed Copy \$_____*; Microfiche \$3.00

*Pages	NTIS
	Selling Price
001-025	\$4.00
026-050	\$4.50
051-075	\$5.25
076-100	\$6.00
101-125	\$6.50
126-150	\$7.25
151-175	\$8.00
176-200	\$9.00
201-225	\$9.25
226-250	\$9.50
251-275	\$10.75
276-300	\$11.00

3 3679 00059 7882

A SAMPLING DESIGN FOR THE 1980 COMMERCIAL
AND MULTIFAMILY RESIDENTIAL BUILDING SURVEY

W.M. Bowen
A.R. Olsen
A.L. Nieves

June 1981

Prepared for
the U.S. Department of Energy
under Contract DE-AC06-76RLO 1830

Pacific Northwest Laboratory
Richland, Washington 99352

CONTENTS

SUMMARY	1
INTRODUCTION	2
POPULATION AND SAMPLE FRAME	3
STRATIFICATION	4
SAMPLE SIZE	5
SAMPLE SIZE RECOMMENDATIONS	16
IMPLEMENTATION OF THE SAMPLING PLAN	22
LIMITATIONS OF THE SAMPLING DESIGN	29
APPENDIX A: POWER TABLES	A.1
APPENDIX B: NUMBER OF BUILDINGS IN EACH STRATUM	B.1

SUMMARY

A sampling plan is proposed for the 1980 Commercial and Multifamily Building Energy Performance Survey. The sampling plan is designed to acquire sufficient information to make inferences about nationwide compliance with DEB₈₀. Due to lack of information about the per building costs associated with conducting the survey, several alternative sample sizes are discussed. Implementation of the sampling plan is described, and formulas are given for the statistical analysis of the survey data.

INTRODUCTION

This report presents details of a proposed sample design for the 1980 Commercial and Multifamily Building Energy Performance Survey. The objective of the survey is to assess the extent to which new building design practices comply with the proposed "1980 Energy Budget Levels for Commercial and Multifamily Residential Building Designs" (DEB_{80}). The procedure will be to:

- (1) identify a small number of building types which account for the majority of commercial buildings constructed in the U.S.A.;
- (2) conduct a "separate survey" for each building type;
- (3) include only buildings designed during 1980.

For each building in the survey, the Design Energy Consumption (DEC_{80}) will be determined by the DOE2.1 computer program. The quantity

$$X = (DEC_{80} - DEB_{80}) \quad (1)$$

will be calculated for each building as a measure of its compliance with DEB_{80} . These X quantities will then be used to compute sample statistics. Inferences about nationwide compliance with DEB_{80} may then be made for each building type. Subsequent sections of this report provide details of the population, sampling frame, stratification, sample size, and implementation of the sampling plan. Although there are additional objectives of the study, this sample design addresses only the primary objective described above.

POPULATION AND SAMPLE FRAME

The population of interest includes all commercial and multifamily residential buildings in the U.S.A. for which designs were completed during calendar year 1980. Energy requirements (and indeed DEB_{80} 's) differ by building type. For the purpose of this survey, each building type is viewed as a subpopulation. Since it is infeasible, in terms of money and resources, to include all building types in the survey the scope of the survey is narrowed by excluding:

1. buildings valued at less than \$100,000
2. additions or alterations
3. church, YMCA, bowling alley, club, lodge, studio, exhibition hall, laboratory, government, manufacturing, or restaurant buildings.

The building types included in the survey (funding permitting) and their corresponding F.W. Dodge Structure Codes (DSC) are listed in Table 1 in descending order of importance to the survey. It is recommended that the survey proceed by building type in the order suggested by Table 1. After the surveys have been completed for the high priority building types, should funding limitation preclude sampling from all building types, the following options may then be exercised:

1. sparse sampling of some or all remaining building types (this may involve collapsing geographic regions and is discussed in subsequent sections), or
2. complete sampling of as many of the remaining building types as funding permits, i.e., eliminate some of the lower priority building types from the study.

For each building type the sample frame consists of all buildings and construction starts listed on the 1980 F.W. Dodge tapes for which construction plans are available. The total number of buildings listed on the 1980 F.W. Dodge tapes for each building type is denoted K_{80} and is displayed in Table 1. The actual number of these buildings for which construction plans are available is unknown, but it is believed that construction plans are available for most (say 95%) of the K_{80} buildings of each type.

TABLE 1. Building Types to be Included in the Survey
with Dodge Structure Code, Number of Buildings
listed on the 1980 F.W. Dodge Tapes and Standard
Deviation of DEC₇₆ - DEB₈₀

<u>Building Type</u>	<u>DSC</u>	<u>K₈₀</u>	<u>S₇₆</u>
1. Large Office*	5,6,7	1039	17.87
2. Small Office+	5,6,7	9400	25.17
3. Low-rise Apartments	70,75	13253	18.55
4. High-rise Apartments	71	1115	18.55
5. Elementary School	41	371	16.44
6. Secondary School	42,43,44,45	596	28.80
7. Clinic	94	1702	40.32
8. Hospital	93	144	109.22
9. Nursing Home	95	19	39.50
10. Store	1	5474	31.05
11. Shopping Center	101	1206	31.16
12. Warehouse	3	8048	19.56
13. Hotel/Motel	69,72,73	513	17.30
14. Theater/Auditorium	56,59,256	178	23.22
15. Community Center	63,65	223	22.13
16. Gymnasium	62,262	578	35.31

* floor area at least 50K ft²

+ floor area less than 50K ft²

STRATIFICATION

The United States, including Alaska and Hawaii, is stratified by climate zone and Census Division. Seven climate zones were defined for the 1976 AIA/RC Phase II Study in terms of the number of heating and cooling degree days. Weather data were then used to assign each county in the U.S.A. to its appropriate climate zone, see Figure 1. The fifty states are assigned to the four Census Regions* which are further divided into nine Census Divisions, see Figure 1. Thus, the stratification of the U.S.A. is defined by:

1. States assigned to Census Divisions
2. Counties within Census Divisions assigned to climate zones (see Figure 1)

This stratification of Census Divisions by climate zones implies a total of sixty-three strata. However, Table 2 reveals that there are actually thirty-eight strata.

An important goal of the stratification is to ensure that all climate zones in every Census Division are represented in the survey. However, in certain strata, there were no 1980 designs for some building types. Thus, it will be necessary to judiciously collapse similar strata, while attempting to maintain a fair representation of geographic regions and climate zones in the survey. The necessary information for such decisions, presented in Appendix B, comes from a summary analysis of the 1980 F.W. Dodge tapes.

* See, e.g., "Characteristics of New Housing: 1979", Construction Reports C25-79-13, U.S. Department of Commerce, Bureau of the Census, page 69.

CLIMATE ZONES

1. < 2000 CDD
> 7000 HDD
2. < 2000 CDD
5000-7000 HDD
3. < 2000 CDD
4000-5500 HDD
4. < 2000 CDD
2000-4000 HDD
5. < 2000 CDD
0-2000 HD
6. > 2000 CDD
0-2000 HDD
7. > 2000 CDD
2000-4000 HDD

FIGURE 1 CLIMATE ZONES DEFINED BY THE AIA/RC
WITH CENSUS REGIONS AND DIVISIONS

TABLE 2. Contingency Table Showing Presence of
Climate Zones in Census Division. There
Are Thirty-Eight Strata

<u>CENSUS DIVISION</u>		<u>AIA/RC PHASE II CLIMATE ZONES</u>							<u>TOTAL STRATA</u>
		<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	
New England	(NE)	x	x						2
Mid-Atlantic	(NE)	x	x	x					3
So. Atlantic	(S)	x	x	x	x		x	x	6
E. So. Central	(S)			x	x		x	x	4
W. So. Central	(S)			x	x		x	x	4
E. No. Central	(NC)	x	x	x					3
W. No. Central	(NC)	x	x	x	x				4
Mountain	(W)	x	x	x	x		x	x	6
<u>Pacific</u>	<u>(W)</u>	x	x	x	x*	x*	x	x	<u>6</u>
TOTAL									38

* Climate Zones 4 and 5 were collapsed leaving a total of 38 strata

SAMPLE SIZE

In order to determine sample size it is necessary to establish:

- (1) The desired precision of parameter estimates;
- (2) The power of the hypothesis test(s).

These, however, are administrative and management decisions rather than statistical perspectives. Both, however, will influence the sample sizes necessary for this survey. In any event, some knowledge of the variability existing within the population is essential. The measure of concern for each of the building types is $DEC_{80} - DEB_{80}$. Estimates of the standard deviation for each building type are calculated from data collected in Phase II of the 1976 AIA/RC Commercial Building Survey. These estimates (see Table 1) are used as approximations of the standard deviations of $DEC_{80} - DEB_{80}$. For purposes of this sample design, it is assumed that

$$\text{Std. Dev. of } (DEC_{76} - DEB_{80}) = \text{Std. Dev. of } (DEC_{80} - DEB_{80}).$$

An objective of the survey for each building type is to be able to construct a $100(1 - \alpha)\%$ confidence interval for the 80th percentile of the distribution of $X = (DEC_{80} - DEB_{80})$ such that the half-width of the interval is no more than 5MBtu/ft²/year. That is, it is desirable that an estimate of the 80th percentile be correct to within ± 5 MBtu of the true value of the 80th percentile, say $X_{.80}$, in the sense that if the sample estimate is $\hat{X}_{.80} = -20$ MBtu there is a $100(1 - \alpha)\%$ chance that the true value, $X_{.80}$, is between -25MBtu and -15MBtu. In this manner, we would interpret $\hat{X}_{.80} = 20$ MBtu to mean that it is estimated that 80 percent of the buildings within the type being examined have DEC_{80} values that are at least 20MBtu below their DEB_{80} values. Thus, if $\alpha = .05$, there exists a 95 percent probability that 80 percent of the buildings in the relevant type have DEC_{80} values at least 15MBtu to 25MBtu below their DEB_{80} values.

If it can be assumed that X follows approximately a normal distribution with standard deviation σ , then the standard deviation of the estimator $\hat{X}_{.80}$ is

$$\text{Std. Dev. } (\hat{X}_{.80}) = \left(\frac{K_{80} - n}{n K_{80}} \right) \left(\frac{.40}{.2803} \right) \sigma \quad (2)$$

where n is the sample size. Assuming further that $\hat{X}_{.80}$ follows a normal distribution, the sample size required to construct a 100 $(1-\alpha)$ % confidence interval for $X_{.80}$ with half-width 5MBtu is given by

$$\begin{aligned} n &= n_0 / (1 + n_0 / K_{80}), \\ \text{where} \quad n_0 &= [Z_{\alpha/2} \sigma (.4 / .2803) / 5]^2 \end{aligned} \quad (3)$$

and where $Z_{\alpha/2}$ is the $\alpha/2$ quantile of the standard normal distribution.

For each building type the S_{76} value from Table 1 was used in place of σ in equation (3) to obtain an approximation of the required sample size for a specified value of α .

Using Large Office Buildings as an example, the value $S_{76} = 17.87$ is obtained from Table 1. To approximate the sample sizes required to construct 80%, 90% and 95% confidence intervals for $X_{.80}$, each having a half-width of 5MBtu, the values $Z_{.10} = -1.282$, $Z_{.05} = -1.645$, and $Z_{.025} = -1.96$, respectively, are substituted for $Z_{\alpha/2}$, and $S_{76} = 17.87$ replaces σ in equation (3). The resulting sample sizes are calculated as follows:

$$n_0 = [-1.282(17.87)(.2854)]^2 = 43$$

$$\text{and } n = 43 / (1 + 43/1039) = 42$$

for an 80% confidence interval;

$$n_o = [-1.645(17.87)(.2854)]^2 = 71$$

$$\text{and } n = 71/(1 + 71/1039) = 67$$

for a 90% confidence interval; and

$$n_o = [-1.96(17.87)(.2854)]^2 = 100$$

$$\text{and } n = 100/(1 + 100/1039) = 92$$

for a 95% confidence interval. Sample sizes computed in this manner for each of the building types are displayed in Table 3.

It should be noted that the assumption that X and $\hat{X}_{.80}$ follow normal distributions is probably not true. However, the sample sizes determined under this assumption are considered reasonable for practical purposes.

It can be seen from Table 3 that certain building types require quite large sample sizes to permit the construction of confidence intervals with half-widths 5MBtu. This is due to the size of their S_{76} values. It may be reasonable for some building types to require the half-widths of the confidence intervals for $\hat{X}_{.80}$ to be some fraction of σ . Using this concept, equation (3) can be written

$$\begin{aligned} n &= n_o / (1 + n_o / K_{80}) \\ \text{where} \quad n_o &= [Z_{\alpha/2} (.4/.2803)/C]^2 \end{aligned} \tag{4}$$

TABLE 3. Required Sample Sizes for 100(1- α)% Confidence
Intervals for $\bar{X}_{.80}$ with Half-Width 5MBtu

Building Type	(1 - α)		
	80%	90%	95%
Large Office	42	67	92
Small Office	85	140	199
Low-rise Apartments	46	76	108
High-rise Apartments	46	72	99
Elementary School	34	52	70
Secondary School	95	140	181
Clinic	194	297	392
Hospital	132	137	139
Nursing Home	18	18	19
Store	129	206	290
Shopping Center	118	182	243
Warehouse	52	85	120
Hotel/Motel	38	59	80
Theater/Auditorium	52	72	87
Community Center	51	73	92
<u>Gymnasium</u>	<u>128</u>	<u>187</u>	<u>233</u>
Total of Sample Sizes	1260	1863	2444

and where C is some fraction. Equation (4) requires no knowledge of σ . The interpretation here is that if the estimate, $\hat{X}_{.80}$, is computed from a sample of size n , there is a $100(1-\alpha)\%$ chance that the true value, $X_{.80}$, is between $\hat{X}_{.80} - C\sigma$ and $\hat{X}_{.80} + C\sigma$, where C and α are to be specified. Table 4 gives the values of n_0 for various values of C and α from which the required sample size n can be computed from equation (4).

TABLE 4. Required n_0 Values for a 100 $(1-\alpha)\%$ Confidence Interval for $X_{.80}$ with Half-Width $C\sigma$ MBtu

C	(1- α)		
	80%	90%	95%
1/2	14	22	32
1/3	31	50	71
1/4	54	89	126
1/5	84	138	196

Using Hospitals as an example, Table 1 gives $K_{80} = 144$ and $S_{76} = 109.22$ which is used in place of σ . Table 4 shows that a 90% confidence interval for $X_{.80}$ with half-width $\sigma/4 \doteq 109.22/4 = 27.31$ MBtu would require $n_0 = 89$, yielding a sample size $n = 55$. Whereas Table 3 shows that a 90% confidence interval for $X_{.80}$ with half-width 5 MBtu would require a sample size $n = 137$. Clearly, requiring a less precise estimate substantially reduces the necessary sample size.

Another important consideration in determining sample size is the hypothesis to be tested and the desired power or sensitivity of the test for detecting departures from the hypothesis. Specifically, an objective of this survey will be to test, for each building type, the null hypothesis that the population mean of X , say μ_x , is equal to a specified value, say μ_0 , against the alternative hypothesis that μ_x differs from μ_0 . For example, it may be desirable to test the hypothesis that the mean X value, μ_x , for Large Office Buildings is $\mu_0 = -40$ MBtu, i.e., that in the population, Large

Office Buildings have DEC_{80} values which are an average of 40MBtu below their DEB_{80} values. Clearly, if μ_x and μ_o differ "greatly" it is desirable to be able to detect this difference with a high probability. That is, when $\mu_x - \mu_o$ is "large", it is desirable to have a high probability of rejecting the null hypothesis in favor of the alternative. This probability is called the power of the test and depends on:

1. the size of $\mu_x - \mu_o$,
2. the significance level of the test, and
3. the standard deviation of the sample mean, $\sigma_{\sqrt{(K_{80}-n)/nK_{80}}}$.

For a fixed significance level and given values of $\mu_x - \mu_o$ and K_{80} , the power of the test increases as n increases. Thus, if σ is known (S_{76} will be used as an approximation) it is possible to select a sample size, n , such that the power of the test is "sufficiently large" when $\mu_x - \mu_o$ exceeds a specified value.

The strategy for selecting a sample size for each building type will follow three steps.

1. Using equation 3 or 4, find an "initial" sample size that satisfies the requirements for the desired precision of the estimate of the 80th percentile.
2. Using the sample size from Step 1 and the desired significance level, compute the power of the test of the hypothesis that $\mu_x = \mu_o$ for various value of $\mu_x - \mu_o$.
3. If a more powerful test is desired, the sample size must be increased.

For the purpose of these comparisons, "power tables" are given in Appendix A. There are three tables for each building type which correspond to the significance levels .20, .10, and .05. Each row of a table corresponds to a

sample size n , and each column corresponds to a value of $\mu_x - \mu_0$. The body of the table gives the power of the test at each significance level/sample size/ $\mu_x - \mu_0$ combination.

Using Large Office Buildings as an example, Table A.1 gives the power of the test when the significance level is .20. Thus, if a sample of size $n=50$ is taken and the value of $\mu_x - \mu_0$ is 7.5MBtu, the power of the test is .9608. Figure 2 displays a plot of the power of the test v.s. $\mu_x - \mu_0$ (i.e., a power curve) for each of the sample sizes 25, 50, 100 and 200.

SAMPLE SIZE RECOMMENDATIONS

Using the information from the previous section, especially Tables 3 and 4 and Appendix A, it is possible to objectively determine a satisfactory sampling plan. However, keeping in mind the limited budget for the survey and the as yet unknown cost of analyzing a building, it is practical to consider several alternative sampling plans.

By way of review, the objectives of the survey for each building type are:

1. to construct a 100 $(1-\alpha)$ % confidence interval for $X_{.80}$ with a specified half-width, and
2. to test the hypothesis that $\mu_x = \mu_0$ with a specified level of significance and "sufficiently high" power when $\mu_x - \mu_0$ exceeds a specified value.

Tables 5, 6 and 7 give three sample sizes for each building type and the necessary information for evaluating and comparing "how well" the objectives of the survey would be met if one of these sample sizes is used. For example, for Large Office Buildings, Table 5 indicates that a sample of size $n = 92$ is necessary to construct a 95% confidence interval for $X_{.80}$ with half-width 5MBtu. For a sample of this size ($n = 92$) the power of the test of the hypothesis that $\mu_x = \mu_0$ is:

1. 80% when the significance level of the test is .20 and $\mu_x - \mu_0 = 3.8$,
2. 80% when the significance level is .10 and $\mu_x - \mu_0 = 4.4$,
3. 90% when the significance level is .20 and $\mu_x - \mu_0 = 4.6$, and
4. 90% when the significance level is .10 and $\mu_x - \mu_0 = 5.2$.

Figure 2. Power Curves for Large Office Buildings
When the Significance Level is .20.

Tables 6 and 7 indicate that samples of size $n = 67$ and $n = 42$ would be required to construct 90% and 80% confidence intervals, respectively, for $\bar{X}_{.80}$ with half-widths 5MBtu. As expected, the power of the hypothesis test decreases as the sample size decreases.

The sample sizes given in Tables 5, 6 and 7 are computed using equations (3) and (4) by specifying a confidence level and a half-width for the confidence interval for $\bar{X}_{.80}$. The scheme used to specify a half-width for a particular building type takes into account its relative importance to the study. Large Office, Small Office, Low-rise Apartments, High-rise Apartments, and Elementary School buildings have highest priority, and the corresponding half-widths are 5MBtu. Secondary Schools and Clinics have the next highest priority with half-widths of $(\sigma/4)$ MBtu. Hospitals, Nursing Homes, Stores, and Shopping Centers are lower priority with half-widths of $(\sigma/3)$ MBtu. The lowest priority building types are Warehouses, Hotel/Motel, Theater/Auditorium, Community Center, and Gymnasium with half-widths of $(\sigma/2)$ MBtu.

As indicated in the above example, the confidence level of the confidence interval for $\bar{X}_{.80}$ is 95% for Table 5, 90% for Table 6, and 80% for Table 7, while the half-widths are constant for all tables. This accounts for the decrease in the sample sizes from Table 5 to Table 7. The sampling plan represented by Table 5 with its larger sample sizes would be most likely to detect differences between μ_x and μ_o but it requires a total of 1141 buildings which may exceed the present budget.

The per building cost of data collection represents a significant unknown. It is recommended that data collection begin with the highest priority building type (Large Office Buildings) using the plan represented by Table 5. An estimate of per building cost can be calculated after data collection has been completed for these buildings. From this estimate, some guidance may be obtained in determining the total number of buildings the budget will allow. At that time, a decision can be made to select a sampling plan for the remaining building types which best utilizes the remaining funds. However, every effort should be made to use the larger sample sizes for the higher priority building types to ensure sufficient precision and power.

TABLE 5

Building Type	Sample Size n	Half-Width of 95% CI. for $\chi_{.80}$	Value of $(\mu_x - \mu_0)$ for which the power of the test is			
			80%		90%	
			<u>.20*</u>	<u>.10*</u>	<u>.20*</u>	<u>.10*</u>
Large Office	92	5	3.8	4.4	4.6	5.2
Small Office	199	5	3.8	4.4	4.6	5.2
Low-rise Apts.	108	5	3.8	4.4	4.6	5.2
High-rise Apts.	99	5	3.8	4.4	4.6	5.2
Elem School	70	5	3.8	4.4	4.6	5.2
Sec. School	104	7.2	5.5	6.4	6.6	7.5
Clinic	118	10.1	7.6	8.9	9.2	10.5
Hospital	48	36.4	27.5	32.0	33.0	37.7
Nurs. Home	15	13.3	10.0	11.7	12.0	13.7
Store	71	10.4	7.8	9.2	9.5	10.8
Shop. Center	67	10.4	7.9	9.2	9.5	10.8
Warehouse	32	9.8	7.4	8.6	8.9	10.1
Hotel/Motel	31	8.7	6.5	7.6	7.9	9.0
Theater/Aud.	28	11.6	8.7	10.2	10.5	12.0
Comm. Center	28	11.1	8.3	9.6	9.9	11.3
Gymnasium	31	17.8	13.3	15.5	16.0	18.3
<hr/>						
Total	1141					

*Significance level of the test

TABLE 6

Building Type	Sample Size n	Half-Width of 90% CI. for $\bar{X}_{.80}$	Value of $(\mu_x - \mu_0)$ for which the power of the test is			
			80%		90%	
			<u>.20*</u>	<u>.10*</u>	<u>.20*</u>	<u>.10*</u>
Large Office	67	5	4.5	5.3	5.4	6.2
Small Office	140	5	4.5	5.3	5.4	6.2
Low-rise Apts.	76	5	4.5	5.3	5.4	6.2
High-rise Apts.	72	5	4.5	5.3	5.4	6.2
Elem. School	52	5	4.5	5.3	5.4	6.2
Sec. School	78	7.2	6.5	7.6	7.8	8.9
Clinic	85	10.1	9.1	10.6	11.0	12.5
Hospital	38	36.4	32.8	38.4	39.6	45.2
Nurs. Home	14	13.3	11.9	13.9	14.3	16.4
Store	50	10.4	9.3	10.9	11.3	12.9
Shop. Center	49	10.4	9.4	10.9	11.3	12.9
Warehouse	22	9.8	8.9	10.4	10.7	12.2
Hotel/Motel	22	8.7	7.8	9.2	9.5	10.8
Theater/Aud.	20	11.6	10.5	12.3	12.7	14.5
Comm. Center	20	11.1	10.0	11.7	12.1	13.8
Gymnasium	22	17.8	16.0	18.7	19.3	22.0
<hr/>						
Total	827					

*Significance level of the test

TABLE 7

Building Type	Sample Size n	Half-Width of 80% CI. for $\bar{X}_{.80}$	Value of $(\mu_x - \mu_0)$ for which the power of the test is			
			80%		90%	
			<u>.20*</u>	<u>.10*</u>	<u>.20*</u>	<u>.10*</u>
Large Office	42	5	5.7	6.7	6.9	7.9
Small Office	85	5	5.7	6.7	6.9	7.9
Low-rise Apts.	46	5	5.7	6.7	6.9	7.9
High-rise Apts.	46	5	5.7	6.7	6.9	7.9
Elem. School	34	5	5.7	6.7	6.9	7.9
Sec. School	50	7.2	8.3	9.8	9.7	11.5
Clinic	54	10.1	11.7	13.7	14.1	16.1
Hospital	26	36.4	41.6	48.8	50.3	57.4
Nurs. Home	12	13.3	15.1	17.6	18.2	20.8
Store	31	10.4	11.9	13.9	14.3	16.4
Shop. Center	31	10.4	11.9	13.9	14.3	16.4
Warehouse	14	9.8	11.1	13.0	13.4	15.3
Hotel/Motel	14	8.7	9.8	11.5	11.9	13.6
Theater/Aud.	13	11.6	13.2	15.4	15.9	18.2
Comm. Center	14	11.1	12.6	14.7	15.2	17.3
Gymnasium	14	17.8	20.0	23.5	24.2	27.6

Total 526

*Significance level of the test

IMPLEMENTATION OF THE SAMPLING PLAN

The discussion, thus far, has dealt with determining how many buildings of each type should be included in the study. This section gives the details of the sampling scheme that will be implemented once the sample sizes have been determined. For notational simplicity and clarity of presentation, it is necessary to narrow the scope of the subsequent discussion to a single building type. This is consistent with previous sections, since a "separate survey" has been recommended for each building type.

The following definitions are helpful in subsequent discussions:

K_i = the total number of buildings in the i^{th} strata that are listed on the 1980 F.W. Dodge tapes.

N_i = the total number of buildings in the i^{th} strata that are listed on the 1980 F.W. Dodge tapes and that have construction plans available. The value of N_i is unknown.

L = the number of strata for which $K_i > 0$ and $N_i > 0$.

$K = \sum_i K_i$ = the total number of buildings in the U.S.A. that are listed on the 1980 F.W. Dodge tapes. (This quantity was denoted K_{80} in previous sections).

$N = \sum_i N_i$ = the total number of buildings in the U.S.A. that are listed on the 1980 F.W. Dodge tapes and that have construction plans available. The value of N is unknown.

$P_i = K_i/K$ expresses the total number of buildings in the i^{th}

strata as a percent of the total number of buildings in the

U.S.A.

n = the proposed sample size.

$n_i = nP_i$ rounded up to the next whole number. This will be the

sample size for the i^{th} strata, (i.e., the number of

buildings from the i^{th} strata that will be included in the

survey). By rounding up to the next integer, n_i will always

be at least one unless K_i is zero.

$n^* = \sum_i n_i$ = the actual total sample size. n^* will usually be larger than n due to rounding n_i .

For the particular building type being sampled, the sampling scheme will proceed as follows. A list of all buildings from the 1980 F.W. Dodge tapes will be created on a computer file. Each building will be assigned a climate zone code (an integer between 1 and 7) and a Census Division code (an integer between 1 and 9) depending upon the location (state and county) of the building site, see Figure 1. It will then be possible to determine how many buildings from each of the 38 strata are listed on the 1980 F.W. Dodge tapes. That is, the values of the K_i 's can be determined.

For each of the strata with $K_i > 0$, a distinct random integer between 1 and K_i will be assigned to each of the K_i buildings. The list of buildings will then be sorted so that the order of the buildings on the list is an ascending order of the random integers. Starting at the top of the sorted list, the first n_i buildings will be included in the sample. If any of

these n_i buildings do not have construction plans available, the sampling continues by including the $(n_i + 1)$ th, $(n_i + 2)$ th, etc. buildings from the sorted list until there are n_i buildings in the sample which do have construction plans available. Let k_i denote the total number of buildings actually sampled in order to have n_i buildings in the sample which have construction plans available.

One of the following situations may occur for some strata:

1. $K_i > 0$ and $N_i < n_i$, or
2. $K_i > 0$ and $N_i = 0$.

If situation 1 occurs, then all of the N_i buildings with construction plans available will be included in the sample. In this case, a re-definition of terms gives $k_i = K_i$ and $n_i = N_i$. Since the sample size for these strata will be smaller than planned, it may be desirable to reallocate the "unused portion" of the overall sample size to enlarge the sample sizes in other strata, or for other building types.

If situation 2 occurs, the particular strata will be dropped from the survey and the "unused portion" of the sample size may be reallocated as discussed above.

For the i^{th} strata (except situation 2, described above) there will be k_i buildings in the sample, of which n_i have construction plans available. The $(k_i - n_i)$ buildings which do not have construction plans available will be treated as "non-respondents".

The construction plans for those buildings in the sample which have construction plans available will be analyzed by an architect who will complete a survey form for each building. The data from the survey forms will be used as input for the DOE2.1 computer program which will determine the DEC_{80} value for each building.

The DEB_{80} value for each building will be determined by the procedure outlined in the November 28, 1979 Federal Register, Vol. 44, No. 230, page 68180.

The quantities $X_{ij} = (DEC_{80} - DEB_{80})$ for j^{th} building in the i^{th} strata will be computed, and the estimation procedures described below will be used to construct confidence intervals for the national mean, μ_x , and the 80th percentile, $X_{.80}$.

The population of buildings in strata i can be viewed as two domains. The N_i buildings with construction plans available are domain 1, and the $(K_i - N_i)$ remaining buildings are domain 2. Let μ_{1i} and μ_{2i} denote the population mean of X for domain 1 and domain 2 of the i^{th} strata, respectively. Since only the buildings from domain 1 can be analyzed, the sample mean of X for the i^{th} strata, $\bar{X}_i$, will be an unbiased estimate of μ_{1i} . The estimate of the overall population mean, μ_x , will be

$$\bar{X} = \frac{\sum_{i=1}^L K_i \bar{X}_i}{K} \quad (5)$$

The expectation of $\bar{X}$ in (5) is

$$E(\bar{X}) = \frac{\sum_{i=1}^L K_i \mu_i}{K} + \frac{\sum_{i=1}^L (K_i - N_i) (\mu_{1i} - \mu_{2i})}{K} \quad (6)$$

where μ_i is the population mean of the i^{th} strata, so that (6) can be rewritten as

$$\left[E(\bar{X}) - \mu_x \right] = \sum_{i=1}^L \frac{(K_i - N_i) (\mu_{1i} - \mu_{2i})}{K}, \quad (7)$$

The term on the right side of equation (7) is the bias of the estimator $\bar{X}$ in (5). Thus, in order for $\bar{X}$ to estimate μ_x unbiasedly, either

1. $K_i = N_i$ must hold or

2. $\mu_{1i} = \mu_{2i}$ must hold

for every strata.

It will be assumed for this study that the difference $(\mu_{1i} - \mu_{2i})$ is negligible for every strata. In addition, it is projected that the ratio N_i/K_i is "near one", say 95%, so that $(K_i - N_i)/K$ in equation (7) is small, say 5%. Thus, under these conditions, the bias of $\bar{X}$ as an estimate of μ_x can be ignored without serious consequences.

To construct a confidence interval for μ_x it is necessary to estimate the variance of $\bar{X}$. It is convenient to consider first the variance of X_{ij} , which is given by

$$V(X_{ij}) = \sigma^2 \left(\frac{N - n^*}{N} \right) \quad (8)$$

It is assumed that the variance of X_{ij} is constant for all strata. Thus, σ^2 can be estimated by the within strata mean square, given by

$$S_w^2 = \sum_{i=1}^L \sum_{j=1}^{n_i} (X_{ij} - \bar{X}_i)^2 / (n^* - L), \quad (9)$$

which has $(n^* - L)$ degrees of freedom. The quantities N_i , and hence N in equation (8), are unknown. However, it will be assumed that

$$n_i/N_i \doteq k_i/K_i \quad (10)$$

so that an estimate of N_i is given by

$$\hat{N}_i = n_i K_i / k_i \quad (11)$$

from which it is possible to estimate N using the formula

$$\hat{N} = \sum_{i=1}^L \hat{N}_i \quad (12)$$

Substituting S_w^2 and $\hat{N}$ in place of σ^2 and N in equation (8) yields an estimate of the variance of X_{ij} which is given by

$$S^2 = S_w^2 \left(\frac{\hat{N} - n^*}{\hat{N}} \right) \quad (13)$$

Then the variance of $\bar{X}_i$ is estimated by

$$\hat{V}(\bar{X}_i) = \frac{S^2}{n_i} \quad , \quad (14)$$

and it follows that an estimate of the variance of $\bar{X}$ is given by

$$\hat{V}(\bar{X}) = \frac{S^2}{K^2} \sum_{i=1}^L \frac{K_i^2}{n_i} \quad (15)$$

which has $(n^* - L)$ degrees of freedom.

A $100(1 - \alpha)\%$ confidence interval for μ_x is given by

$$\bar{X} \pm (t_{n^*-L, \alpha/2}) \sqrt{\hat{V}(\bar{X})}, \quad (16)$$

where $\bar{X}$ is given by equation (5), $\hat{V}(\bar{X})$ is given by equation (15) and where t_{n^*-L} is the $\alpha/2$ percentile of the Student's t distribution with $(n^* - L)$ degrees of freedom.

An estimate of the 80th percentile, $X_{.80}$, is given by

$$\hat{X}_{.80} = \bar{X} + (t_{n^*-L, .80}) \sqrt{S^2} \quad (17)$$

where $\bar{X}$ is given by equation (5), S^2 is given by equation (13), and where $t_{n^*-L, .80}$ is the 80th percentile of the Student's t distribution with $(n^* - L)$ degrees of freedom.

Using a propagation of error argument, it can be shown that an estimate of the variance of $\hat{X}_{.80}$ is given by

$$\hat{V}(\hat{X}_{.80}) = \hat{V}(\bar{X}) + \left[\frac{S^2 t_{n^*-L, .80}^2}{2(n^*-L)} \right], \quad (18)$$

where $\hat{V}(\bar{X})$ is given by equation (15), S^2 is given by equation (13), and where $t_{n^*-L, .80}$ is the 80th percentile of the Student's t distribution with $(n^* - L)$ degrees of freedom.

A 100 $(1 - \alpha)\%$ confidence interval for $X_{.80}$ is given by

$$\hat{X}_{.80} \pm t_{n^*-L, \alpha/2} \sqrt{\hat{V}(\hat{X}_{.80})} \quad (19)$$

where $\hat{X}_{.80}$ is given by equation (17), $\hat{V}(\hat{X}_{.80})$ is given by equation (18), and where $t_{n^*-L, \alpha/2}$ is the $\alpha/2$ percentile of the Student's t distribution with $(n^* - L)$ degrees of freedom.

LIMITATIONS OF THE SAMPLE DESIGN

A difficulty that will most likely be encountered, especially with the lower priority building types, stems from the fact that there are thirty-eight strata. When the proposed sample size is considerably smaller than the number of strata for which K_i is larger than zero, it may be too costly to increase the sample size enough so that all strata are represented. There are several possible options in this case. Perhaps the most feasible for this study is the so-called "method of collapsed strata" discussed earlier, where several similar strata are combined to form one larger stratum. The number of strata is thus reduced, enabling the sampling scheme and data analysis described above to be implemented.

It must be emphasized that the proposed sample design is intended to yield sufficient information for making "satisfactory" inferences about nationwide compliance with DEB_{80} for the various building types. The intent is not to draw conclusions about compliance within individual climate zones or Census Divisions. If, for example, it is desirable to make inferences about compliance with DEB_{80} within each Census Division, then sample sizes similar to those given in Tables 3 through 7 would be required for each Census Division. This would increase the total number of buildings required for the survey by as much as 900% or nine times the number required for nationwide inferences. Similarly, to make inferences about compliance with DEB_{80} within each climate zone could require 700% or seven times the total sample size required for nationwide inferences. It can be seen by examination of Table 1 and Appendix B that for some building types, K_{80} is much smaller than 700% or 900% of the proposed sample size. Thus, for these particular building types, the above comments are over-pessimistic. However, the restricted budget for this project precludes taking large enough samples to make "satisfactory" inferences within individual climate zones or census divisions.

APPENDIX A

POWER TABLES

TABLE A. 1 LARGE OFFICE

THE POWER OF THE TEST OF THE HYPOTHESIS THAT $\mu_X = \mu_0$ WHEN THE SIGNIFICANCE LEVEL IS 0.20

N	(MX - μ_0)												
	-15.00	-12.50	-10.00	-7.50	-5.00	-2.50	0.00	2.50	5.00	7.50	10.00	12.50	15.00
25.	0.9985	0.9880	0.9395	0.8005	0.5568	0.3063	0.1998	0.3063	0.5568	0.8005	0.9395	0.9880	0.9985
50.	1.0000	0.9999	0.9972	0.9608	0.7726	0.4052	0.1998	0.4052	0.7726	0.9608	0.9972	0.9999	1.0000
75.	1.0000	1.0000	0.9999	0.9936	0.8914	0.4959	0.1998	0.4959	0.8914	0.9936	0.9999	1.0000	1.0000
100.	1.0000	1.0000	1.0000	0.9991	0.9517	0.5781	0.1998	0.5781	0.9517	0.9991	1.0000	1.0000	1.0000
125.	1.0000	1.0000	1.0000	0.9999	0.9800	0.6517	0.1998	0.6517	0.9800	0.9999	1.0000	1.0000	1.0000
150.	1.0000	1.0000	1.0000	1.0000	0.9923	0.7166	0.1998	0.7166	0.9923	1.0000	1.0000	1.0000	1.0000
175.	1.0000	1.0000	1.0000	1.0000	0.9973	0.7731	0.1998	0.7731	0.9973	1.0000	1.0000	1.0000	1.0000
200.	1.0000	1.0000	1.0000	1.0000	0.9991	0.8214	0.1998	0.8214	0.9991	1.0000	1.0000	1.0000	1.0000
225.	1.0000	1.0000	1.0000	1.0000	0.9997	0.8620	0.1998	0.8620	0.9997	1.0000	1.0000	1.0000	1.0000
250.	1.0000	1.0000	1.0000	1.0000	0.9999	0.8956	0.1998	0.8956	0.9999	1.0000	1.0000	1.0000	1.0000
275.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9227	0.1998	0.9227	1.0000	1.0000	1.0000	1.0000	1.0000
300.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9442	0.1998	0.9442	1.0000	1.0000	1.0000	1.0000	1.0000
325.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9608	0.1998	0.9608	1.0000	1.0000	1.0000	1.0000	1.0000
350.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9733	0.1998	0.9733	1.0000	1.0000	1.0000	1.0000	1.0000
375.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9824	0.1998	0.9824	1.0000	1.0000	1.0000	1.0000	1.0000
400.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9889	0.1998	0.9889	1.0000	1.0000	1.0000	1.0000	1.0000
425.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9932	0.1998	0.9932	1.0000	1.0000	1.0000	1.0000	1.0000
450.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9961	0.1998	0.9961	1.0000	1.0000	1.0000	1.0000	1.0000
475.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9979	0.1998	0.9979	1.0000	1.0000	1.0000	1.0000	1.0000
500.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9989	0.1998	0.9989	1.0000	1.0000	1.0000	1.0000	1.0000

TABLE A. 2 LARGE OFFICE
THE POWER OF THE TEST OF THE HYPOTHESIS THAT $\mu_X = \mu_0$ WHEN THE SIGNIFICANCE LEVEL IS 0.10

N	(MX - NO)												
	-15.00	-12.50	-10.00	-7.50	-5.00	-2.50	0.00	2.50	5.00	7.50	10.00	12.50	15.00
25.	0.9954	0.9710	0.8824	0.6842	0.4106	0.1837	0.1000	0.1837	0.4106	0.6842	0.8824	0.9710	0.9954
50.	1.0000	0.9997	0.9920	0.9188	0.6492	0.2679	0.1000	0.2679	0.6492	0.9188	0.9920	0.9997	1.0000
75.	1.0000	1.0000	0.9996	0.9833	0.8080	0.3512	0.1000	0.3512	0.8080	0.9833	0.9996	1.0000	1.0000
100.	1.0000	1.0000	1.0000	0.9972	0.9029	0.4321	0.1000	0.4321	0.9029	0.9972	1.0000	1.0000	1.0000
125.	1.0000	1.0000	1.0000	0.9996	0.9545	0.5095	0.1000	0.5095	0.9545	0.9996	1.0000	1.0000	1.0000
150.	1.0000	1.0000	1.0000	1.0000	0.9803	0.5824	0.1000	0.5824	0.9803	1.0000	1.0000	1.0000	1.0000
175.	1.0000	1.0000	1.0000	1.0000	0.9921	0.6498	0.1000	0.6498	0.9921	1.0000	1.0000	1.0000	1.0000
200.	1.0000	1.0000	1.0000	1.0000	0.9971	0.7112	0.1000	0.7112	0.9971	1.0000	1.0000	1.0000	1.0000
225.	1.0000	1.0000	1.0000	1.0000	0.9990	0.7661	0.1000	0.7661	0.9990	1.0000	1.0000	1.0000	1.0000
250.	1.0000	1.0000	1.0000	1.0000	0.9997	0.8142	0.1000	0.8142	0.9997	1.0000	1.0000	1.0000	1.0000
275.	1.0000	1.0000	1.0000	1.0000	0.9999	0.8555	0.1000	0.8555	0.9999	1.0000	1.0000	1.0000	1.0000
300.	1.0000	1.0000	1.0000	1.0000	1.0000	0.8903	0.1000	0.8903	1.0000	1.0000	1.0000	1.0000	1.0000
325.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9189	0.1000	0.9189	1.0000	1.0000	1.0000	1.0000	1.0000
350.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9417	0.1000	0.9417	1.0000	1.0000	1.0000	1.0000	1.0000
375.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9594	0.1000	0.9594	1.0000	1.0000	1.0000	1.0000	1.0000
400.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9727	0.1000	0.9727	1.0000	1.0000	1.0000	1.0000	1.0000
425.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9824	0.1000	0.9824	1.0000	1.0000	1.0000	1.0000	1.0000
450.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9892	0.1000	0.9892	1.0000	1.0000	1.0000	1.0000	1.0000
475.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9937	0.1000	0.9937	1.0000	1.0000	1.0000	1.0000	1.0000
500.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9965	0.1000	0.9965	1.0000	1.0000	1.0000	1.0000	1.0000

TABLE A. 3 LARGE OFFICE

THE POWER OF THE TEST OF THE HYPOTHESIS THAT $\mu_X = \mu_0$ WHEN THE SIGNIFICANCE LEVEL IS 0.05

N	(MX - M0)												
	-15.00	-12.50	-10.00	-7.50	-5.00	-2.50	0.00	2.50	5.00	7.50	10.00	12.50	15.00
25.	0.9889	0.9430	0.8085	0.5652	0.2936	0.1091	0.0500	0.1091	0.2936	0.5652	0.8085	0.9430	0.9889
50.	1.0000	0.9991	0.9819	0.8603	0.5271	0.1735	0.0500	0.1735	0.5271	0.8603	0.9819	0.9991	1.0000
75.	1.0000	1.0000	0.9989	0.9651	0.7108	0.2419	0.0500	0.2419	0.7108	0.9651	0.9989	1.0000	1.0000
100.	1.0000	1.0000	1.0000	0.9930	0.8372	0.3129	0.0500	0.3129	0.8372	0.9930	1.0000	1.0000	1.0000
125.	1.0000	1.0000	1.0000	0.9988	0.9155	0.3852	0.0500	0.3852	0.9155	0.9988	1.0000	1.0000	1.0000
150.	1.0000	1.0000	1.0000	0.9998	0.9595	0.4572	0.0500	0.4572	0.9595	0.9998	1.0000	1.0000	1.0000
175.	1.0000	1.0000	1.0000	1.0000	0.9821	0.5277	0.0500	0.5277	0.9821	1.0000	1.0000	1.0000	1.0000
200.	1.0000	1.0000	1.0000	1.0000	0.9927	0.5955	0.0500	0.5955	0.9927	1.0000	1.0000	1.0000	1.0000
225.	1.0000	1.0000	1.0000	1.0000	0.9973	0.6594	0.0500	0.6594	0.9973	1.0000	1.0000	1.0000	1.0000
250.	1.0000	1.0000	1.0000	1.0000	0.9991	0.7185	0.0500	0.7185	0.9991	1.0000	1.0000	1.0000	1.0000
275.	1.0000	1.0000	1.0000	1.0000	0.9997	0.7720	0.0500	0.7720	0.9997	1.0000	1.0000	1.0000	1.0000
300.	1.0000	1.0000	1.0000	1.0000	0.9999	0.8194	0.0500	0.8194	0.9999	1.0000	1.0000	1.0000	1.0000
325.	1.0000	1.0000	1.0000	1.0000	1.0000	0.8605	0.0500	0.8605	1.0000	1.0000	1.0000	1.0000	1.0000
350.	1.0000	1.0000	1.0000	1.0000	1.0000	0.8951	0.0500	0.8951	1.0000	1.0000	1.0000	1.0000	1.0000
375.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9235	0.0500	0.9235	1.0000	1.0000	1.0000	1.0000	1.0000
400.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9461	0.0500	0.9461	1.0000	1.0000	1.0000	1.0000	1.0000
425.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9634	0.0500	0.9634	1.0000	1.0000	1.0000	1.0000	1.0000
450.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9762	0.0500	0.9762	1.0000	1.0000	1.0000	1.0000	1.0000
475.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9853	0.0500	0.9853	1.0000	1.0000	1.0000	1.0000	1.0000
500.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9914	0.0500	0.9914	1.0000	1.0000	1.0000	1.0000	1.0000

TABLE A. 4 SMALL OFFICE

THE POWER OF THE TEST OF THE HYPOTHESIS THAT $\mu_X = \mu_0$ WHEN THE SIGNIFICANCE LEVEL IS 0.20

N	(MX - M0)												
	-15.00	-12.50	-10.00	-7.50	-5.00	-2.50	0.00	2.50	5.00	7.50	10.00	12.50	15.00
25.	0.9556	0.8859	0.7608	0.5859	0.3983	0.2539	0.1998	0.2539	0.3983	0.5859	0.7608	0.8859	0.9556
50.	0.9984	0.9874	0.9376	0.7972	0.5539	0.3052	0.1998	0.3052	0.5539	0.7972	0.9376	0.9874	0.9984
75.	1.0000	0.9988	0.9851	0.9048	0.6732	0.3538	0.1998	0.3538	0.6732	0.9048	0.9851	0.9988	1.0000
100.	1.0000	0.9999	0.9967	0.9567	0.7633	0.3997	0.1998	0.3997	0.7633	0.9567	0.9967	0.9999	1.0000
125.	1.0000	1.0000	0.9993	0.9809	0.8301	0.4430	0.1998	0.4430	0.8301	0.9809	0.9993	1.0000	1.0000
150.	1.0000	1.0000	0.9999	0.9917	0.8792	0.4839	0.1998	0.4839	0.8792	0.9917	0.9999	1.0000	1.0000
175.	1.0000	1.0000	1.0000	0.9965	0.9148	0.5222	0.1998	0.5222	0.9148	0.9965	1.0000	1.0000	1.0000
200.	1.0000	1.0000	1.0000	0.9985	0.9404	0.5583	0.1998	0.5583	0.9404	0.9985	1.0000	1.0000	1.0000
225.	1.0000	1.0000	1.0000	0.9994	0.9586	0.5920	0.1998	0.5920	0.9586	0.9994	1.0000	1.0000	1.0000
250.	1.0000	1.0000	1.0000	0.9998	0.9714	0.6237	0.1998	0.6237	0.9714	0.9998	1.0000	1.0000	1.0000
275.	1.0000	1.0000	1.0000	0.9999	0.9804	0.6532	0.1998	0.6532	0.9804	0.9999	1.0000	1.0000	1.0000
300.	1.0000	1.0000	1.0000	1.0000	0.9866	0.6808	0.1998	0.6808	0.9866	1.0000	1.0000	1.0000	1.0000
325.	1.0000	1.0000	1.0000	1.0000	0.9909	0.7065	0.1998	0.7065	0.9909	1.0000	1.0000	1.0000	1.0000
350.	1.0000	1.0000	1.0000	1.0000	0.9939	0.7304	0.1998	0.7304	0.9939	1.0000	1.0000	1.0000	1.0000
375.	1.0000	1.0000	1.0000	1.0000	0.9959	0.7526	0.1998	0.7526	0.9959	1.0000	1.0000	1.0000	1.0000
400.	1.0000	1.0000	1.0000	1.0000	0.9973	0.7733	0.1998	0.7733	0.9973	1.0000	1.0000	1.0000	1.0000
425.	1.0000	1.0000	1.0000	1.0000	0.9982	0.7924	0.1998	0.7924	0.9982	1.0000	1.0000	1.0000	1.0000
450.	1.0000	1.0000	1.0000	1.0000	0.9988	0.8101	0.1998	0.8101	0.9988	1.0000	1.0000	1.0000	1.0000
475.	1.0000	1.0000	1.0000	1.0000	0.9992	0.8265	0.1998	0.8265	0.9992	1.0000	1.0000	1.0000	1.0000
500.	1.0000	1.0000	1.0000	1.0000	0.9995	0.8416	0.1998	0.8416	0.9995	1.0000	1.0000	1.0000	1.0000

TABLE A. 5 SMALL OFFICE

THE POWER OF THE TEST OF THE HYPOTHESIS THAT $\mu_X = \mu_0$ WHEN THE SIGNIFICANCE LEVEL IS 0.10

N	(MX - M0)												
	-15.00	-12.50	-10.00	-7.50	-5.00	-2.50	0.00	2.50	5.00	7.50	10.00	12.50	15.00
25.	0.9097	0.8000	0.6348	0.4400	0.2619	0.1416	0.1000	0.1416	0.2619	0.4400	0.6348	0.8000	0.9097
50.	0.9951	0.9697	0.8794	0.6801	0.4076	0.1828	0.1000	0.1828	0.4076	0.6801	0.8794	0.9697	0.9951
75.	0.9998	0.9962	0.9648	0.8279	0.5332	0.2234	0.1000	0.2234	0.5332	0.8279	0.9648	0.9962	0.9998
100.	1.0000	0.9996	0.9906	0.9116	0.6378	0.2631	0.1000	0.2631	0.6378	0.9116	0.9906	0.9996	1.0000
125.	1.0000	1.0000	0.9976	0.9563	0.7228	0.3019	0.1000	0.3019	0.7228	0.9563	0.9976	1.0000	1.0000
150.	1.0000	1.0000	0.9994	0.9790	0.7904	0.3398	0.1000	0.3398	0.7904	0.9790	0.9994	1.0000	1.0000
175.	1.0000	1.0000	0.9999	0.9902	0.8432	0.3765	0.1000	0.3765	0.8432	0.9902	0.9999	1.0000	1.0000
200.	1.0000	1.0000	1.0000	0.9955	0.8839	0.4120	0.1000	0.4120	0.8839	0.9955	1.0000	1.0000	1.0000
225.	1.0000	1.0000	1.0000	0.9980	0.9148	0.4463	0.1000	0.4463	0.9148	0.9980	1.0000	1.0000	1.0000
250.	1.0000	1.0000	1.0000	0.9991	0.9380	0.4794	0.1000	0.4794	0.9380	0.9991	1.0000	1.0000	1.0000
275.	1.0000	1.0000	1.0000	0.9996	0.9553	0.5111	0.1000	0.5111	0.9553	0.9996	1.0000	1.0000	1.0000
300.	1.0000	1.0000	1.0000	0.9998	0.9680	0.5416	0.1000	0.5416	0.9680	0.9998	1.0000	1.0000	1.0000
325.	1.0000	1.0000	1.0000	0.9999	0.9772	0.5707	0.1000	0.5707	0.9772	0.9999	1.0000	1.0000	1.0000
350.	1.0000	1.0000	1.0000	1.0000	0.9839	0.5984	0.1000	0.5984	0.9839	1.0000	1.0000	1.0000	1.0000
375.	1.0000	1.0000	1.0000	1.0000	0.9887	0.6249	0.1000	0.6249	0.9887	1.0000	1.0000	1.0000	1.0000
400.	1.0000	1.0000	1.0000	1.0000	0.9921	0.6501	0.1000	0.6501	0.9921	1.0000	1.0000	1.0000	1.0000
425.	1.0000	1.0000	1.0000	1.0000	0.9946	0.6739	0.1000	0.6739	0.9946	1.0000	1.0000	1.0000	1.0000
450.	1.0000	1.0000	1.0000	1.0000	0.9962	0.6966	0.1000	0.6966	0.9962	1.0000	1.0000	1.0000	1.0000
475.	1.0000	1.0000	1.0000	1.0000	0.9974	0.7179	0.1000	0.7179	0.9974	1.0000	1.0000	1.0000	1.0000
500.	1.0000	1.0000	1.0000	1.0000	0.9982	0.7381	0.1000	0.7381	0.9982	1.0000	1.0000	1.0000	1.0000

TABLE A. 6 SMALL OFFICE

THE POWER OF THE TEST OF THE HYPOTHESIS THAT $\mu_X = \mu_0$ WHEN THE SIGNIFICANCE LEVEL IS 0.05

N	(MX - M0)												
	-15.00	-12.50	-10.00	-7.50	-5.00	-2.50	0.00	2.50	5.00	7.50	10.00	12.50	15.00
25.	0.8470	0.7007	0.5117	0.3201	0.1687	0.0788	0.0500	0.0788	0.1687	0.3201	0.5117	0.7007	0.8470
50.	0.9883	0.9407	0.8042	0.5607	0.2910	0.1085	0.0500	0.1085	0.2910	0.5607	0.8042	0.9407	0.9883
75.	0.9994	0.9908	0.9325	0.7359	0.4081	0.1388	0.0500	0.1388	0.4081	0.7359	0.9325	0.9908	0.9994
100.	1.0000	0.9988	0.9790	0.8498	0.5149	0.1697	0.0500	0.1697	0.5149	0.8498	0.9790	0.9988	1.0000
125.	1.0000	0.9999	0.9940	0.9183	0.6087	0.2009	0.0500	0.2009	0.6087	0.9183	0.9940	0.9999	1.0000
150.	1.0000	1.0000	0.9984	0.9572	0.6889	0.2323	0.0500	0.2323	0.6889	0.9572	0.9984	1.0000	1.0000
175.	1.0000	1.0000	0.9996	0.9783	0.7558	0.2637	0.0500	0.2637	0.7558	0.9783	0.9996	1.0000	1.0000
200.	1.0000	1.0000	0.9999	0.9893	0.8105	0.2949	0.0500	0.2949	0.8105	0.9893	0.9999	1.0000	1.0000
225.	1.0000	1.0000	1.0000	0.9948	0.8545	0.3259	0.0500	0.3259	0.8545	0.9948	1.0000	1.0000	1.0000
250.	1.0000	1.0000	1.0000	0.9976	0.8894	0.3565	0.0500	0.3565	0.8894	0.9976	1.0000	1.0000	1.0000
275.	1.0000	1.0000	1.0000	0.9989	0.9167	0.3867	0.0500	0.3867	0.9167	0.9989	1.0000	1.0000	1.0000
300.	1.0000	1.0000	1.0000	0.9995	0.9378	0.4163	0.0500	0.4163	0.9378	0.9995	1.0000	1.0000	1.0000
325.	1.0000	1.0000	1.0000	0.9998	0.9540	0.4453	0.0500	0.4453	0.9540	0.9998	1.0000	1.0000	1.0000
350.	1.0000	1.0000	1.0000	0.9999	0.9662	0.4737	0.0500	0.4737	0.9662	0.9999	1.0000	1.0000	1.0000
375.	1.0000	1.0000	1.0000	1.0000	0.9753	0.5012	0.0500	0.5012	0.9753	1.0000	1.0000	1.0000	1.0000
400.	1.0000	1.0000	1.0000	1.0000	0.9821	0.5280	0.0500	0.5280	0.9821	1.0000	1.0000	1.0000	1.0000
425.	1.0000	1.0000	1.0000	1.0000	0.9872	0.5539	0.0500	0.5539	0.9872	1.0000	1.0000	1.0000	1.0000
450.	1.0000	1.0000	1.0000	1.0000	0.9908	0.5790	0.0500	0.5790	0.9908	1.0000	1.0000	1.0000	1.0000
475.	1.0000	1.0000	1.0000	1.0000	0.9935	0.6032	0.0500	0.6032	0.9935	1.0000	1.0000	1.0000	1.0000
500.	1.0000	1.0000	1.0000	1.0000	0.9954	0.6265	0.0500	0.6265	0.9954	1.0000	1.0000	1.0000	1.0000

TABLE A. 7 LOW-RISE APARTMENTS

THE POWER OF THE TEST OF THE HYPOTHESIS THAT $\mu_X = \mu_0$ WHEN THE SIGNIFICANCE LEVEL IS 0.20

N	(MX - M0)												
	-15.00	-12.50	-10.00	-7.50	-5.00	-2.50	0.00	2.50	5.00	7.50	10.00	12.50	15.00
25.	0.9972	0.9817	0.9216	0.7713	0.5310	0.2970	0.1998	0.2970	0.5310	0.7713	0.9216	0.9817	0.9972
50.	1.0000	0.9998	0.9944	0.9432	0.7356	0.3844	0.1998	0.3844	0.7356	0.9432	0.9944	0.9998	1.0000
75.	1.0000	1.0000	0.9997	0.9871	0.8553	0.4627	0.1998	0.4627	0.8553	0.9871	0.9997	1.0000	1.0000
100.	1.0000	1.0000	1.0000	0.9973	0.9228	0.5324	0.1998	0.5324	0.9228	0.9973	1.0000	1.0000	1.0000
125.	1.0000	1.0000	1.0000	0.9994	0.9596	0.5943	0.1998	0.5943	0.9596	0.9994	1.0000	1.0000	1.0000
150.	1.0000	1.0000	1.0000	0.9999	0.9792	0.6489	0.1998	0.6489	0.9792	0.9999	1.0000	1.0000	1.0000
175.	1.0000	1.0000	1.0000	1.0000	0.9895	0.6970	0.1998	0.6970	0.9895	1.0000	1.0000	1.0000	1.0000
200.	1.0000	1.0000	1.0000	1.0000	0.9948	0.7391	0.1998	0.7391	0.9948	1.0000	1.0000	1.0000	1.0000
225.	1.0000	1.0000	1.0000	1.0000	0.9974	0.7759	0.1998	0.7759	0.9974	1.0000	1.0000	1.0000	1.0000
250.	1.0000	1.0000	1.0000	1.0000	0.9987	0.8080	0.1998	0.8080	0.9987	1.0000	1.0000	1.0000	1.0000
275.	1.0000	1.0000	1.0000	1.0000	0.9994	0.8358	0.1998	0.8358	0.9994	1.0000	1.0000	1.0000	1.0000
300.	1.0000	1.0000	1.0000	1.0000	0.9997	0.8599	0.1998	0.8599	0.9997	1.0000	1.0000	1.0000	1.0000
325.	1.0000	1.0000	1.0000	1.0000	0.9999	0.8807	0.1998	0.8807	0.9999	1.0000	1.0000	1.0000	1.0000
350.	1.0000	1.0000	1.0000	1.0000	0.9999	0.8986	0.1998	0.8986	0.9999	1.0000	1.0000	1.0000	1.0000
375.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9140	0.1998	0.9140	1.0000	1.0000	1.0000	1.0000	1.0000
400.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9272	0.1998	0.9272	1.0000	1.0000	1.0000	1.0000	1.0000
425.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9385	0.1998	0.9385	1.0000	1.0000	1.0000	1.0000	1.0000
450.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9481	0.1998	0.9481	1.0000	1.0000	1.0000	1.0000	1.0000
475.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9563	0.1998	0.9563	1.0000	1.0000	1.0000	1.0000	1.0000
500.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9633	0.1998	0.9633	1.0000	1.0000	1.0000	1.0000	1.0000

TABLE A. 8 LOW-RISE APARTMENTS

THE POWER OF THE TEST OF THE HYPOTHESIS THAT $\mu_X = \mu_0$ WHEN THE SIGNIFICANCE LEVEL IS 0.10

N	(MX - M0)												
	-15.00	-12.50	-10.00	-7.50	-5.00	-2.50	0.00	2.50	5.00	7.50	10.00	12.50	15.00
25.	0.9918	0.9580	0.8538	0.6476	0.3850	0.1761	0.1000	0.1761	0.3850	0.6476	0.8538	0.9580	0.9918
50.	1.0000	0.9991	0.9852	0.8886	0.6045	0.2497	0.1000	0.2497	0.6045	0.8886	0.9852	0.9991	1.0000
75.	1.0000	1.0000	0.9988	0.9690	0.7568	0.3200	0.1000	0.3200	0.7568	0.9690	0.9988	1.0000	1.0000
100.	1.0000	1.0000	0.9999	0.9921	0.8556	0.3864	0.1000	0.3864	0.8556	0.9921	0.9999	1.0000	1.0000
125.	1.0000	1.0000	1.0000	0.9981	0.9167	0.4487	0.1000	0.4487	0.9167	0.9981	1.0000	1.0000	1.0000
150.	1.0000	1.0000	1.0000	0.9996	0.9530	0.5065	0.1000	0.5065	0.9530	0.9996	1.0000	1.0000	1.0000
175.	1.0000	1.0000	1.0000	0.9999	0.9741	0.5598	0.1000	0.5598	0.9741	0.9999	1.0000	1.0000	1.0000
200.	1.0000	1.0000	1.0000	1.0000	0.9860	0.6087	0.1000	0.6087	0.9860	1.0000	1.0000	1.0000	1.0000
225.	1.0000	1.0000	1.0000	1.0000	0.9925	0.6533	0.1000	0.6533	0.9925	1.0000	1.0000	1.0000	1.0000
250.	1.0000	1.0000	1.0000	1.0000	0.9961	0.6938	0.1000	0.6938	0.9961	1.0000	1.0000	1.0000	1.0000
275.	1.0000	1.0000	1.0000	1.0000	0.9980	0.7303	0.1000	0.7303	0.9980	1.0000	1.0000	1.0000	1.0000
300.	1.0000	1.0000	1.0000	1.0000	0.9990	0.7631	0.1000	0.7631	0.9990	1.0000	1.0000	1.0000	1.0000
325.	1.0000	1.0000	1.0000	1.0000	0.9995	0.7925	0.1000	0.7925	0.9995	1.0000	1.0000	1.0000	1.0000
350.	1.0000	1.0000	1.0000	1.0000	0.9997	0.8187	0.1000	0.8187	0.9997	1.0000	1.0000	1.0000	1.0000
375.	1.0000	1.0000	1.0000	1.0000	0.9999	0.8420	0.1000	0.8420	0.9999	1.0000	1.0000	1.0000	1.0000
400.	1.0000	1.0000	1.0000	1.0000	0.9999	0.8626	0.1000	0.8626	0.9999	1.0000	1.0000	1.0000	1.0000
425.	1.0000	1.0000	1.0000	1.0000	1.0000	0.8808	0.1000	0.8808	1.0000	1.0000	1.0000	1.0000	1.0000
450.	1.0000	1.0000	1.0000	1.0000	1.0000	0.8968	0.1000	0.8968	1.0000	1.0000	1.0000	1.0000	1.0000
475.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9109	0.1000	0.9109	1.0000	1.0000	1.0000	1.0000	1.0000
500.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9232	0.1000	0.9232	1.0000	1.0000	1.0000	1.0000	1.0000

TABLE A. 9 LOW-RISE APARTMENTS

THE POWER OF THE TEST OF THE HYPOTHESIS THAT $\mu_X = \mu_0$ WHEN THE SIGNIFICANCE LEVEL IS 0.05

N	(MX - MO)												
	-15.00	-12.50	-10.00	-7.50	-5.00	-2.50	0.00	2.50	5.00	7.50	10.00	12.50	15.00
25.	0.9816	0.9211	0.7697	0.5253	0.2711	0.1035	0.0500	0.1035	0.2711	0.5253	0.7697	0.9211	0.9816
50.	0.9999	0.9976	0.9685	0.8171	0.4799	0.1592	0.0500	0.1592	0.4799	0.8171	0.9685	0.9976	0.9999
75.	1.0000	1.0000	0.9968	0.9396	0.6484	0.2158	0.0500	0.2158	0.6484	0.9396	0.9968	1.0000	1.0000
100.	1.0000	1.0000	0.9997	0.9821	0.7721	0.2723	0.0500	0.2723	0.7721	0.9821	0.9997	1.0000	1.0000
125.	1.0000	1.0000	1.0000	0.9951	0.8572	0.3280	0.0500	0.3280	0.8572	0.9951	1.0000	1.0000	1.0000
150.	1.0000	1.0000	1.0000	0.9987	0.9131	0.3822	0.0500	0.3822	0.9131	0.9987	1.0000	1.0000	1.0000
175.	1.0000	1.0000	1.0000	0.9997	0.9484	0.4345	0.0500	0.4345	0.9484	0.9997	1.0000	1.0000	1.0000
200.	1.0000	1.0000	1.0000	0.9999	0.9700	0.4843	0.0500	0.4843	0.9700	0.9999	1.0000	1.0000	1.0000
225.	1.0000	1.0000	1.0000	1.0000	0.9829	0.5315	0.0500	0.5315	0.9829	1.0000	1.0000	1.0000	1.0000
250.	1.0000	1.0000	1.0000	1.0000	0.9904	0.5759	0.0500	0.5759	0.9904	1.0000	1.0000	1.0000	1.0000
275.	1.0000	1.0000	1.0000	1.0000	0.9947	0.6173	0.0500	0.6173	0.9947	1.0000	1.0000	1.0000	1.0000
300.	1.0000	1.0000	1.0000	1.0000	0.9971	0.6559	0.0500	0.6559	0.9971	1.0000	1.0000	1.0000	1.0000
325.	1.0000	1.0000	1.0000	1.0000	0.9985	0.6915	0.0500	0.6915	0.9985	1.0000	1.0000	1.0000	1.0000
350.	1.0000	1.0000	1.0000	1.0000	0.9992	0.7242	0.0500	0.7242	0.9992	1.0000	1.0000	1.0000	1.0000
375.	1.0000	1.0000	1.0000	1.0000	0.9996	0.7541	0.0500	0.7541	0.9996	1.0000	1.0000	1.0000	1.0000
400.	1.0000	1.0000	1.0000	1.0000	0.9998	0.7814	0.0500	0.7814	0.9998	1.0000	1.0000	1.0000	1.0000
425.	1.0000	1.0000	1.0000	1.0000	0.9999	0.8062	0.0500	0.8062	0.9999	1.0000	1.0000	1.0000	1.0000
450.	1.0000	1.0000	1.0000	1.0000	0.9999	0.8286	0.0500	0.8286	0.9999	1.0000	1.0000	1.0000	1.0000
475.	1.0000	1.0000	1.0000	1.0000	1.0000	0.8488	0.0500	0.8488	1.0000	1.0000	1.0000	1.0000	1.0000
500.	1.0000	1.0000	1.0000	1.0000	1.0000	0.8669	0.0500	0.8669	1.0000	1.0000	1.0000	1.0000	1.0000

TABLE A.10 HIGH-RISE APARTMENTS

THE POWER OF THE TEST OF THE HYPOTHESIS THAT $\mu_X = \mu_0$ WHEN THE SIGNIFICANCE LEVEL IS 0.20

N	(MX - M0)												
	-15.00	-12.50	-10.00	-7.50	-5.00	-2.50	0.00	2.50	5.00	7.50	10.00	12.50	15.00
25.	0.9975	0.9832	0.9257	0.7776	0.5364	0.2989	0.1998	0.2989	0.5364	0.7776	0.9257	0.9832	0.9975
50.	1.0000	0.9998	0.9956	0.9498	0.7486	0.3915	0.1998	0.3915	0.7486	0.9498	0.9956	0.9998	1.0000
75.	1.0000	1.0000	0.9998	0.9904	0.8719	0.4771	0.1998	0.4771	0.8719	0.9904	0.9998	1.0000	1.0000
100.	1.0000	1.0000	1.0000	0.9984	0.9386	0.5555	0.1998	0.5555	0.9386	0.9984	1.0000	1.0000	1.0000
125.	1.0000	1.0000	1.0000	0.9998	0.9723	0.6264	0.1998	0.6264	0.9723	0.9998	1.0000	1.0000	1.0000
150.	1.0000	1.0000	1.0000	1.0000	0.9883	0.6899	0.1998	0.6899	0.9883	1.0000	1.0000	1.0000	1.0000
175.	1.0000	1.0000	1.0000	1.0000	0.9954	0.7459	0.1998	0.7459	0.9954	1.0000	1.0000	1.0000	1.0000
200.	1.0000	1.0000	1.0000	1.0000	0.9983	0.7948	0.1998	0.7948	0.9983	1.0000	1.0000	1.0000	1.0000
225.	1.0000	1.0000	1.0000	1.0000	0.9994	0.8368	0.1998	0.8368	0.9994	1.0000	1.0000	1.0000	1.0000
250.	1.0000	1.0000	1.0000	1.0000	0.9998	0.8724	0.1998	0.8724	0.9998	1.0000	1.0000	1.0000	1.0000
275.	1.0000	1.0000	1.0000	1.0000	0.9999	0.9020	0.1998	0.9020	0.9999	1.0000	1.0000	1.0000	1.0000
300.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9263	0.1998	0.9263	1.0000	1.0000	1.0000	1.0000	1.0000
325.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9457	0.1998	0.9457	1.0000	1.0000	1.0000	1.0000	1.0000
350.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9610	0.1998	0.9610	1.0000	1.0000	1.0000	1.0000	1.0000
375.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9727	0.1998	0.9727	1.0000	1.0000	1.0000	1.0000	1.0000
400.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9814	0.1998	0.9814	1.0000	1.0000	1.0000	1.0000	1.0000
425.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9878	0.1998	0.9878	1.0000	1.0000	1.0000	1.0000	1.0000
450.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9922	0.1998	0.9922	1.0000	1.0000	1.0000	1.0000	1.0000
475.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9953	0.1998	0.9953	1.0000	1.0000	1.0000	1.0000	1.0000
500.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9972	0.1998	0.9972	1.0000	1.0000	1.0000	1.0000	1.0000

TABLE A.11 HIGH-RISE APARTMENTS

THE POWER OF THE TEST OF THE HYPOTHESIS THAT $\mu_X = \mu_0$ WHEN THE SIGNIFICANCE LEVEL IS 0.10

N	(MX - μ_0)												
	-15.00	-12.50	-10.00	-7.50	-5.00	-2.50	0.00	2.50	5.00	7.50	10.00	12.50	15.00
25.	0.9927	0.9610	0.8602	0.6554	0.3903	0.1777	0.1000	0.1777	0.3903	0.6554	0.8602	0.9610	0.9927
50.	1.0000	0.9994	0.9879	0.8998	0.6200	0.2559	0.1000	0.2559	0.6200	0.8998	0.9879	0.9994	1.0000
75.	1.0000	1.0000	0.9993	0.9762	0.7800	0.3334	0.1000	0.3334	0.7800	0.9762	0.9993	1.0000	1.0000
100.	1.0000	1.0000	1.0000	0.9952	0.8810	0.4092	0.1000	0.4092	0.8810	0.9952	1.0000	1.0000	1.0000
125.	1.0000	1.0000	1.0000	0.9992	0.9398	0.4823	0.1000	0.4823	0.9398	0.9992	1.0000	1.0000	1.0000
150.	1.0000	1.0000	1.0000	0.9999	0.9715	0.5517	0.1000	0.5517	0.9715	0.9999	1.0000	1.0000	1.0000
175.	1.0000	1.0000	1.0000	1.0000	0.9874	0.6168	0.1000	0.6168	0.9874	1.0000	1.0000	1.0000	1.0000
200.	1.0000	1.0000	1.0000	1.0000	0.9948	0.6770	0.1000	0.6770	0.9948	1.0000	1.0000	1.0000	1.0000
225.	1.0000	1.0000	1.0000	1.0000	0.9980	0.7317	0.1000	0.7317	0.9980	1.0000	1.0000	1.0000	1.0000
250.	1.0000	1.0000	1.0000	1.0000	0.9993	0.7807	0.1000	0.7807	0.9993	1.0000	1.0000	1.0000	1.0000
275.	1.0000	1.0000	1.0000	1.0000	0.9998	0.8238	0.1000	0.8238	0.9998	1.0000	1.0000	1.0000	1.0000
300.	1.0000	1.0000	1.0000	1.0000	0.9999	0.8611	0.1000	0.8611	0.9999	1.0000	1.0000	1.0000	1.0000
325.	1.0000	1.0000	1.0000	1.0000	1.0000	0.8928	0.1000	0.8928	1.0000	1.0000	1.0000	1.0000	1.0000
350.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9191	0.1000	0.9191	1.0000	1.0000	1.0000	1.0000	1.0000
375.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9405	0.1000	0.9405	1.0000	1.0000	1.0000	1.0000	1.0000
400.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9574	0.1000	0.9574	1.0000	1.0000	1.0000	1.0000	1.0000
425.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9704	0.1000	0.9704	1.0000	1.0000	1.0000	1.0000	1.0000
450.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9802	0.1000	0.9802	1.0000	1.0000	1.0000	1.0000	1.0000
475.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9872	0.1000	0.9872	1.0000	1.0000	1.0000	1.0000	1.0000
500.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9921	0.1000	0.9921	1.0000	1.0000	1.0000	1.0000	1.0000

TABLE A.12 HIGH-RISE APARTMENTS

THE POWER OF THE TEST OF THE HYPOTHESIS THAT $\mu_X = \mu_0$ WHEN THE SIGNIFICANCE LEVEL IS 0.05

N	(MX - μ_0)												
	-15.00	-12.50	-10.00	-7.50	-5.00	-2.50	0.00	2.50	5.00	7.50	10.00	12.50	15.00
25.	0.9834	0.9261	0.7782	0.5337	0.2757	0.1047	0.0500	0.1047	0.2757	0.5337	0.7782	0.9261	0.9834
50.	0.9999	0.9982	0.9738	0.8328	0.4961	0.1640	0.0500	0.1640	0.4961	0.8328	0.9738	0.9982	0.9999
75.	1.0000	1.0000	0.9980	0.9521	0.6762	0.2269	0.0500	0.2269	0.6762	0.9521	0.9980	1.0000	1.0000
100.	1.0000	1.0000	0.9999	0.9886	0.8065	0.2924	0.0500	0.2924	0.8065	0.9886	0.9999	1.0000	1.0000
125.	1.0000	1.0000	1.0000	0.9977	0.8922	0.3593	0.0500	0.3593	0.8922	0.9977	1.0000	1.0000	1.0000
150.	1.0000	1.0000	1.0000	0.9996	0.9439	0.4264	0.0500	0.4264	0.9439	0.9996	1.0000	1.0000	1.0000
175.	1.0000	1.0000	1.0000	0.9999	0.9728	0.4928	0.0500	0.4928	0.9728	0.9999	1.0000	1.0000	1.0000
200.	1.0000	1.0000	1.0000	1.0000	0.9877	0.5573	0.0500	0.5573	0.9877	1.0000	1.0000	1.0000	1.0000
225.	1.0000	1.0000	1.0000	1.0000	0.9948	0.6190	0.0500	0.6190	0.9948	1.0000	1.0000	1.0000	1.0000
250.	1.0000	1.0000	1.0000	1.0000	0.9980	0.6770	0.0500	0.6770	0.9980	1.0000	1.0000	1.0000	1.0000
275.	1.0000	1.0000	1.0000	1.0000	0.9993	0.7307	0.0500	0.7307	0.9993	1.0000	1.0000	1.0000	1.0000
300.	1.0000	1.0000	1.0000	1.0000	0.9998	0.7794	0.0500	0.7794	0.9998	1.0000	1.0000	1.0000	1.0000
325.	1.0000	1.0000	1.0000	1.0000	0.9999	0.8229	0.0500	0.8229	0.9999	1.0000	1.0000	1.0000	1.0000
350.	1.0000	1.0000	1.0000	1.0000	1.0000	0.8608	0.0500	0.8608	1.0000	1.0000	1.0000	1.0000	1.0000
375.	1.0000	1.0000	1.0000	1.0000	1.0000	0.8932	0.0500	0.8932	1.0000	1.0000	1.0000	1.0000	1.0000
400.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9201	0.0500	0.9201	1.0000	1.0000	1.0000	1.0000	1.0000
425.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9420	0.0500	0.9420	1.0000	1.0000	1.0000	1.0000	1.0000
450.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9592	0.0500	0.9592	1.0000	1.0000	1.0000	1.0000	1.0000
475.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9724	0.0500	0.9724	1.0000	1.0000	1.0000	1.0000	1.0000
500.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9820	0.0500	0.9820	1.0000	1.0000	1.0000	1.0000	1.0000

TABLE A.13 ELEMENTARY SCHOOL

THE POWER OF THE TEST OF THE HYPOTHESIS THAT $\mu_X = \mu_0$ WHEN THE SIGNIFICANCE LEVEL IS 0.20

N	(MX - M0)												
	-15.00	-12.50	-10.00	-7.50	-5.00	-2.50	0.00	2.50	5.00	7.50	10.00	12.50	15.00
18.	0.9964	0.9786	0.9137	0.7593	0.5209	0.2934	0.1998	0.2934	0.5209	0.7593	0.9137	0.9786	0.9964
36.	1.0000	0.9998	0.9947	0.9451	0.7391	0.3863	0.1998	0.3863	0.7391	0.9451	0.9947	0.9998	1.0000
54.	1.0000	1.0000	0.9998	0.9905	0.8721	0.4772	0.1998	0.4772	0.8721	0.9905	0.9998	1.0000	1.0000
72.	1.0000	1.0000	1.0000	0.9988	0.9444	0.5650	0.1998	0.5650	0.9444	0.9988	1.0000	1.0000	1.0000
90.	1.0000	1.0000	1.0000	0.9999	0.9790	0.6481	0.1998	0.6481	0.9790	0.9999	1.0000	1.0000	1.0000
108.	1.0000	1.0000	1.0000	1.0000	0.9933	0.7249	0.1998	0.7249	0.9933	1.0000	1.0000	1.0000	1.0000
126.	1.0000	1.0000	1.0000	1.0000	0.9982	0.7938	0.1998	0.7938	0.9982	1.0000	1.0000	1.0000	1.0000
144.	1.0000	1.0000	1.0000	1.0000	0.9996	0.8535	0.1998	0.8535	0.9996	1.0000	1.0000	1.0000	1.0000
162.	1.0000	1.0000	1.0000	1.0000	0.9999	0.9027	0.1998	0.9027	0.9999	1.0000	1.0000	1.0000	1.0000
180.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9408	0.1998	0.9408	1.0000	1.0000	1.0000	1.0000	1.0000
198.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9680	0.1998	0.9680	1.0000	1.0000	1.0000	1.0000	1.0000
216.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9852	0.1998	0.9852	1.0000	1.0000	1.0000	1.0000	1.0000
234.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9946	0.1998	0.9946	1.0000	1.0000	1.0000	1.0000	1.0000
252.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9986	0.1998	0.9986	1.0000	1.0000	1.0000	1.0000	1.0000
270.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9998	0.1998	0.9998	1.0000	1.0000	1.0000	1.0000	1.0000
288.	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.1998	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
306.	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.1998	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
324.	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.1998	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
342.	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.1998	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
360.	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.1998	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

TABLE A.14 ELEMENTARY SCHOOL

THE POWER OF THE TEST OF THE HYPOTHESIS THAT $\mu_X = \mu_0$ WHEN THE SIGNIFICANCE LEVEL IS 0.10

N	(MX - M0)												
	-15.00	-12.50	-10.00	-7.50	-5.00	-2.50	0.00	2.50	5.00	7.50	10.00	12.50	15.00
18.	0.9899	0.9518	0.8415	0.6329	0.3752	0.1732	0.1000	0.1732	0.3752	0.6329	0.8415	0.9518	0.9899
36.	1.0000	0.9992	0.9859	0.8917	0.6087	0.2513	0.1000	0.2513	0.6087	0.8917	0.9859	0.9992	1.0000
54.	1.0000	1.0000	0.9993	0.9762	0.7802	0.3335	0.1000	0.3335	0.7802	0.9762	0.9993	1.0000	1.0000
72.	1.0000	1.0000	1.0000	0.9962	0.8906	0.4188	0.1000	0.4188	0.8906	0.9962	1.0000	1.0000	1.0000
90.	1.0000	1.0000	1.0000	0.9996	0.9526	0.5055	0.1000	0.5055	0.9526	0.9996	1.0000	1.0000	1.0000
108.	1.0000	1.0000	1.0000	1.0000	0.9825	0.5919	0.1000	0.5919	0.9825	1.0000	1.0000	1.0000	1.0000
126.	1.0000	1.0000	1.0000	1.0000	0.9947	0.6757	0.1000	0.6757	0.9947	1.0000	1.0000	1.0000	1.0000
144.	1.0000	1.0000	1.0000	1.0000	0.9987	0.7543	0.1000	0.7543	0.9987	1.0000	1.0000	1.0000	1.0000
162.	1.0000	1.0000	1.0000	1.0000	0.9998	0.8248	0.1000	0.8248	0.9998	1.0000	1.0000	1.0000	1.0000
180.	1.0000	1.0000	1.0000	1.0000	1.0000	0.8846	0.1000	0.8846	1.0000	1.0000	1.0000	1.0000	1.0000
198.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9317	0.1000	0.9317	1.0000	1.0000	1.0000	1.0000	1.0000
216.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9651	0.1000	0.9651	1.0000	1.0000	1.0000	1.0000	1.0000
234.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9855	0.1000	0.9855	1.0000	1.0000	1.0000	1.0000	1.0000
252.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9956	0.1000	0.9956	1.0000	1.0000	1.0000	1.0000	1.0000
270.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9992	0.1000	0.9992	1.0000	1.0000	1.0000	1.0000	1.0000
288.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.1000	0.9999	1.0000	1.0000	1.0000	1.0000	1.0000
306.	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.1000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
324.	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.1000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
342.	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.1000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
360.	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.1000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

TABLE A.15 ELEMENTARY SCHOOL

THE POWER OF THE TEST OF THE HYPOTHESIS THAT $\mu_X = \mu_0$ WHEN THE SIGNIFICANCE LEVEL IS 0.05

N	(MX - M0)												
	-15.00	-12.50	-10.00	-7.50	-5.00	-2.50	0.00	2.50	5.00	7.50	10.00	12.50	15.00
18.	0.9777	0.9110	0.7535	0.5097	0.2625	0.1014	0.0500	0.1014	0.2625	0.5097	0.7535	0.9110	0.9777
36.	0.9999	0.9978	0.9700	0.8214	0.4842	0.1604	0.0500	0.1604	0.4842	0.8214	0.9700	0.9978	0.9999
54.	1.0000	1.0000	0.9980	0.9522	0.6765	0.2271	0.0500	0.2271	0.6765	0.9522	0.9980	1.0000	1.0000
72.	1.0000	1.0000	0.9999	0.9907	0.8198	0.3009	0.0500	0.3009	0.8198	0.9907	0.9999	1.0000	1.0000
90.	1.0000	1.0000	1.0000	0.9987	0.9123	0.3813	0.0500	0.3813	0.9123	0.9987	1.0000	1.0000	1.0000
108.	1.0000	1.0000	1.0000	0.9999	0.9636	0.4670	0.0500	0.4670	0.9636	0.9999	1.0000	1.0000	1.0000
126.	1.0000	1.0000	1.0000	1.0000	0.9875	0.5559	0.0500	0.5559	0.9875	1.0000	1.0000	1.0000	1.0000
144.	1.0000	1.0000	1.0000	1.0000	0.9966	0.6454	0.0500	0.6454	0.9966	1.0000	1.0000	1.0000	1.0000
162.	1.0000	1.0000	1.0000	1.0000	0.9993	0.7320	0.0500	0.7320	0.9993	1.0000	1.0000	1.0000	1.0000
180.	1.0000	1.0000	1.0000	1.0000	0.9999	0.8115	0.0500	0.8115	0.9999	1.0000	1.0000	1.0000	1.0000
198.	1.0000	1.0000	1.0000	1.0000	1.0000	0.8797	0.0500	0.8797	1.0000	1.0000	1.0000	1.0000	1.0000
216.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9329	0.0500	0.9329	1.0000	1.0000	1.0000	1.0000	1.0000
234.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9691	0.0500	0.9691	1.0000	1.0000	1.0000	1.0000	1.0000
252.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9893	0.0500	0.9893	1.0000	1.0000	1.0000	1.0000	1.0000
270.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9977	0.0500	0.9977	1.0000	1.0000	1.0000	1.0000	1.0000
288.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9998	0.0500	0.9998	1.0000	1.0000	1.0000	1.0000	1.0000
306.	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0500	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
324.	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0500	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
342.	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0500	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
360.	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0500	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

TABLE A.16 SECONDARY SCHOOL

THE POWER OF THE TEST OF THE HYPOTHESIS THAT $\mu_X = \mu_0$ WHEN THE SIGNIFICANCE LEVEL IS 0.20

N	(MX - μ_0)												
	-15.00	-12.50	-10.00	-7.50	-5.00	-2.50	0.00	2.50	5.00	7.50	10.00	12.50	15.00
25.	0.9160	0.8254	0.6897	0.5238	0.3614	0.2431	0.1998	0.2431	0.3614	0.5238	0.6897	0.8254	0.9160
50.	0.9949	0.9729	0.9003	0.7402	0.5054	0.2881	0.1998	0.2881	0.5054	0.7402	0.9003	0.9729	0.9949
75.	0.9998	0.9969	0.9735	0.8709	0.6298	0.3348	0.1998	0.3348	0.6298	0.8709	0.9735	0.9969	0.9998
100.	1.0000	0.9997	0.9942	0.9421	0.7335	0.3833	0.1998	0.3833	0.7335	0.9421	0.9942	0.9997	1.0000
125.	1.0000	1.0000	0.9990	0.9769	0.8166	0.4334	0.1998	0.4334	0.8166	0.9769	0.9990	1.0000	1.0000
150.	1.0000	1.0000	0.9999	0.9919	0.8803	0.4849	0.1998	0.4849	0.8803	0.9919	0.9999	1.0000	1.0000
175.	1.0000	1.0000	1.0000	0.9976	0.9266	0.5376	0.1998	0.5376	0.9266	0.9976	1.0000	1.0000	1.0000
200.	1.0000	1.0000	1.0000	0.9994	0.9582	0.5913	0.1998	0.5913	0.9582	0.9994	1.0000	1.0000	1.0000
225.	1.0000	1.0000	1.0000	0.9999	0.9782	0.6454	0.1998	0.6454	0.9782	0.9999	1.0000	1.0000	1.0000
250.	1.0000	1.0000	1.0000	1.0000	0.9899	0.6993	0.1998	0.6993	0.9899	1.0000	1.0000	1.0000	1.0000
275.	1.0000	1.0000	1.0000	1.0000	0.9959	0.7522	0.1998	0.7522	0.9959	1.0000	1.0000	1.0000	1.0000
300.	1.0000	1.0000	1.0000	1.0000	0.9986	0.8031	0.1998	0.8031	0.9986	1.0000	1.0000	1.0000	1.0000
325.	1.0000	1.0000	1.0000	1.0000	0.9996	0.8507	0.1998	0.8507	0.9996	1.0000	1.0000	1.0000	1.0000
350.	1.0000	1.0000	1.0000	1.0000	0.9999	0.8936	0.1998	0.8936	0.9999	1.0000	1.0000	1.0000	1.0000
375.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9304	0.1998	0.9304	1.0000	1.0000	1.0000	1.0000	1.0000
400.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9596	0.1998	0.9596	1.0000	1.0000	1.0000	1.0000	1.0000
425.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9803	0.1998	0.9803	1.0000	1.0000	1.0000	1.0000	1.0000
450.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9926	0.1998	0.9926	1.0000	1.0000	1.0000	1.0000	1.0000
475.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9982	0.1998	0.9982	1.0000	1.0000	1.0000	1.0000	1.0000
500.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9998	0.1998	0.9998	1.0000	1.0000	1.0000	1.0000	1.0000

TABLE A.17 SECONDARY SCHOOL

THE POWER OF THE TEST OF THE HYPOTHESIS THAT $\mu_X = \mu_0$ WHEN THE SIGNIFICANCE LEVEL IS 0.10

N	(MX - μ_0)												
	-15.00	-12.50	-10.00	-7.50	-5.00	-2.50	0.00	2.50	5.00	7.50	10.00	12.50	15.00
25.	0.8451	0.7164	0.5515	0.3780	0.2299	0.1331	0.1000	0.1331	0.2299	0.3780	0.5515	0.7164	0.8451
50.	0.9862	0.9408	0.8213	0.6100	0.3602	0.1689	0.1000	0.1689	0.3602	0.6100	0.8213	0.9408	0.9862
75.	0.9993	0.9912	0.9419	0.7785	0.4859	0.2073	0.1000	0.2073	0.4859	0.7785	0.9419	0.9912	0.9993
100.	1.0000	0.9991	0.9847	0.8868	0.6020	0.2487	0.1000	0.2487	0.6020	0.8868	0.9847	0.9991	1.0000
125.	1.0000	0.9999	0.9968	0.9485	0.7049	0.2931	0.1000	0.2931	0.7049	0.9485	0.9968	0.9999	1.0000
150.	1.0000	1.0000	0.9995	0.9794	0.7919	0.3407	0.1000	0.3407	0.7919	0.9794	0.9995	1.0000	1.0000
175.	1.0000	1.0000	0.9999	0.9929	0.8616	0.3915	0.1000	0.3915	0.8616	0.9929	0.9999	1.0000	1.0000
200.	1.0000	1.0000	1.0000	0.9980	0.9142	0.4456	0.1000	0.4456	0.9142	0.9980	1.0000	1.0000	1.0000
225.	1.0000	1.0000	1.0000	0.9995	0.9511	0.5026	0.1000	0.5026	0.9511	0.9995	1.0000	1.0000	1.0000
250.	1.0000	1.0000	1.0000	0.9999	0.9749	0.5624	0.1000	0.5624	0.9749	0.9999	1.0000	1.0000	1.0000
275.	1.0000	1.0000	1.0000	1.0000	0.9886	0.6243	0.1000	0.6243	0.9886	1.0000	1.0000	1.0000	1.0000
300.	1.0000	1.0000	1.0000	1.0000	0.9956	0.6875	0.1000	0.6875	0.9956	1.0000	1.0000	1.0000	1.0000
325.	1.0000	1.0000	1.0000	1.0000	0.9986	0.7504	0.1000	0.7504	0.9986	1.0000	1.0000	1.0000	1.0000
350.	1.0000	1.0000	1.0000	1.0000	0.9997	0.8113	0.1000	0.8113	0.9997	1.0000	1.0000	1.0000	1.0000
375.	1.0000	1.0000	1.0000	1.0000	0.9999	0.8677	0.1000	0.8677	0.9999	1.0000	1.0000	1.0000	1.0000
400.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9166	0.1000	0.9166	1.0000	1.0000	1.0000	1.0000	1.0000
425.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9551	0.1000	0.9551	1.0000	1.0000	1.0000	1.0000	1.0000
450.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9810	0.1000	0.9810	1.0000	1.0000	1.0000	1.0000	1.0000
475.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9947	0.1000	0.9947	1.0000	1.0000	1.0000	1.0000	1.0000
500.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9993	0.1000	0.9993	1.0000	1.0000	1.0000	1.0000	1.0000

TABLE A.18 SECONDARY SCHOOL

THE POWER OF THE TEST OF THE HYPOTHESIS THAT $\mu_X = \mu_0$ WHEN THE SIGNIFICANCE LEVEL IS 0.05

N	(MX - μ_0)												
	-15.00	-12.50	-10.00	-7.50	-5.00	-2.50	0.00	2.50	5.00	7.50	10.00	12.50	15.00
25.	0.7582	0.6015	0.4262	0.2649	0.1438	0.0728	0.0500	0.0728	0.1438	0.2649	0.4262	0.6015	0.7582
50.	0.9705	0.8937	0.7275	0.4856	0.2497	0.0983	0.0500	0.0983	0.2497	0.4856	0.7275	0.8937	0.9705
75.	0.9979	0.9803	0.8955	0.6744	0.3626	0.1267	0.0500	0.1267	0.3626	0.6744	0.8955	0.9803	0.9979
100.	0.9999	0.9974	0.9676	0.8145	0.4774	0.1584	0.0500	0.1584	0.4774	0.8145	0.9676	0.9974	0.9999
125.	1.0000	0.9998	0.9920	0.9058	0.5884	0.1938	0.0500	0.1938	0.5884	0.9058	0.9920	0.9998	1.0000
150.	1.0000	1.0000	0.9984	0.9579	0.6908	0.2331	0.0500	0.2331	0.6908	0.9579	0.9984	1.0000	1.0000
175.	1.0000	1.0000	0.9998	0.9838	0.7801	0.2768	0.0500	0.2768	0.7801	0.9838	0.9998	1.0000	1.0000
200.	1.0000	1.0000	1.0000	0.9947	0.8536	0.3252	0.0500	0.3252	0.8536	0.9947	1.0000	1.0000	1.0000
225.	1.0000	1.0000	1.0000	0.9986	0.9100	0.3786	0.0500	0.3786	0.9100	0.9986	1.0000	1.0000	1.0000
250.	1.0000	1.0000	1.0000	0.9997	0.9498	0.4371	0.0500	0.4371	0.9498	0.9997	1.0000	1.0000	1.0000
275.	1.0000	1.0000	1.0000	1.0000	0.9752	0.5006	0.0500	0.5006	0.9752	1.0000	1.0000	1.0000	1.0000
300.	1.0000	1.0000	1.0000	1.0000	0.9895	0.5689	0.0500	0.5689	0.9895	1.0000	1.0000	1.0000	1.0000
325.	1.0000	1.0000	1.0000	1.0000	0.9963	0.6409	0.0500	0.6409	0.9963	1.0000	1.0000	1.0000	1.0000
350.	1.0000	1.0000	1.0000	1.0000	0.9990	0.7149	0.0500	0.7149	0.9990	1.0000	1.0000	1.0000	1.0000
375.	1.0000	1.0000	1.0000	1.0000	0.9998	0.7883	0.0500	0.7883	0.9998	1.0000	1.0000	1.0000	1.0000
400.	1.0000	1.0000	1.0000	1.0000	1.0000	0.8571	0.0500	0.8571	1.0000	1.0000	1.0000	1.0000	1.0000
425.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9163	0.0500	0.9163	1.0000	1.0000	1.0000	1.0000	1.0000
450.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9608	0.0500	0.9608	1.0000	1.0000	1.0000	1.0000	1.0000
475.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9874	0.0500	0.9874	1.0000	1.0000	1.0000	1.0000	1.0000
500.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9980	0.0500	0.9980	1.0000	1.0000	1.0000	1.0000	1.0000

TABLE A.19 CLINIC

THE POWER OF THE TEST OF THE HYPOTHESIS THAT $\mu_X = \mu_0$ WHEN THE SIGNIFICANCE LEVEL IS 0.20

N	(MX - μ_0)												
	-15.00	-12.50	-10.00	-7.50	-5.00	-2.50	0.00	2.50	5.00	7.50	10.00	12.50	15.00
25.	0.7239	0.6123	0.4926	0.3783	0.2838	0.2215	0.1998	0.2215	0.2838	0.3783	0.4926	0.6123	0.7239
50.	0.9175	0.8274	0.6919	0.5256	0.3625	0.2434	0.1998	0.2434	0.3625	0.5256	0.6919	0.8274	0.9175
75.	0.9780	0.9284	0.8201	0.6444	0.4358	0.2654	0.1998	0.2654	0.4358	0.6444	0.8201	0.9284	0.9780
100.	0.9947	0.9722	0.8988	0.7381	0.5037	0.2875	0.1998	0.2875	0.5037	0.7381	0.8988	0.9722	0.9947
125.	0.9988	0.9898	0.9451	0.8105	0.5662	0.3098	0.1998	0.3098	0.5662	0.8105	0.9451	0.9898	0.9988
150.	0.9998	0.9965	0.9712	0.8653	0.6232	0.3321	0.1998	0.3321	0.6232	0.8653	0.9712	0.9965	0.9998
175.	1.0000	0.9988	0.9854	0.9059	0.6749	0.3545	0.1998	0.3545	0.6749	0.9059	0.9854	0.9988	1.0000
200.	1.0000	0.9996	0.9929	0.9355	0.7215	0.3771	0.1998	0.3771	0.7215	0.9355	0.9929	0.9996	1.0000
225.	1.0000	0.9999	0.9967	0.9567	0.7631	0.3996	0.1998	0.3996	0.7631	0.9567	0.9967	0.9999	1.0000
250.	1.0000	1.0000	0.9985	0.9714	0.8001	0.4223	0.1998	0.4223	0.8001	0.9714	0.9985	1.0000	1.0000
275.	1.0000	1.0000	0.9993	0.9815	0.8327	0.4449	0.1998	0.4449	0.8327	0.9815	0.9993	1.0000	1.0000
300.	1.0000	1.0000	0.9997	0.9883	0.8611	0.4675	0.1998	0.4675	0.8611	0.9883	0.9997	1.0000	1.0000
325.	1.0000	1.0000	0.9999	0.9928	0.8857	0.4901	0.1998	0.4901	0.8857	0.9928	0.9999	1.0000	1.0000
350.	1.0000	1.0000	1.0000	0.9956	0.9068	0.5127	0.1998	0.5127	0.9068	0.9956	1.0000	1.0000	1.0000
375.	1.0000	1.0000	1.0000	0.9974	0.9248	0.5351	0.1998	0.5351	0.9248	0.9974	1.0000	1.0000	1.0000
400.	1.0000	1.0000	1.0000	0.9985	0.9399	0.5575	0.1998	0.5575	0.9399	0.9985	1.0000	1.0000	1.0000
425.	1.0000	1.0000	1.0000	0.9992	0.9525	0.5797	0.1998	0.5797	0.9525	0.9992	1.0000	1.0000	1.0000
450.	1.0000	1.0000	1.0000	0.9995	0.9629	0.6017	0.1998	0.6017	0.9629	0.9995	1.0000	1.0000	1.0000
475.	1.0000	1.0000	1.0000	0.9998	0.9714	0.6236	0.1998	0.6236	0.9714	0.9998	1.0000	1.0000	1.0000
500.	1.0000	1.0000	1.0000	0.9999	0.9782	0.6452	0.1998	0.6452	0.9782	0.9999	1.0000	1.0000	1.0000

TABLE A.20 CLINIC

THE POWER OF THE TEST OF THE HYPOTHESIS THAT $\mu_X = \mu_0$ WHEN THE SIGNIFICANCE LEVEL IS 0.10

N	(MX - μ_0)												
	-15.00	-12.50	-10.00	-7.50	-5.00	-2.50	0.00	2.50	5.00	7.50	10.00	12.50	15.00
25.	0.5908	0.4674	0.3481	0.2444	0.1654	0.1165	0.1000	0.1165	0.1654	0.2444	0.3481	0.4674	0.5908
50.	0.8474	0.7191	0.5540	0.3797	0.2308	0.1334	0.1000	0.1334	0.2308	0.3797	0.5540	0.7191	0.8474
75.	0.9506	0.8646	0.7095	0.5015	0.2954	0.1507	0.1000	0.1507	0.2954	0.5015	0.7095	0.8646	0.9506
100.	0.9857	0.9395	0.8190	0.6075	0.3586	0.1684	0.1000	0.1684	0.3586	0.6075	0.8190	0.9395	0.9857
125.	0.9963	0.9748	0.8917	0.6970	0.4199	0.1865	0.1000	0.1865	0.4199	0.6970	0.8917	0.9748	0.9963
150.	0.9991	0.9901	0.9377	0.7706	0.4789	0.2051	0.1000	0.2051	0.4789	0.7706	0.9377	0.9901	0.9991
175.	0.9998	0.9964	0.9655	0.8297	0.5350	0.2240	0.1000	0.2240	0.5350	0.8297	0.9655	0.9964	0.9998
200.	1.0000	0.9987	0.9816	0.8760	0.5880	0.2433	0.1000	0.2433	0.5880	0.8760	0.9816	0.9987	1.0000
225.	1.0000	0.9996	0.9906	0.9115	0.6376	0.2630	0.1000	0.2630	0.6376	0.9115	0.9906	0.9996	1.0000
250.	1.0000	0.9999	0.9953	0.9381	0.6837	0.2832	0.1000	0.2832	0.6837	0.9381	0.9953	0.9999	1.0000
275.	1.0000	1.0000	0.9978	0.9576	0.7261	0.3036	0.1000	0.3036	0.7261	0.9576	0.9978	1.0000	1.0000
300.	1.0000	1.0000	0.9990	0.9716	0.7647	0.3245	0.1000	0.3245	0.7647	0.9716	0.9990	1.0000	1.0000
325.	1.0000	1.0000	0.9996	0.9814	0.7997	0.3457	0.1000	0.3457	0.7997	0.9814	0.9996	1.0000	1.0000
350.	1.0000	1.0000	0.9998	0.9881	0.8310	0.3672	0.1000	0.3672	0.8310	0.9881	0.9998	1.0000	1.0000
375.	1.0000	1.0000	0.9999	0.9925	0.8587	0.3891	0.1000	0.3891	0.8587	0.9925	0.9999	1.0000	1.0000
400.	1.0000	1.0000	1.0000	0.9955	0.8831	0.4112	0.1000	0.4112	0.8831	0.9955	1.0000	1.0000	1.0000
425.	1.0000	1.0000	1.0000	0.9973	0.9043	0.4337	0.1000	0.4337	0.9043	0.9973	1.0000	1.0000	1.0000
450.	1.0000	1.0000	1.0000	0.9984	0.9225	0.4564	0.1000	0.4564	0.9225	0.9984	1.0000	1.0000	1.0000
475.	1.0000	1.0000	1.0000	0.9991	0.9380	0.4793	0.1000	0.4793	0.9380	0.9991	1.0000	1.0000	1.0000
500.	1.0000	1.0000	1.0000	0.9995	0.9510	0.5024	0.1000	0.5024	0.9510	0.9995	1.0000	1.0000	1.0000

TABLE A.21 CLINIC

THE POWER OF THE TEST OF THE HYPOTHESIS THAT $\mu_X = \mu_0$ WHEN THE SIGNIFICANCE LEVEL IS 0.05

N	(MX - M0)												
	-15.00	-12.50	-10.00	-7.50	-5.00	-2.50	0.00	2.50	5.00	7.50	10.00	12.50	15.00
25.	0.4658	0.3454	0.2393	0.1550	0.0958	0.0612	0.0500	0.0612	0.0958	0.1550	0.2393	0.3454	0.4658
50.	0.7612	0.6045	0.4287	0.2665	0.1445	0.0730	0.0500	0.0730	0.1445	0.2665	0.4287	0.6045	0.7612
75.	0.9091	0.7841	0.5936	0.3775	0.1956	0.0852	0.0500	0.0852	0.1956	0.3775	0.5936	0.7841	0.9091
100.	0.9696	0.8917	0.7245	0.4830	0.2483	0.0979	0.0500	0.0979	0.2483	0.4830	0.7245	0.8917	0.9696
125.	0.9909	0.9496	0.8214	0.5795	0.3020	0.1112	0.0500	0.1112	0.3020	0.5795	0.8214	0.9496	0.9909
150.	0.9975	0.9781	0.8890	0.6649	0.3561	0.1250	0.0500	0.1250	0.3561	0.6649	0.8890	0.9781	0.9975
175.	0.9994	0.9911	0.9337	0.7382	0.4099	0.1393	0.0500	0.1393	0.4099	0.7382	0.9337	0.9911	0.9994
200.	0.9999	0.9966	0.9619	0.7996	0.4630	0.1542	0.0500	0.1542	0.4630	0.7996	0.9619	0.9966	0.9999
225.	1.0000	0.9988	0.9790	0.8497	0.5147	0.1697	0.0500	0.1697	0.5147	0.8497	0.9790	0.9988	1.0000
250.	1.0000	0.9996	0.9889	0.8896	0.5647	0.1857	0.0500	0.1857	0.5647	0.8896	0.9889	0.9996	1.0000
275.	1.0000	0.9999	0.9943	0.9206	0.6125	0.2023	0.0500	0.2023	0.6125	0.9206	0.9943	0.9999	1.0000
300.	1.0000	1.0000	0.9972	0.9441	0.6578	0.2195	0.0500	0.2195	0.6578	0.9441	0.9972	1.0000	1.0000
325.	1.0000	1.0000	0.9987	0.9615	0.7004	0.2373	0.0500	0.2373	0.7004	0.9615	0.9987	1.0000	1.0000
350.	1.0000	1.0000	0.9994	0.9741	0.7399	0.2557	0.0500	0.2557	0.7399	0.9741	0.9994	1.0000	1.0000
375.	1.0000	1.0000	0.9997	0.9830	0.7763	0.2746	0.0500	0.2746	0.7763	0.9830	0.9997	1.0000	1.0000
400.	1.0000	1.0000	0.9999	0.9891	0.8094	0.2942	0.0500	0.2942	0.8094	0.9891	0.9999	1.0000	1.0000
425.	1.0000	1.0000	1.0000	0.9932	0.8393	0.3144	0.0500	0.3144	0.8393	0.9932	1.0000	1.0000	1.0000
450.	1.0000	1.0000	1.0000	0.9959	0.8659	0.3351	0.0500	0.3351	0.8659	0.9959	1.0000	1.0000	1.0000
475.	1.0000	1.0000	1.0000	0.9976	0.8894	0.3565	0.0500	0.3565	0.8894	0.9976	1.0000	1.0000	1.0000
500.	1.0000	1.0000	1.0000	0.9986	0.9098	0.3784	0.0500	0.3784	0.9098	0.9986	1.0000	1.0000	1.0000

TABLE A.22 HOSPITAL

THE POWER OF THE TEST OF THE HYPOTHESIS THAT $\mu_X = \mu_0$ WHEN THE SIGNIFICANCE LEVEL IS 0.20

N	(MX - M0)												
	-15.00	-12.50	-10.00	-7.50	-5.00	-2.50	0.00	2.50	5.00	7.50	10.00	12.50	15.00
7.	0.2306	0.2213	0.2136	0.2076	0.2033	0.2007	0.1998	0.2007	0.2033	0.2076	0.2136	0.2213	0.2306
14.	0.2635	0.2445	0.2286	0.2161	0.2071	0.2017	0.1998	0.2017	0.2071	0.2161	0.2286	0.2445	0.2635
21.	0.2987	0.2696	0.2451	0.2256	0.2114	0.2027	0.1998	0.2027	0.2114	0.2256	0.2451	0.2696	0.2987
28.	0.3366	0.2970	0.2632	0.2360	0.2161	0.2039	0.1998	0.2039	0.2161	0.2360	0.2632	0.2970	0.3366
35.	0.3772	0.3269	0.2832	0.2477	0.2214	0.2053	0.1998	0.2053	0.2214	0.2477	0.2832	0.3269	0.3772
42.	0.4209	0.3596	0.3054	0.2607	0.2274	0.2068	0.1998	0.2068	0.2274	0.2607	0.3054	0.3596	0.4209
49.	0.4676	0.3954	0.3302	0.2755	0.2342	0.2086	0.1998	0.2086	0.2342	0.2755	0.3302	0.3954	0.4676
56.	0.5177	0.4348	0.3580	0.2923	0.2421	0.2106	0.1998	0.2106	0.2421	0.2923	0.3580	0.4348	0.5177
63.	0.5712	0.4781	0.3893	0.3116	0.2512	0.2130	0.1998	0.2130	0.2512	0.3116	0.3893	0.4781	0.5712
70.	0.6278	0.5259	0.4249	0.3340	0.2620	0.2158	0.1998	0.2158	0.2620	0.3340	0.4249	0.5259	0.6278
77.	0.6872	0.5784	0.4655	0.3603	0.2748	0.2191	0.1998	0.2191	0.2748	0.3603	0.4655	0.5784	0.6872
84.	0.7485	0.6360	0.5121	0.3914	0.2904	0.2233	0.1998	0.2233	0.2904	0.3914	0.5121	0.6360	0.7485
91.	0.8102	0.6987	0.5659	0.4290	0.3097	0.2285	0.1998	0.2285	0.3097	0.4290	0.5659	0.6987	0.8102
98.	0.8695	0.7655	0.6281	0.4749	0.3341	0.2353	0.1998	0.2353	0.3341	0.4749	0.6281	0.7655	0.8695
105.	0.9225	0.8345	0.6998	0.5322	0.3662	0.2445	0.1998	0.2445	0.3662	0.5322	0.6998	0.8345	0.9225
112.	0.9642	0.9011	0.7808	0.6048	0.4101	0.2575	0.1998	0.2575	0.4101	0.6048	0.7808	0.9011	0.9642
119.	0.9897	0.9568	0.8677	0.6980	0.4733	0.2774	0.1998	0.2774	0.4733	0.6980	0.8677	0.9568	0.9897
126.	0.9990	0.9907	0.9479	0.8157	0.5712	0.3116	0.1998	0.3116	0.5712	0.8157	0.9479	0.9907	0.9990
133.	1.0000	0.9998	0.9944	0.9433	0.7358	0.3845	0.1998	0.3845	0.7358	0.9433	0.9944	0.9998	1.0000
140.	1.0000	1.0000	1.0000	0.9998	0.9755	0.6360	0.1998	0.6360	0.9755	0.9998	1.0000	1.0000	1.0000

TABLE A.23 HOSPITAL

THE POWER OF THE TEST OF THE HYPOTHESIS THAT $\mu_X = \mu_0$ WHEN THE SIGNIFICANCE LEVEL IS 0.10

N	(MX - M0)												
	-15.00	-12.50	-10.00	-7.50	-5.00	-2.50	0.00	2.50	5.00	7.50	10.00	12.50	15.00
7.	0.1234	0.1163	0.1104	0.1058	0.1026	0.1006	0.1000	0.1006	0.1026	0.1058	0.1104	0.1163	0.1234
14.	0.1492	0.1342	0.1219	0.1123	0.1055	0.1013	0.1000	0.1013	0.1055	0.1123	0.1219	0.1342	0.1492
21.	0.1775	0.1541	0.1347	0.1196	0.1087	0.1022	0.1000	0.1022	0.1087	0.1196	0.1347	0.1541	0.1775
28.	0.2088	0.1761	0.1490	0.1276	0.1123	0.1031	0.1000	0.1031	0.1123	0.1276	0.1490	0.1761	0.2088
35.	0.2435	0.2007	0.1650	0.1367	0.1164	0.1041	0.1000	0.1041	0.1164	0.1367	0.1650	0.2007	0.2435
42.	0.2819	0.2283	0.1830	0.1470	0.1210	0.1052	0.1000	0.1052	0.1210	0.1470	0.1830	0.2283	0.2819
49.	0.3246	0.2593	0.2035	0.1588	0.1263	0.1066	0.1000	0.1066	0.1263	0.1588	0.2035	0.2593	0.3246
56.	0.3721	0.2944	0.2269	0.1723	0.1324	0.1081	0.1000	0.1081	0.1324	0.1723	0.2269	0.2944	0.3721
63.	0.4250	0.3344	0.2540	0.1881	0.1395	0.1099	0.1000	0.1099	0.1395	0.1881	0.2540	0.3344	0.4250
70.	0.4838	0.3800	0.2855	0.2067	0.1480	0.1121	0.1000	0.1121	0.1480	0.2067	0.2855	0.3800	0.4838
77.	0.5488	0.4324	0.3226	0.2289	0.1582	0.1146	0.1000	0.1146	0.1582	0.2289	0.3226	0.4324	0.5488
84.	0.6200	0.4926	0.3667	0.2558	0.1707	0.1178	0.1000	0.1178	0.1707	0.2558	0.3667	0.4926	0.6200
91.	0.6966	0.5617	0.4197	0.2892	0.1865	0.1219	0.1000	0.1219	0.1865	0.2892	0.4197	0.5617	0.6966
98.	0.7765	0.6406	0.4841	0.3314	0.2068	0.1271	0.1000	0.1271	0.2068	0.3314	0.4841	0.6406	0.7765
105.	0.8552	0.7286	0.5630	0.3862	0.2340	0.1342	0.1000	0.1342	0.2340	0.3862	0.5630	0.7286	0.8552
112.	0.9248	0.8224	0.6594	0.4595	0.2723	0.1444	0.1000	0.1444	0.2723	0.4595	0.6594	0.8224	0.9248
119.	0.9744	0.9117	0.7740	0.5610	0.3299	0.1603	0.1000	0.1603	0.3299	0.5610	0.7740	0.9117	0.9744
126.	0.9967	0.9766	0.8965	0.7038	0.4250	0.1881	0.1000	0.1881	0.4250	0.7038	0.8965	0.9766	0.9967
133.	1.0000	0.9991	0.9852	0.8888	0.6048	0.2498	0.1000	0.2498	0.6048	0.8888	0.9852	0.9991	1.0000
140.	1.0000	1.0000	1.0000	0.9994	0.9458	0.4926	0.1000	0.4926	0.9458	0.9994	1.0000	1.0000	1.0000

TABLE A.24 HOSPITAL

THE POWER OF THE TEST OF THE HYPOTHESIS THAT $\mu_X = \mu_0$ WHEN THE SIGNIFICANCE LEVEL IS 0.05

	(MX - M0)												
N	-15.00	-12.50	-10.00	-7.50	-5.00	-2.50	0.00	2.50	5.00	7.50	10.00	12.50	15.00
7.	0.0660	0.0611	0.0571	0.0540	0.0518	0.0504	0.0500	0.0504	0.0518	0.0540	0.0571	0.0611	0.0660
14.	0.0841	0.0736	0.0650	0.0584	0.0537	0.0509	0.0500	0.0509	0.0537	0.0584	0.0650	0.0736	0.0841
21.	0.1046	0.0876	0.0739	0.0634	0.0559	0.0515	0.0500	0.0515	0.0559	0.0634	0.0739	0.0876	0.1046
28.	0.1278	0.1036	0.0840	0.0690	0.0584	0.0521	0.0500	0.0521	0.0584	0.0690	0.0840	0.1036	0.1278
35.	0.1543	0.1217	0.0954	0.0753	0.0612	0.0528	0.0500	0.0528	0.0612	0.0753	0.0954	0.1217	0.1543
42.	0.1847	0.1426	0.1086	0.0826	0.0643	0.0536	0.0500	0.0536	0.0643	0.0826	0.1086	0.1426	0.1847
49.	0.2196	0.1667	0.1238	0.0910	0.0680	0.0545	0.0500	0.0545	0.0680	0.0910	0.1238	0.1667	0.2196
56.	0.2599	0.1948	0.1416	0.1008	0.0723	0.0555	0.0500	0.0555	0.0723	0.1008	0.1416	0.1948	0.2599
63.	0.3066	0.2277	0.1625	0.1123	0.0773	0.0567	0.0500	0.0567	0.0773	0.1123	0.1625	0.2277	0.3066
70.	0.3607	0.2667	0.1876	0.1262	0.0833	0.0582	0.0500	0.0582	0.0833	0.1262	0.1876	0.2667	0.3607
77.	0.4235	0.3132	0.2179	0.1431	0.0906	0.0600	0.0500	0.0600	0.0906	0.1431	0.2179	0.3132	0.4235
84.	0.4961	0.3690	0.2552	0.1640	0.0996	0.0622	0.0500	0.0622	0.0996	0.1640	0.2552	0.3690	0.4961
91.	0.5791	0.4364	0.3018	0.1905	0.1111	0.0650	0.0500	0.0650	0.1111	0.1905	0.3018	0.4364	0.5791
98.	0.6720	0.5178	0.3610	0.2252	0.1263	0.0686	0.0500	0.0686	0.1263	0.2252	0.3610	0.5178	0.6720
105.	0.7716	0.6154	0.4376	0.2721	0.1470	0.0736	0.0500	0.0736	0.1470	0.2721	0.4376	0.6154	0.7716
112.	0.8693	0.7289	0.5381	0.3381	0.1770	0.0808	0.0500	0.0808	0.1770	0.3381	0.5381	0.7289	0.8693
119.	0.9490	0.8500	0.6690	0.4357	0.2240	0.0920	0.0500	0.0920	0.2240	0.4357	0.6690	0.8500	0.9490
126.	0.9918	0.9529	0.8282	0.5871	0.3066	0.1123	0.0500	0.1123	0.3066	0.5871	0.8282	0.9529	0.9918
133.	0.9999	0.9976	0.9686	0.8173	0.4802	0.1593	0.0500	0.1593	0.4802	0.8173	0.9686	0.9976	0.9999
140.	1.0000	1.0000	1.0000	0.9982	0.9015	0.3690	0.0500	0.3690	0.9015	0.9982	1.0000	1.0000	1.0000

TABLE A.25 NURSING HOME

THE POWER OF THE TEST OF THE HYPOTHESIS THAT $\mu_X = \mu_0$ WHEN THE SIGNIFICANCE LEVEL IS 0.20

N	(MX - μ_0)												
	-15.00	-12.50	-10.00	-7.50	-5.00	-2.50	0.00	2.50	5.00	7.50	10.00	12.50	15.00
1.	0.2335	0.2233	0.2149	0.2084	0.2036	0.2008	0.1998	0.2008	0.2036	0.2084	0.2149	0.2233	0.2335
2.	0.2697	0.2489	0.2315	0.2178	0.2079	0.2019	0.1998	0.2019	0.2079	0.2178	0.2315	0.2489	0.2697
3.	0.3088	0.2769	0.2499	0.2283	0.2126	0.2030	0.1998	0.2030	0.2126	0.2283	0.2499	0.2769	0.3088
4.	0.3509	0.3075	0.2702	0.2401	0.2179	0.2044	0.1998	0.2044	0.2179	0.2401	0.2702	0.3075	0.3509
5.	0.3964	0.3412	0.2929	0.2533	0.2240	0.2059	0.1998	0.2059	0.2240	0.2533	0.2929	0.3412	0.3964
6.	0.4455	0.3783	0.3183	0.2684	0.2309	0.2077	0.1998	0.2077	0.2309	0.2684	0.3183	0.3783	0.4455
7.	0.4984	0.4194	0.3471	0.2857	0.2390	0.2098	0.1998	0.2098	0.2390	0.2857	0.3471	0.4194	0.4984
8.	0.5551	0.4649	0.3797	0.3057	0.2484	0.2122	0.1998	0.2122	0.2484	0.3057	0.3797	0.4649	0.5551
9.	0.6156	0.5154	0.4170	0.3290	0.2596	0.2151	0.1998	0.2151	0.2596	0.3290	0.4170	0.5154	0.6156
10.	0.6795	0.5714	0.4600	0.3567	0.2730	0.2187	0.1998	0.2187	0.2730	0.3567	0.4600	0.5714	0.6795
11.	0.7457	0.6332	0.5098	0.3899	0.2896	0.2231	0.1998	0.2231	0.2896	0.3899	0.5098	0.6332	0.7457
12.	0.8123	0.7009	0.5679	0.4304	0.3104	0.2288	0.1998	0.2288	0.3104	0.4304	0.5679	0.7009	0.8123
13.	0.8760	0.7734	0.6358	0.4808	0.3374	0.2362	0.1998	0.2362	0.3374	0.4808	0.6358	0.7734	0.8760
14.	0.9316	0.8478	0.7147	0.5448	0.3736	0.2466	0.1998	0.2466	0.3736	0.5448	0.7147	0.8478	0.9316
15.	0.9728	0.9177	0.8040	0.6277	0.4248	0.2620	0.1998	0.2620	0.4248	0.6277	0.8040	0.9177	0.9728
16.	0.9945	0.9715	0.8974	0.7361	0.5022	0.2870	0.1998	0.2870	0.5022	0.7361	0.8974	0.9715	0.9945
17.	0.9998	0.9969	0.9735	0.8711	0.6300	0.3349	0.1998	0.3349	0.6300	0.8711	0.9735	0.9969	0.9998
18.	1.0000	1.0000	0.9997	0.9871	0.8553	0.4627	0.1998	0.4627	0.8553	0.9871	0.9997	1.0000	1.0000

TABLE A.26 NURSING HOME

THE POWER OF THE TEST OF THE HYPOTHESIS THAT $\mu_X = \mu_0$ WHEN THE SIGNIFICANCE LEVEL IS 0.10

N	(MX - M0)												
	-15.00	-12.50	-10.00	-7.50	-5.00	-2.50	0.00	2.50	5.00	7.50	10.00	12.50	15.00
1.	0.1257	0.1179	0.1114	0.1064	0.1028	0.1007	0.1000	0.1007	0.1028	0.1064	0.1114	0.1179	0.1257
2.	0.1541	0.1377	0.1242	0.1136	0.1060	0.1015	0.1000	0.1015	0.1060	0.1136	0.1242	0.1377	0.1541
3.	0.1857	0.1599	0.1385	0.1217	0.1096	0.1024	0.1000	0.1024	0.1096	0.1217	0.1385	0.1599	0.1857
4.	0.2209	0.1847	0.1545	0.1308	0.1137	0.1034	0.1000	0.1034	0.1137	0.1308	0.1545	0.1847	0.2209
5.	0.2602	0.2127	0.1728	0.1412	0.1184	0.1046	0.1000	0.1046	0.1184	0.1412	0.1728	0.2127	0.2602
6.	0.3042	0.2444	0.1936	0.1531	0.1237	0.1059	0.1000	0.1059	0.1237	0.1531	0.1936	0.2444	0.3042
7.	0.3535	0.2806	0.2177	0.1669	0.1299	0.1075	0.1000	0.1075	0.1299	0.1669	0.2177	0.2806	0.3535
8.	0.4089	0.3221	0.2456	0.1832	0.1373	0.1093	0.1000	0.1093	0.1373	0.1832	0.2456	0.3221	0.4089
9.	0.4709	0.3699	0.2784	0.2025	0.1461	0.1116	0.1000	0.1116	0.1461	0.2025	0.2784	0.3699	0.4709
10.	0.5401	0.4252	0.3175	0.2258	0.1568	0.1143	0.1000	0.1143	0.1568	0.2258	0.3175	0.4252	0.5401
11.	0.6165	0.4896	0.3644	0.2544	0.1701	0.1177	0.1000	0.1177	0.1701	0.2544	0.3644	0.4896	0.6165
12.	0.6993	0.5643	0.4217	0.2905	0.1871	0.1220	0.1000	0.1220	0.1871	0.2905	0.4217	0.5643	0.6993
13.	0.7857	0.6502	0.4923	0.3369	0.2095	0.1278	0.1000	0.1278	0.2095	0.3369	0.4923	0.6502	0.7857
14.	0.8697	0.7464	0.5801	0.3986	0.2403	0.1359	0.1000	0.1359	0.2403	0.3986	0.5801	0.7464	0.8697
15.	0.9407	0.8476	0.6887	0.4837	0.2855	0.1480	0.1000	0.1480	0.2855	0.4837	0.6887	0.8476	0.9407
16.	0.9853	0.9383	0.8169	0.6052	0.3572	0.1680	0.1000	0.1680	0.3572	0.6052	0.8169	0.9383	0.9853
17.	0.9993	0.9913	0.9421	0.7788	0.4861	0.2074	0.1000	0.2074	0.4861	0.7788	0.9421	0.9913	0.9993
18.	1.0000	1.0000	0.9988	0.9690	0.7568	0.3200	0.1000	0.3200	0.7568	0.9690	0.9988	1.0000	1.0000

TABLE A.27 NURSING HOME

THE POWER OF THE TEST OF THE HYPOTHESIS THAT $\mu_X = \mu_0$ WHEN THE SIGNIFICANCE LEVEL IS 0.05

N	(MX - μ_0)												
	-15.00	-12.50	-10.00	-7.50	-5.00	-2.50	0.00	2.50	5.00	7.50	10.00	12.50	15.00
1.	0.0676	0.0622	0.0578	0.0544	0.0519	0.0505	0.0500	0.0505	0.0519	0.0544	0.0578	0.0622	0.0676
2.	0.0877	0.0760	0.0666	0.0593	0.0541	0.0510	0.0500	0.0510	0.0541	0.0593	0.0666	0.0760	0.0877
3.	0.1106	0.0918	0.0765	0.0648	0.0566	0.0516	0.0500	0.0516	0.0566	0.0648	0.0765	0.0918	0.1106
4.	0.1370	0.1098	0.0879	0.0712	0.0593	0.0523	0.0500	0.0523	0.0593	0.0712	0.0879	0.1098	0.1370
5.	0.1674	0.1307	0.1011	0.0785	0.0625	0.0531	0.0500	0.0531	0.0625	0.0785	0.1011	0.1307	0.1674
6.	0.2027	0.1551	0.1164	0.0869	0.0662	0.0540	0.0500	0.0540	0.0662	0.0869	0.1164	0.1551	0.2027
7.	0.2439	0.1836	0.1345	0.0969	0.0706	0.0551	0.0500	0.0551	0.0706	0.0969	0.1345	0.1836	0.2439
8.	0.2921	0.2175	0.1560	0.1087	0.0757	0.0564	0.0500	0.0564	0.0757	0.1087	0.1560	0.2175	0.2921
9.	0.3486	0.2579	0.1819	0.1231	0.0819	0.0579	0.0500	0.0579	0.0819	0.1231	0.1819	0.2579	0.3486
10.	0.4149	0.3068	0.2137	0.1407	0.0896	0.0597	0.0500	0.0597	0.0896	0.1407	0.2137	0.3068	0.4149
11.	0.4925	0.3662	0.2533	0.1629	0.0992	0.0621	0.0500	0.0621	0.0992	0.1629	0.2533	0.3662	0.4925
12.	0.5821	0.4389	0.3036	0.1916	0.1116	0.0651	0.0500	0.0651	0.1116	0.1916	0.3036	0.4389	0.5821
13.	0.6831	0.5281	0.3687	0.2299	0.1283	0.0691	0.0500	0.0691	0.1283	0.2299	0.3687	0.5281	0.6831
14.	0.7910	0.6362	0.4549	0.2830	0.1519	0.0747	0.0500	0.0747	0.1519	0.2830	0.4549	0.6362	0.7910
15.	0.8935	0.7615	0.5702	0.3606	0.1876	0.0833	0.0500	0.0833	0.1876	0.3606	0.5702	0.7615	0.8935
16.	0.9687	0.8898	0.7219	0.4807	0.2470	0.0976	0.0500	0.0976	0.2470	0.4807	0.7219	0.8898	0.9687
17.	0.9979	0.9804	0.8957	0.6747	0.3628	0.1268	0.0500	0.1268	0.3628	0.6747	0.8957	0.9804	0.9979
18.	1.0000	1.0000	0.9968	0.9396	0.6484	0.2158	0.0500	0.2158	0.6484	0.9396	0.9968	1.0000	1.0000

TABLE A.28 STORE

THE POWER OF THE TEST OF THE HYPOTHESES THAT $\mu_X = \mu_0$ WHEN THE SIGNIFICANCE LEVEL IS 0.20

N	(MX - μ_0)												
	-15.00	-12.50	-10.00	-7.50	-5.00	-2.50	0.00	2.50	5.00	7.50	10.00	12.50	15.00
25.	0.8728	0.7695	0.6319	0.4778	0.3357	0.2358	0.1998	0.2358	0.3357	0.4778	0.6319	0.7695	0.8728
50.	0.9842	0.9427	0.8429	0.6692	0.4527	0.2707	0.1998	0.2707	0.4527	0.6692	0.8429	0.9427	0.9842
75.	0.9983	0.9871	0.9366	0.7955	0.5523	0.3046	0.1998	0.3046	0.5523	0.7955	0.9366	0.9871	0.9983
100.	0.9998	0.9973	0.9755	0.8762	0.6361	0.3375	0.1998	0.3375	0.6361	0.8762	0.9755	0.9973	0.9998
125.	1.0000	0.9995	0.9909	0.9265	0.7061	0.3694	0.1998	0.3694	0.7061	0.9265	0.9909	0.9995	1.0000
150.	1.0000	0.9999	0.9967	0.9571	0.7641	0.4002	0.1998	0.4002	0.7641	0.9571	0.9967	0.9999	1.0000
175.	1.0000	1.0000	0.9988	0.9753	0.8117	0.4300	0.1998	0.4300	0.8117	0.9753	0.9988	1.0000	1.0000
200.	1.0000	1.0000	0.9996	0.9860	0.8505	0.4588	0.1998	0.4588	0.8505	0.9860	0.9996	1.0000	1.0000
225.	1.0000	1.0000	0.9999	0.9922	0.8820	0.4865	0.1998	0.4865	0.8820	0.9922	0.9999	1.0000	1.0000
250.	1.0000	1.0000	1.0000	0.9957	0.9074	0.5133	0.1998	0.5133	0.9074	0.9957	1.0000	1.0000	1.0000
275.	1.0000	1.0000	1.0000	0.9977	0.9276	0.5391	0.1998	0.5391	0.9276	0.9977	1.0000	1.0000	1.0000
300.	1.0000	1.0000	1.0000	0.9987	0.9437	0.5639	0.1998	0.5639	0.9437	0.9987	1.0000	1.0000	1.0000
325.	1.0000	1.0000	1.0000	0.9993	0.9565	0.5877	0.1998	0.5877	0.9565	0.9993	1.0000	1.0000	1.0000
350.	1.0000	1.0000	1.0000	0.9996	0.9665	0.6106	0.1998	0.6106	0.9665	0.9996	1.0000	1.0000	1.0000
375.	1.0000	1.0000	1.0000	0.9998	0.9744	0.6325	0.1998	0.6325	0.9744	0.9998	1.0000	1.0000	1.0000
400.	1.0000	1.0000	1.0000	0.9999	0.9805	0.6535	0.1998	0.6535	0.9805	0.9999	1.0000	1.0000	1.0000
425.	1.0000	1.0000	1.0000	1.0000	0.9852	0.6736	0.1998	0.6736	0.9852	1.0000	1.0000	1.0000	1.0000
450.	1.0000	1.0000	1.0000	1.0000	0.9888	0.6928	0.1998	0.6928	0.9888	1.0000	1.0000	1.0000	1.0000
475.	1.0000	1.0000	1.0000	1.0000	0.9916	0.7112	0.1998	0.7112	0.9916	1.0000	1.0000	1.0000	1.0000
500.	1.0000	1.0000	1.0000	1.0000	0.9937	0.7287	0.1998	0.7287	0.9937	1.0000	1.0000	1.0000	1.0000

TABLE A.29 STORE

THE POWER OF THE TEST OF THE HYPOTHESIS THAT $\mu_X = \mu_0$ WHEN THE SIGNIFICANCE LEVEL IS 0.10

N	(MX - μ_0)												
	-15.00	-12.50	-10.00	-7.50	-5.00	-2.50	0.00	2.50	5.00	7.50	10.00	12.50	15.00
25.	0.7811	0.6454	0.4882	0.3341	0.2081	0.1275	0.1000	0.1275	0.2081	0.3341	0.4882	0.6454	0.7811
50.	0.9630	0.8878	0.7399	0.5286	0.3108	0.1549	0.1000	0.1549	0.3108	0.5286	0.7399	0.8878	0.9630
75.	0.9949	0.9689	0.8777	0.6778	0.4060	0.1823	0.1000	0.1823	0.4060	0.6778	0.8777	0.9689	0.9949
100.	0.9994	0.9922	0.9458	0.7861	0.4926	0.2096	0.1000	0.2096	0.4926	0.7861	0.9458	0.9922	0.9994
125.	0.9999	0.9982	0.9771	0.8615	0.5702	0.2367	0.1000	0.2367	0.5702	0.8615	0.9771	0.9982	0.9999
150.	1.0000	0.9996	0.9907	0.9122	0.6388	0.2635	0.1000	0.2635	0.6388	0.9122	0.9907	0.9996	1.0000
175.	1.0000	0.9999	0.9964	0.9455	0.6986	0.2901	0.1000	0.2901	0.6986	0.9455	0.9964	0.9999	1.0000
200.	1.0000	1.0000	0.9986	0.9668	0.7502	0.3164	0.1000	0.3164	0.7502	0.9668	0.9986	1.0000	1.0000
225.	1.0000	1.0000	0.9995	0.9801	0.7944	0.3423	0.1000	0.3423	0.7944	0.9801	0.9995	1.0000	1.0000
250.	1.0000	1.0000	0.9998	0.9882	0.8318	0.3678	0.1000	0.3678	0.8318	0.9882	0.9998	1.0000	1.0000
275.	1.0000	1.0000	0.9999	0.9932	0.8633	0.3930	0.1000	0.3930	0.8633	0.9932	0.9999	1.0000	1.0000
300.	1.0000	1.0000	1.0000	0.9961	0.8895	0.4176	0.1000	0.4176	0.8895	0.9961	1.0000	1.0000	1.0000
325.	1.0000	1.0000	1.0000	0.9978	0.9112	0.4419	0.1000	0.4419	0.9112	0.9978	1.0000	1.0000	1.0000
350.	1.0000	1.0000	1.0000	0.9988	0.9291	0.4656	0.1000	0.4656	0.9291	0.9988	1.0000	1.0000	1.0000
375.	1.0000	1.0000	1.0000	0.9993	0.9436	0.4888	0.1000	0.4888	0.9436	0.9993	1.0000	1.0000	1.0000
400.	1.0000	1.0000	1.0000	0.9996	0.9554	0.5115	0.1000	0.5115	0.9554	0.9996	1.0000	1.0000	1.0000
425.	1.0000	1.0000	1.0000	0.9998	0.9650	0.5336	0.1000	0.5336	0.9650	0.9998	1.0000	1.0000	1.0000
450.	1.0000	1.0000	1.0000	0.9999	0.9726	0.5551	0.1000	0.5551	0.9726	0.9999	1.0000	1.0000	1.0000
475.	1.0000	1.0000	1.0000	0.9999	0.9787	0.5761	0.1000	0.5761	0.9787	0.9999	1.0000	1.0000	1.0000
500.	1.0000	1.0000	1.0000	1.0000	0.9835	0.5965	0.1000	0.5965	0.9835	1.0000	1.0000	1.0000	1.0000

TABLE A.30 STORE

THE POWER OF THE TEST OF THE HYPOTHESIS THAT $\mu_X = \mu_0$ WHEN THE SIGNIFICANCE LEVEL IS 0.05

	(MX - MO)												
N	-15.00	-12.50	-10.00	-7.50	-5.00	-2.50	0.00	2.50	5.00	7.50	10.00	12.50	15.00
25.	0.6776	0.5230	0.3648	0.2275	0.1273	0.0688	0.0500	0.0688	0.1273	0.2275	0.3648	0.5230	0.6776
50.	0.9294	0.8159	0.6285	0.4037	0.2082	0.0882	0.0500	0.0882	0.2082	0.4037	0.6285	0.8159	0.9294
75.	0.9879	0.9395	0.8019	0.5582	0.2896	0.1081	0.0500	0.1081	0.2896	0.5582	0.8019	0.9395	0.9879
100.	0.9982	0.9823	0.9016	0.6836	0.3691	0.1284	0.0500	0.1284	0.3691	0.6836	0.9016	0.9823	0.9982
125.	0.9998	0.9952	0.9538	0.7799	0.4449	0.1491	0.0500	0.1491	0.4449	0.7799	0.9538	0.9952	0.9998
150.	1.0000	0.9988	0.9793	0.8508	0.5159	0.1700	0.0500	0.1700	0.5159	0.8508	0.9793	0.9988	1.0000
175.	1.0000	0.9997	0.9911	0.9011	0.5813	0.1913	0.0500	0.1913	0.5813	0.9011	0.9911	0.9997	1.0000
200.	1.0000	0.9999	0.9963	0.9358	0.6406	0.2128	0.0500	0.2128	0.6406	0.9358	0.9963	0.9999	1.0000
225.	1.0000	1.0000	0.9985	0.9591	0.6938	0.2344	0.0500	0.2344	0.6938	0.9591	0.9985	1.0000	1.0000
250.	1.0000	1.0000	0.9994	0.9744	0.7410	0.2562	0.0500	0.2562	0.7410	0.9744	0.9994	1.0000	1.0000
275.	1.0000	1.0000	0.9998	0.9842	0.7823	0.2780	0.0500	0.2780	0.7823	0.9842	0.9998	1.0000	1.0000
300.	1.0000	1.0000	0.9999	0.9904	0.8183	0.2999	0.0500	0.2999	0.8183	0.9904	0.9999	1.0000	1.0000
325.	1.0000	1.0000	1.0000	0.9943	0.8493	0.3218	0.0500	0.3218	0.8493	0.9943	1.0000	1.0000	1.0000
350.	1.0000	1.0000	1.0000	0.9966	0.8757	0.3437	0.0500	0.3437	0.8757	0.9966	1.0000	1.0000	1.0000
375.	1.0000	1.0000	1.0000	0.9981	0.8981	0.3654	0.0500	0.3654	0.8981	0.9981	1.0000	1.0000	1.0000
400.	1.0000	1.0000	1.0000	0.9989	0.9170	0.3870	0.0500	0.3870	0.9170	0.9989	1.0000	1.0000	1.0000
425.	1.0000	1.0000	1.0000	0.9994	0.9328	0.4085	0.0500	0.4085	0.9328	0.9994	1.0000	1.0000	1.0000
450.	1.0000	1.0000	1.0000	0.9996	0.9458	0.4298	0.0500	0.4298	0.9458	0.9996	1.0000	1.0000	1.0000
475.	1.0000	1.0000	1.0000	0.9998	0.9566	0.4508	0.0500	0.4508	0.9566	0.9998	1.0000	1.0000	1.0000
500.	1.0000	1.0000	1.0000	0.9999	0.9654	0.4716	0.0500	0.4716	0.9654	0.9999	1.0000	1.0000	1.0000

TABLE A.31 SHOPPING CENTER

THE POWER OF THE TEST OF THE HYPOTHESIS THAT $\mu_X = \mu_0$ WHEN THE SIGNIFICANCE LEVEL IS 0.20

N	(MX - μ_0)												
	-15.00	-12.50	-10.00	-7.50	-5.00	-2.50	0.00	2.50	5.00	7.50	10.00	12.50	15.00
25.	0.8751	0.7723	0.6347	0.4800	0.3369	0.2361	0.1998	0.2361	0.3369	0.4800	0.6347	0.7723	0.8751
50.	0.9859	0.9469	0.8500	0.6772	0.4583	0.2725	0.1998	0.2725	0.4583	0.6772	0.8500	0.9469	0.9859
75.	0.9987	0.9894	0.9439	0.8083	0.5641	0.3090	0.1998	0.3090	0.5641	0.8083	0.9439	0.9894	0.9987
100.	0.9999	0.9982	0.9807	0.8910	0.6546	0.3455	0.1998	0.3455	0.6546	0.8910	0.9807	0.9982	0.9999
125.	1.0000	0.9997	0.9939	0.9407	0.7308	0.3819	0.1998	0.3819	0.7308	0.9407	0.9939	0.9997	1.0000
150.	1.0000	1.0000	0.9982	0.9691	0.7937	0.4182	0.1998	0.4182	0.7937	0.9691	0.9982	1.0000	1.0000
175.	1.0000	1.0000	0.9995	0.9847	0.8448	0.4542	0.1998	0.4542	0.8448	0.9847	0.9995	1.0000	1.0000
200.	1.0000	1.0000	0.9999	0.9928	0.8855	0.4900	0.1998	0.4900	0.8855	0.9928	0.9999	1.0000	1.0000
225.	1.0000	1.0000	1.0000	0.9967	0.9173	0.5253	0.1998	0.5253	0.9173	0.9967	1.0000	1.0000	1.0000
250.	1.0000	1.0000	1.0000	0.9986	0.9415	0.5602	0.1998	0.5602	0.9415	0.9986	1.0000	1.0000	1.0000
275.	1.0000	1.0000	1.0000	0.9994	0.9597	0.5944	0.1998	0.5944	0.9597	0.9994	1.0000	1.0000	1.0000
300.	1.0000	1.0000	1.0000	0.9998	0.9729	0.6280	0.1998	0.6280	0.9729	0.9998	1.0000	1.0000	1.0000
325.	1.0000	1.0000	1.0000	0.9999	0.9822	0.6607	0.1998	0.6607	0.9822	0.9999	1.0000	1.0000	1.0000
350.	1.0000	1.0000	1.0000	1.0000	0.9887	0.6924	0.1998	0.6924	0.9887	1.0000	1.0000	1.0000	1.0000
375.	1.0000	1.0000	1.0000	1.0000	0.9931	0.7231	0.1998	0.7231	0.9931	1.0000	1.0000	1.0000	1.0000
400.	1.0000	1.0000	1.0000	1.0000	0.9959	0.7526	0.1998	0.7526	0.9959	1.0000	1.0000	1.0000	1.0000
425.	1.0000	1.0000	1.0000	1.0000	0.9977	0.7808	0.1998	0.7808	0.9977	1.0000	1.0000	1.0000	1.0000
450.	1.0000	1.0000	1.0000	1.0000	0.9987	0.8075	0.1998	0.8075	0.9987	1.0000	1.0000	1.0000	1.0000
475.	1.0000	1.0000	1.0000	1.0000	0.9993	0.8327	0.1998	0.8327	0.9993	1.0000	1.0000	1.0000	1.0000
500.	1.0000	1.0000	1.0000	1.0000	0.9997	0.8562	0.1998	0.8562	0.9997	1.0000	1.0000	1.0000	1.0000

TABLE A.32 SHOPPING CENTER

THE POWER OF THE TEST OF THE HYPOTHESIS THAT $\mu_X = \mu_0$ WHEN THE SIGNIFICANCE LEVEL IS 0.10

N	(MX - M0)												
	-15.00	-12.50	-10.00	-7.50	-5.00	-2.50	0.00	2.50	5.00	7.50	10.00	12.50	15.00
25.	0.7845	0.6489	0.4912	0.3361	0.2091	0.1277	0.1000	0.1277	0.2091	0.3361	0.4912	0.6489	0.7845
50.	0.9665	0.8948	0.7495	0.5376	0.3160	0.1564	0.1000	0.1564	0.3160	0.5376	0.7495	0.8948	0.9665
75.	0.9961	0.9740	0.8897	0.6942	0.4179	0.1859	0.1000	0.1859	0.4179	0.6942	0.8897	0.9740	0.9961
100.	0.9996	0.9945	0.9560	0.8074	0.5127	0.2163	0.1000	0.2163	0.5127	0.8074	0.9560	0.9945	0.9996
125.	1.0000	0.9990	0.9840	0.8844	0.5989	0.2475	0.1000	0.2475	0.5989	0.8844	0.9840	0.9990	1.0000
150.	1.0000	0.9998	0.9947	0.9339	0.6756	0.2795	0.1000	0.2795	0.6756	0.9339	0.9947	0.9998	1.0000
175.	1.0000	1.0000	0.9984	0.9640	0.7425	0.3122	0.1000	0.3122	0.7425	0.9640	0.9984	1.0000	1.0000
200.	1.0000	1.0000	0.9996	0.9813	0.7995	0.3455	0.1000	0.3455	0.7995	0.9813	0.9996	1.0000	1.0000
225.	1.0000	1.0000	0.9999	0.9908	0.8470	0.3795	0.1000	0.3795	0.8470	0.9908	0.9999	1.0000	1.0000
250.	1.0000	1.0000	1.0000	0.9957	0.8858	0.4139	0.1000	0.4139	0.8858	0.9957	1.0000	1.0000	1.0000
275.	1.0000	1.0000	1.0000	0.9981	0.9168	0.4488	0.1000	0.4488	0.9168	0.9981	1.0000	1.0000	1.0000
300.	1.0000	1.0000	1.0000	0.9992	0.9408	0.4839	0.1000	0.4839	0.9408	0.9992	1.0000	1.0000	1.0000
325.	1.0000	1.0000	1.0000	0.9997	0.9590	0.5193	0.1000	0.5193	0.9590	0.9997	1.0000	1.0000	1.0000
350.	1.0000	1.0000	1.0000	0.9999	0.9725	0.5546	0.1000	0.5546	0.9725	0.9999	1.0000	1.0000	1.0000
375.	1.0000	1.0000	1.0000	1.0000	0.9821	0.5899	0.1000	0.5899	0.9821	1.0000	1.0000	1.0000	1.0000
400.	1.0000	1.0000	1.0000	1.0000	0.9887	0.6248	0.1000	0.6248	0.9887	1.0000	1.0000	1.0000	1.0000
425.	1.0000	1.0000	1.0000	1.0000	0.9932	0.6593	0.1000	0.6593	0.9932	1.0000	1.0000	1.0000	1.0000
450.	1.0000	1.0000	1.0000	1.0000	0.9960	0.6932	0.1000	0.6932	0.9960	1.0000	1.0000	1.0000	1.0000
475.	1.0000	1.0000	1.0000	1.0000	0.9978	0.7261	0.1000	0.7261	0.9978	1.0000	1.0000	1.0000	1.0000
500.	1.0000	1.0000	1.0000	1.0000	0.9988	0.7580	0.1000	0.7580	0.9988	1.0000	1.0000	1.0000	1.0000

TABLE A.33 SHOPPING CENTER

THE POWER OF THE TEST OF THE HYPOTHESIS THAT $\mu_X = \mu_0$ WHEN THE SIGNIFICANCE LEVEL IS 0.05

N	(MX - M0)												
	-15.00	-12.50	-10.00	-7.50	-5.00	-2.50	0.00	2.50	5.00	7.50	10.00	12.50	15.00
25.	0.6816	0.5267	0.3677	0.2292	0.1280	0.0690	0.0500	0.0690	0.1280	0.2292	0.3677	0.5267	0.6816
50.	0.9353	0.8257	0.6398	0.4124	0.2124	0.0893	0.0500	0.0893	0.2124	0.4124	0.6398	0.8257	0.9353
75.	0.9905	0.9482	0.8186	0.5763	0.3001	0.1107	0.0500	0.1107	0.3001	0.5763	0.8186	0.9482	0.9905
100.	0.9989	0.9871	0.9179	0.7100	0.3882	0.1335	0.0500	0.1335	0.3882	0.7100	0.9179	0.9871	0.9989
125.	0.9999	0.9973	0.9664	0.8112	0.4741	0.1575	0.0500	0.1575	0.4741	0.8112	0.9664	0.9973	0.9999
150.	1.0000	0.9995	0.9875	0.8830	0.5558	0.1827	0.0500	0.1827	0.5558	0.8830	0.9875	0.9995	1.0000
175.	1.0000	0.9999	0.9958	0.9311	0.6315	0.2093	0.0500	0.2093	0.6315	0.9311	0.9958	0.9999	1.0000
200.	1.0000	1.0000	0.9987	0.9614	0.7001	0.2372	0.0500	0.2372	0.7001	0.9614	0.9987	1.0000	1.0000
225.	1.0000	1.0000	0.9996	0.9795	0.7608	0.2663	0.0500	0.2663	0.7608	0.9795	0.9996	1.0000	1.0000
250.	1.0000	1.0000	0.9999	0.9897	0.8132	0.2966	0.0500	0.2966	0.8132	0.9897	0.9999	1.0000	1.0000
275.	1.0000	1.0000	1.0000	0.9951	0.8574	0.3282	0.0500	0.3282	0.8574	0.9951	1.0000	1.0000	1.0000
300.	1.0000	1.0000	1.0000	0.9978	0.8937	0.3608	0.0500	0.3608	0.8937	0.9978	1.0000	1.0000	1.0000
325.	1.0000	1.0000	1.0000	0.9991	0.9229	0.3946	0.0500	0.3946	0.9229	0.9991	1.0000	1.0000	1.0000
350.	1.0000	1.0000	1.0000	0.9996	0.9456	0.4293	0.0500	0.4293	0.9456	0.9996	1.0000	1.0000	1.0000
375.	1.0000	1.0000	1.0000	0.9999	0.9627	0.4649	0.0500	0.4649	0.9627	0.9999	1.0000	1.0000	1.0000
400.	1.0000	1.0000	1.0000	1.0000	0.9753	0.5012	0.0500	0.5012	0.9753	1.0000	1.0000	1.0000	1.0000
425.	1.0000	1.0000	1.0000	1.0000	0.9842	0.5380	0.0500	0.5380	0.9842	1.0000	1.0000	1.0000	1.0000
450.	1.0000	1.0000	1.0000	1.0000	0.9903	0.5752	0.0500	0.5752	0.9903	1.0000	1.0000	1.0000	1.0000
475.	1.0000	1.0000	1.0000	1.0000	0.9943	0.6126	0.0500	0.6126	0.9943	1.0000	1.0000	1.0000	1.0000
500.	1.0000	1.0000	1.0000	1.0000	0.9968	0.6498	0.0500	0.6498	0.9968	1.0000	1.0000	1.0000	1.0000

TABLE A.34 WAREHOUSE

THE POWER OF THE TEST OF THE HYPOTHESIS THAT $\mu_X = \mu_0$ WHEN THE SIGNIFICANCE LEVEL IS 0.20

N	(MX - M0)												
	-15.00	-12.50	-10.00	-7.50	-5.00	-2.50	0.00	2.50	5.00	7.50	10.00	12.50	15.00
25.	0.9947	0.9725	0.8995	0.7390	0.5044	0.2878	0.1998	0.2878	0.5044	0.7390	0.8995	0.9725	0.9947
50.	1.0000	0.9994	0.9905	0.9248	0.7033	0.3680	0.1998	0.3680	0.7033	0.9248	0.9905	0.9994	1.0000
75.	1.0000	1.0000	0.9992	0.9800	0.8272	0.4409	0.1998	0.4409	0.8272	0.9800	0.9992	1.0000	1.0000
100.	1.0000	1.0000	0.9999	0.9950	0.9016	0.5068	0.1998	0.5068	0.9016	0.9950	0.9999	1.0000	1.0000
125.	1.0000	1.0000	1.0000	0.9988	0.9450	0.5661	0.1998	0.5661	0.9450	0.9988	1.0000	1.0000	1.0000
150.	1.0000	1.0000	1.0000	0.9997	0.9698	0.6193	0.1998	0.6193	0.9698	0.9997	1.0000	1.0000	1.0000
175.	1.0000	1.0000	1.0000	0.9999	0.9837	0.6669	0.1998	0.6669	0.9837	0.9999	1.0000	1.0000	1.0000
200.	1.0000	1.0000	1.0000	1.0000	0.9913	0.7092	0.1998	0.7092	0.9913	1.0000	1.0000	1.0000	1.0000
225.	1.0000	1.0000	1.0000	1.0000	0.9954	0.7468	0.1998	0.7468	0.9954	1.0000	1.0000	1.0000	1.0000
250.	1.0000	1.0000	1.0000	1.0000	0.9976	0.7801	0.1998	0.7801	0.9976	1.0000	1.0000	1.0000	1.0000
275.	1.0000	1.0000	1.0000	1.0000	0.9988	0.8094	0.1998	0.8094	0.9988	1.0000	1.0000	1.0000	1.0000
300.	1.0000	1.0000	1.0000	1.0000	0.9994	0.8352	0.1998	0.8352	0.9994	1.0000	1.0000	1.0000	1.0000
325.	1.0000	1.0000	1.0000	1.0000	0.9997	0.8579	0.1998	0.8579	0.9997	1.0000	1.0000	1.0000	1.0000
350.	1.0000	1.0000	1.0000	1.0000	0.9998	0.8777	0.1998	0.8777	0.9998	1.0000	1.0000	1.0000	1.0000
375.	1.0000	1.0000	1.0000	1.0000	0.9999	0.8949	0.1998	0.8949	0.9999	1.0000	1.0000	1.0000	1.0000
400.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9100	0.1998	0.9100	1.0000	1.0000	1.0000	1.0000	1.0000
425.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9230	0.1998	0.9230	1.0000	1.0000	1.0000	1.0000	1.0000
450.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9343	0.1998	0.9343	1.0000	1.0000	1.0000	1.0000	1.0000
475.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9441	0.1998	0.9441	1.0000	1.0000	1.0000	1.0000	1.0000
500.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9525	0.1998	0.9525	1.0000	1.0000	1.0000	1.0000	1.0000

TABLE A.35 WAREHOUSE

THE POWER OF THE TEST OF THE HYPOTHESIS THAT $\mu_X = \mu_0$ WHEN THE SIGNIFICANCE LEVEL IS 0.10

N	(MX - μ_0)												
	-15.00	-12.50	-10.00	-7.50	-5.00	-2.50	0.00	2.50	5.00	7.50	10.00	12.50	15.00
25.	0.9859	0.9401	0.8200	0.6086	0.3593	0.1686	0.1000	0.1686	0.3593	0.6086	0.8200	0.9401	0.9859
50.	0.9999	0.9981	0.9762	0.8588	0.5670	0.2355	0.1000	0.2355	0.5670	0.8588	0.9762	0.9981	0.9999
75.	1.0000	1.0000	0.9975	0.9546	0.7188	0.3000	0.1000	0.3000	0.7188	0.9546	0.9975	1.0000	1.0000
100.	1.0000	1.0000	0.9998	0.9866	0.8231	0.3615	0.1000	0.3615	0.8231	0.9866	0.9998	1.0000	1.0000
125.	1.0000	1.0000	1.0000	0.9963	0.8917	0.4199	0.1000	0.4199	0.8917	0.9963	1.0000	1.0000	1.0000
150.	1.0000	1.0000	1.0000	0.9990	0.9352	0.4748	0.1000	0.4748	0.9352	0.9990	1.0000	1.0000	1.0000
175.	1.0000	1.0000	1.0000	0.9998	0.9620	0.5261	0.1000	0.5261	0.9620	0.9998	1.0000	1.0000	1.0000
200.	1.0000	1.0000	1.0000	0.9999	0.9781	0.5738	0.1000	0.5738	0.9781	0.9999	1.0000	1.0000	1.0000
225.	1.0000	1.0000	1.0000	1.0000	0.9876	0.6179	0.1000	0.6179	0.9876	1.0000	1.0000	1.0000	1.0000
250.	1.0000	1.0000	1.0000	1.0000	0.9931	0.6585	0.1000	0.6585	0.9931	1.0000	1.0000	1.0000	1.0000
275.	1.0000	1.0000	1.0000	1.0000	0.9962	0.6956	0.1000	0.6956	0.9962	1.0000	1.0000	1.0000	1.0000
300.	1.0000	1.0000	1.0000	1.0000	0.9979	0.7295	0.1000	0.7295	0.9979	1.0000	1.0000	1.0000	1.0000
325.	1.0000	1.0000	1.0000	1.0000	0.9989	0.7603	0.1000	0.7603	0.9989	1.0000	1.0000	1.0000	1.0000
350.	1.0000	1.0000	1.0000	1.0000	0.9994	0.7881	0.1000	0.7881	0.9994	1.0000	1.0000	1.0000	1.0000
375.	1.0000	1.0000	1.0000	1.0000	0.9997	0.8132	0.1000	0.8132	0.9997	1.0000	1.0000	1.0000	1.0000
400.	1.0000	1.0000	1.0000	1.0000	0.9998	0.8358	0.1000	0.8358	0.9998	1.0000	1.0000	1.0000	1.0000
425.	1.0000	1.0000	1.0000	1.0000	0.9999	0.8560	0.1000	0.8560	0.9999	1.0000	1.0000	1.0000	1.0000
450.	1.0000	1.0000	1.0000	1.0000	1.0000	0.8740	0.1000	0.8740	1.0000	1.0000	1.0000	1.0000	1.0000
475.	1.0000	1.0000	1.0000	1.0000	1.0000	0.8900	0.1000	0.8900	1.0000	1.0000	1.0000	1.0000	1.0000
500.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9042	0.1000	0.9042	1.0000	1.0000	1.0000	1.0000	1.0000

TABLE A.36 WAREHOUSE

THE POWER OF THE TEST OF THE HYPOTHESIS THAT $\mu_X = \mu_0$ WHEN THE SIGNIFICANCE LEVEL IS 0.05

N	(MX - μ_0)												
	-15.00	-12.50	-10.00	-7.50	-5.00	-2.50	0.00	2.50	5.00	7.50	10.00	12.50	15.00
25.	0.9700	0.8926	0.7258	0.4842	0.2489	0.0981	0.0500	0.0981	0.2489	0.4842	0.7258	0.8926	0.9700
50.	0.9997	0.9950	0.9522	0.7763	0.4417	0.1482	0.0500	0.1482	0.4417	0.7763	0.9522	0.9950	0.9997
75.	1.0000	0.9998	0.9936	0.9156	0.6042	0.1993	0.0500	0.1993	0.6042	0.9156	0.9936	0.9998	1.0000
100.	1.0000	1.0000	0.9993	0.9712	0.7298	0.2508	0.0500	0.2508	0.7298	0.9712	0.9993	1.0000	1.0000
125.	1.0000	1.0000	0.9999	0.9909	0.8213	0.3019	0.0500	0.3019	0.8213	0.9909	0.9999	1.0000	1.0000
150.	1.0000	1.0000	1.0000	0.9973	0.8850	0.3522	0.0500	0.3522	0.8850	0.9973	1.0000	1.0000	1.0000
175.	1.0000	1.0000	1.0000	0.9992	0.9277	0.4012	0.0500	0.4012	0.9277	0.9992	1.0000	1.0000	1.0000
200.	1.0000	1.0000	1.0000	0.9998	0.9555	0.4485	0.0500	0.4485	0.9555	0.9998	1.0000	1.0000	1.0000
225.	1.0000	1.0000	1.0000	0.9999	0.9731	0.4939	0.0500	0.4939	0.9731	0.9999	1.0000	1.0000	1.0000
250.	1.0000	1.0000	1.0000	1.0000	0.9841	0.5371	0.0500	0.5371	0.9841	1.0000	1.0000	1.0000	1.0000
275.	1.0000	1.0000	1.0000	1.0000	0.9907	0.5780	0.0500	0.5780	0.9907	1.0000	1.0000	1.0000	1.0000
300.	1.0000	1.0000	1.0000	1.0000	0.9947	0.6165	0.0500	0.6165	0.9947	1.0000	1.0000	1.0000	1.0000
325.	1.0000	1.0000	1.0000	1.0000	0.9970	0.6525	0.0500	0.6525	0.9970	1.0000	1.0000	1.0000	1.0000
350.	1.0000	1.0000	1.0000	1.0000	0.9983	0.6861	0.0500	0.6861	0.9983	1.0000	1.0000	1.0000	1.0000
375.	1.0000	1.0000	1.0000	1.0000	0.9991	0.7173	0.0500	0.7173	0.9991	1.0000	1.0000	1.0000	1.0000
400.	1.0000	1.0000	1.0000	1.0000	0.9995	0.7461	0.0500	0.7461	0.9995	1.0000	1.0000	1.0000	1.0000
425.	1.0000	1.0000	1.0000	1.0000	0.9997	0.7726	0.0500	0.7726	0.9997	1.0000	1.0000	1.0000	1.0000
450.	1.0000	1.0000	1.0000	1.0000	0.9999	0.7969	0.0500	0.7969	0.9999	1.0000	1.0000	1.0000	1.0000
475.	1.0000	1.0000	1.0000	1.0000	0.9999	0.8190	0.0500	0.8190	0.9999	1.0000	1.0000	1.0000	1.0000
500.	1.0000	1.0000	1.0000	1.0000	1.0000	0.8392	0.0500	0.8392	1.0000	1.0000	1.0000	1.0000	1.0000

TABLE A.37 HOTEL/MOTEL

THE POWER OF THE TEST OF THE HYPOTHESIS THAT $\mu_X = \mu_0$ WHEN THE SIGNIFICANCE LEVEL IS 0.20

N	(MX - μ_0)												
	-15.00	-12.50	-10.00	-7.50	-5.00	-2.50	0.00	2.50	5.00	7.50	10.00	12.50	15.00
25.	0.9992	0.9923	0.9537	0.8267	0.5820	0.3157	0.1998	0.3157	0.5820	0.8267	0.9537	0.9923	0.9992
50.	1.0000	1.0000	0.9987	0.9741	0.8079	0.4274	0.1998	0.4274	0.8079	0.9741	0.9987	1.0000	1.0000
75.	1.0000	1.0000	1.0000	0.9973	0.9232	0.5330	0.1998	0.5330	0.9232	0.9973	1.0000	1.0000	1.0000
100.	1.0000	1.0000	1.0000	0.9998	0.9738	0.6307	0.1998	0.6307	0.9738	0.9998	1.0000	1.0000	1.0000
125.	1.0000	1.0000	1.0000	1.0000	0.9925	0.7185	0.1998	0.7185	0.9925	1.0000	1.0000	1.0000	1.0000
150.	1.0000	1.0000	1.0000	1.0000	0.9983	0.7948	0.1998	0.7948	0.9983	1.0000	1.0000	1.0000	1.0000
175.	1.0000	1.0000	1.0000	1.0000	0.9997	0.8585	0.1998	0.8585	0.9997	1.0000	1.0000	1.0000	1.0000
200.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9090	0.1998	0.9090	1.0000	1.0000	1.0000	1.0000	1.0000
225.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9464	0.1998	0.9464	1.0000	1.0000	1.0000	1.0000	1.0000
250.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9719	0.1998	0.9719	1.0000	1.0000	1.0000	1.0000	1.0000
275.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9873	0.1998	0.9873	1.0000	1.0000	1.0000	1.0000	1.0000
300.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9954	0.1998	0.9954	1.0000	1.0000	1.0000	1.0000	1.0000
325.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9987	0.1998	0.9987	1.0000	1.0000	1.0000	1.0000	1.0000
350.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9998	0.1998	0.9998	1.0000	1.0000	1.0000	1.0000	1.0000
375.	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.1998	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
400.	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.1998	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
425.	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.1998	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
450.	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.1998	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
475.	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.1998	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
500.	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.1998	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

TABLE A.38 HOTEL/MOTEL

THE POWER OF THE TEST OF THE HYPOTHESIS THAT $\mu_X = \mu_0$ WHEN THE SIGNIFICANCE LEVEL IS 0.10

N	(MX - M0)												
	-15.00	-12.50	-10.00	-7.50	-5.00	-2.50	0.00	2.50	5.00	7.50	10.00	12.50	15.00
25.	0.9974	0.9803	0.9063	0.7182	0.4360	0.1915	0.1000	0.1915	0.4360	0.7182	0.9063	0.9803	0.9974
50.	1.0000	0.9999	0.9961	0.9431	0.6937	0.2878	0.1000	0.2878	0.6937	0.9431	0.9961	0.9999	1.0000
75.	1.0000	1.0000	0.9999	0.9922	0.8563	0.3870	0.1000	0.3870	0.8563	0.9922	0.9999	1.0000	1.0000
100.	1.0000	1.0000	1.0000	0.9993	0.9425	0.4868	0.1000	0.4868	0.9425	0.9993	1.0000	1.0000	1.0000
125.	1.0000	1.0000	1.0000	1.0000	0.9808	0.5845	0.1000	0.5845	0.9808	1.0000	1.0000	1.0000	1.0000
150.	1.0000	1.0000	1.0000	1.0000	0.9948	0.6770	0.1000	0.6770	0.9948	1.0000	1.0000	1.0000	1.0000
175.	1.0000	1.0000	1.0000	1.0000	0.9989	0.7612	0.1000	0.7612	0.9989	1.0000	1.0000	1.0000	1.0000
200.	1.0000	1.0000	1.0000	1.0000	0.9998	0.8343	0.1000	0.8343	0.9998	1.0000	1.0000	1.0000	1.0000
225.	1.0000	1.0000	1.0000	1.0000	1.0000	0.8940	0.1000	0.8940	1.0000	1.0000	1.0000	1.0000	1.0000
250.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9390	0.1000	0.9390	1.0000	1.0000	1.0000	1.0000	1.0000
275.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9695	0.1000	0.9695	1.0000	1.0000	1.0000	1.0000	1.0000
300.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9874	0.1000	0.9874	1.0000	1.0000	1.0000	1.0000	1.0000
325.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9961	0.1000	0.9961	1.0000	1.0000	1.0000	1.0000	1.0000
350.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9992	0.1000	0.9992	1.0000	1.0000	1.0000	1.0000	1.0000
375.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9999	0.1000	0.9999	1.0000	1.0000	1.0000	1.0000	1.0000
400.	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.1000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
425.	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.1000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
450.	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.1000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
475.	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.1000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
500.	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.1000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

TABLE A.39 HOTEL/MOTEL

THE POWER OF THE TEST OF THE HYPOTHESIS THAT $\mu_X = \mu_0$ WHEN THE SIGNIFICANCE LEVEL IS 0.05

N	(MX - M0)												
	-15.00	-12.50	-10.00	-7.50	-5.00	-2.50	0.00	2.50	5.00	7.50	10.00	12.50	15.00
25.	0.9935	0.9594	0.8421	0.6035	0.3165	0.1148	0.0500	0.1148	0.3165	0.6035	0.8421	0.9594	0.9935
50.	1.0000	0.9997	0.9904	0.8974	0.5758	0.1894	0.0500	0.1894	0.5758	0.8974	0.9904	0.9997	1.0000
75.	1.0000	1.0000	0.9997	0.9823	0.7730	0.2728	0.0500	0.2728	0.7730	0.9823	0.9997	1.0000	1.0000
100.	1.0000	1.0000	1.0000	0.9980	0.8964	0.3636	0.0500	0.3636	0.8964	0.9980	1.0000	1.0000	1.0000
125.	1.0000	1.0000	1.0000	0.9998	0.9604	0.4594	0.0500	0.4594	0.9604	0.9998	1.0000	1.0000	1.0000
150.	1.0000	1.0000	1.0000	1.0000	0.9877	0.5573	0.0500	0.5573	0.9877	1.0000	1.0000	1.0000	1.0000
175.	1.0000	1.0000	1.0000	1.0000	0.9970	0.6536	0.0500	0.6536	0.9970	1.0000	1.0000	1.0000	1.0000
200.	1.0000	1.0000	1.0000	1.0000	0.9995	0.7442	0.0500	0.7442	0.9995	1.0000	1.0000	1.0000	1.0000
225.	1.0000	1.0000	1.0000	1.0000	0.9999	0.8246	0.0500	0.8246	0.9999	1.0000	1.0000	1.0000	1.0000
250.	1.0000	1.0000	1.0000	1.0000	1.0000	0.8909	0.0500	0.8909	1.0000	1.0000	1.0000	1.0000	1.0000
275.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9404	0.0500	0.9404	1.0000	1.0000	1.0000	1.0000	1.0000
300.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9728	0.0500	0.9728	1.0000	1.0000	1.0000	1.0000	1.0000
325.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9904	0.0500	0.9904	1.0000	1.0000	1.0000	1.0000	1.0000
350.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9977	0.0500	0.9977	1.0000	1.0000	1.0000	1.0000	1.0000
375.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9997	0.0500	0.9997	1.0000	1.0000	1.0000	1.0000	1.0000
400.	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0500	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
425.	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0500	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
450.	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0500	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
475.	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0500	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
500.	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0500	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

TABLE A.40 THEATER/AUDITORIUM

THE POWER OF THE TEST OF THE HYPOTHESIS THAT $\mu_X = \mu_0$ WHEN THE SIGNIFICANCE LEVEL IS 0.20

N	(MX - MO)												
	-15.00	-12.50	-10.00	-7.50	-5.00	-2.50	0.00	2.50	5.00	7.50	10.00	12.50	15.00
8.	0.7224	0.6110	0.4915	0.3775	0.2834	0.2214	0.1998	0.2214	0.2834	0.3775	0.4915	0.6110	0.7224
16.	0.9232	0.8355	0.7008	0.5330	0.3667	0.2446	0.1998	0.2446	0.3667	0.5330	0.7008	0.8355	0.9232
24.	0.9830	0.9398	0.8382	0.6639	0.4491	0.2695	0.1998	0.2695	0.4491	0.6639	0.8382	0.9398	0.9830
32.	0.9970	0.9813	0.9205	0.7695	0.5294	0.2964	0.1998	0.2964	0.5294	0.7695	0.9205	0.9813	0.9970
40.	0.9996	0.9951	0.9650	0.8505	0.6067	0.3254	0.1998	0.3254	0.6067	0.8505	0.9650	0.9951	0.9996
48.	1.0000	0.9990	0.9864	0.9094	0.6798	0.3568	0.1998	0.3568	0.6798	0.9094	0.9864	0.9990	1.0000
56.	1.0000	0.9998	0.9955	0.9493	0.7474	0.3908	0.1998	0.3908	0.7474	0.9493	0.9955	0.9998	1.0000
64.	1.0000	1.0000	0.9987	0.9742	0.8083	0.4277	0.1998	0.4277	0.8083	0.9742	0.9987	1.0000	1.0000
72.	1.0000	1.0000	0.9997	0.9884	0.8613	0.4677	0.1998	0.4677	0.8613	0.9884	0.9997	1.0000	1.0000
80.	1.0000	1.0000	1.0000	0.9955	0.9056	0.5113	0.1998	0.5113	0.9056	0.9955	1.0000	1.0000	1.0000
88.	1.0000	1.0000	1.0000	0.9986	0.9405	0.5585	0.1998	0.5585	0.9405	0.9986	1.0000	1.0000	1.0000
96.	1.0000	1.0000	1.0000	0.9996	0.9661	0.6096	0.1998	0.6096	0.9661	0.9996	1.0000	1.0000	1.0000
104.	1.0000	1.0000	1.0000	0.9999	0.9832	0.6645	0.1998	0.6645	0.9832	0.9999	1.0000	1.0000	1.0000
112.	1.0000	1.0000	1.0000	1.0000	0.9931	0.7230	0.1998	0.7230	0.9931	1.0000	1.0000	1.0000	1.0000
120.	1.0000	1.0000	1.0000	1.0000	0.9978	0.7839	0.1998	0.7839	0.9978	1.0000	1.0000	1.0000	1.0000
128.	1.0000	1.0000	1.0000	1.0000	0.9995	0.8454	0.1998	0.8454	0.9995	1.0000	1.0000	1.0000	1.0000
136.	1.0000	1.0000	1.0000	1.0000	0.9999	0.9037	0.1998	0.9037	0.9999	1.0000	1.0000	1.0000	1.0000
144.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9530	0.1998	0.9530	1.0000	1.0000	1.0000	1.0000	1.0000
152.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9858	0.1998	0.9858	1.0000	1.0000	1.0000	1.0000	1.0000
160.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9987	0.1998	0.9987	1.0000	1.0000	1.0000	1.0000	1.0000

TABLE A.41 THEATER/AUDITORIUM

THE POWER OF THE TEST OF THE HYPOTHESIS THAT $\mu_X = \mu_0$ WHEN THE SIGNIFICANCE LEVEL IS 0.10

N	(MX - M0)												
	-15.00	-12.50	-10.00	-7.50	-5.00	-2.50	0.00	2.50	5.00	7.50	10.00	12.50	15.00
8.	0.5891	0.4660	0.3470	0.2437	0.1651	0.1164	0.1000	0.1164	0.1651	0.2437	0.3470	0.4660	0.5891
16.	0.8562	0.7298	0.5641	0.3870	0.2344	0.1343	0.1000	0.1343	0.2344	0.3870	0.5641	0.7298	0.8562
24.	0.9606	0.8830	0.7335	0.5228	0.3074	0.1540	0.1000	0.1540	0.3074	0.5228	0.7335	0.8830	0.9606
32.	0.9916	0.9571	0.8520	0.6454	0.3835	0.1756	0.1000	0.1756	0.3835	0.6454	0.8520	0.9571	0.9916
40.	0.9986	0.9869	0.9263	0.7502	0.4616	0.1995	0.1000	0.1995	0.4616	0.7502	0.9263	0.9869	0.9986
48.	0.9998	0.9967	0.9676	0.8349	0.5404	0.2259	0.1000	0.2259	0.5404	0.8349	0.9676	0.9967	0.9998
56.	1.0000	0.9994	0.9877	0.8988	0.6186	0.2553	0.1000	0.2553	0.6186	0.8988	0.9877	0.9994	1.0000
64.	1.0000	0.9999	0.9961	0.9434	0.6942	0.2880	0.1000	0.2880	0.6942	0.9434	0.9961	0.9999	1.0000
72.	1.0000	1.0000	0.9990	0.9717	0.7651	0.3247	0.1000	0.3247	0.7651	0.9717	0.9990	1.0000	1.0000
80.	1.0000	1.0000	0.9998	0.9877	0.8291	0.3659	0.1000	0.3659	0.8291	0.9877	0.9998	1.0000	1.0000
88.	1.0000	1.0000	1.0000	0.9956	0.8841	0.4122	0.1000	0.4122	0.8841	0.9956	1.0000	1.0000	1.0000
96.	1.0000	1.0000	1.0000	0.9987	0.9283	0.4645	0.1000	0.4645	0.9283	0.9987	1.0000	1.0000	1.0000
104.	1.0000	1.0000	1.0000	0.9997	0.9609	0.5235	0.1000	0.5235	0.9609	0.9997	1.0000	1.0000	1.0000
112.	1.0000	1.0000	1.0000	1.0000	0.9820	0.5897	0.1000	0.5897	0.9820	1.0000	1.0000	1.0000	1.0000
120.	1.0000	1.0000	1.0000	1.0000	0.9936	0.6633	0.1000	0.6633	0.9936	1.0000	1.0000	1.0000	1.0000
128.	1.0000	1.0000	1.0000	1.0000	0.9984	0.7433	0.1000	0.7433	0.9984	1.0000	1.0000	1.0000	1.0000
136.	1.0000	1.0000	1.0000	1.0000	0.9998	0.8264	0.1000	0.8264	0.9998	1.0000	1.0000	1.0000	1.0000
144.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9051	0.1000	0.9051	1.0000	1.0000	1.0000	1.0000	1.0000
152.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9662	0.1000	0.9662	1.0000	1.0000	1.0000	1.0000	1.0000
160.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9958	0.1000	0.9958	1.0000	1.0000	1.0000	1.0000	1.0000

TABLE A.42 THEATER/AUDITORIUM

THE POWER OF THE TEST OF THE HYPOTHESIS THAT $\mu_X = \mu_0$ WHEN THE SIGNIFICANCE LEVEL IS 0.05

N	(MX - M0)												
	-15.00	-12.50	-10.00	-7.50	-5.00	-2.50	0.00	2.50	5.00	7.50	10.00	12.50	15.00
8.	0.4641	0.3441	0.2384	0.1545	0.0955	0.0612	0.0500	0.0612	0.0955	0.1545	0.2384	0.3441	0.4641
16.	0.7729	0.6168	0.4388	0.2728	0.1473	0.0736	0.0500	0.0736	0.1473	0.2728	0.4388	0.6168	0.7729
24.	0.9254	0.8093	0.6211	0.3980	0.2054	0.0876	0.0500	0.0876	0.2054	0.3980	0.6211	0.8093	0.9254
32.	0.9810	0.9196	0.7673	0.5230	0.2697	0.1032	0.0500	0.1032	0.2697	0.5230	0.7673	0.9196	0.9810
40.	0.9963	0.9717	0.8715	0.6406	0.3399	0.1208	0.0500	0.1208	0.3399	0.6406	0.8715	0.9717	0.9963
48.	0.9995	0.9919	0.9372	0.7449	0.4153	0.1408	0.0500	0.1408	0.4153	0.7449	0.9372	0.9919	0.9995
56.	0.9999	0.9982	0.9734	0.8314	0.4946	0.1635	0.0500	0.1635	0.4946	0.8314	0.9734	0.9982	0.9999
64.	1.0000	0.9997	0.9905	0.8978	0.5764	0.1896	0.0500	0.1896	0.5764	0.8978	0.9905	0.9997	1.0000
72.	1.0000	1.0000	0.9972	0.9443	0.6583	0.2197	0.0500	0.2197	0.6583	0.9443	0.9972	1.0000	1.0000
80.	1.0000	1.0000	0.9994	0.9734	0.7375	0.2545	0.0500	0.2545	0.7375	0.9734	0.9994	1.0000	1.0000
88.	1.0000	1.0000	0.9999	0.9893	0.8108	0.2951	0.0500	0.2951	0.8108	0.9893	0.9999	1.0000	1.0000
96.	1.0000	1.0000	1.0000	0.9966	0.8746	0.3427	0.0500	0.3427	0.8746	0.9966	1.0000	1.0000	1.0000
104.	1.0000	1.0000	1.0000	0.9992	0.9259	0.3987	0.0500	0.3987	0.9259	0.9992	1.0000	1.0000	1.0000
112.	1.0000	1.0000	1.0000	0.9999	0.9627	0.4647	0.0500	0.4647	0.9627	0.9999	1.0000	1.0000	1.0000
120.	1.0000	1.0000	1.0000	1.0000	0.9851	0.5423	0.0500	0.5423	0.9851	1.0000	1.0000	1.0000	1.0000
128.	1.0000	1.0000	1.0000	1.0000	0.9958	0.6324	0.0500	0.6324	0.9958	1.0000	1.0000	1.0000	1.0000
136.	1.0000	1.0000	1.0000	1.0000	0.9993	0.7340	0.0500	0.7340	0.9993	1.0000	1.0000	1.0000	1.0000
144.	1.0000	1.0000	1.0000	1.0000	1.0000	0.8404	0.0500	0.8404	1.0000	1.0000	1.0000	1.0000	1.0000
152.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9349	0.0500	0.9349	1.0000	1.0000	1.0000	1.0000	1.0000
160.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9899	0.0500	0.9899	1.0000	1.0000	1.0000	1.0000	1.0000

TABLE A.43 COMMUNITY CENTER

THE POWER OF THE TEST OF THE HYPOTHESIS THAT $\mu_X = \mu_0$ WHEN THE SIGNIFICANCE LEVEL IS 0.20

N	(MX - MO)												
	-15.00	-12.50	-10.00	-7.50	-5.00	-2.50	0.00	2.50	5.00	7.50	10.00	12.50	15.00
11.	0.8472	0.7394	0.6031	0.4561	0.3240	0.2325	0.1998	0.2325	0.3240	0.4561	0.6031	0.7394	0.8472
22.	0.9806	0.9343	0.8293	0.6542	0.4424	0.2674	0.1998	0.2674	0.4424	0.6542	0.8293	0.9343	0.9806
33.	0.9983	0.9872	0.9370	0.7963	0.5530	0.3049	0.1998	0.3049	0.5530	0.7963	0.9370	0.9872	0.9983
44.	0.9999	0.9981	0.9805	0.8902	0.6536	0.3450	0.1998	0.3450	0.6536	0.8902	0.9805	0.9981	0.9999
55.	1.0000	0.9998	0.9950	0.9467	0.7423	0.3880	0.1998	0.3880	0.7423	0.9467	0.9950	0.9998	1.0000
66.	1.0000	1.0000	0.9990	0.9772	0.8177	0.4341	0.1998	0.4341	0.8177	0.9772	0.9990	1.0000	1.0000
77.	1.0000	1.0000	0.9999	0.9917	0.8787	0.4834	0.1998	0.4834	0.8787	0.9917	0.9999	1.0000	1.0000
88.	1.0000	1.0000	1.0000	0.9975	0.9254	0.5360	0.1998	0.5360	0.9254	0.9975	1.0000	1.0000	1.0000
99.	1.0000	1.0000	1.0000	0.9994	0.9584	0.5918	0.1998	0.5918	0.9584	0.9994	1.0000	1.0000	1.0000
110.	1.0000	1.0000	1.0000	0.9999	0.9797	0.6505	0.1998	0.6505	0.9797	0.9999	1.0000	1.0000	1.0000
121.	1.0000	1.0000	1.0000	1.0000	0.9916	0.7116	0.1998	0.7116	0.9916	1.0000	1.0000	1.0000	1.0000
132.	1.0000	1.0000	1.0000	1.0000	0.9973	0.7738	0.1998	0.7738	0.9973	1.0000	1.0000	1.0000	1.0000
143.	1.0000	1.0000	1.0000	1.0000	0.9994	0.8350	0.1998	0.8350	0.9994	1.0000	1.0000	1.0000	1.0000
154.	1.0000	1.0000	1.0000	1.0000	0.9999	0.8923	0.1998	0.8923	0.9999	1.0000	1.0000	1.0000	1.0000
165.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9410	0.1998	0.9410	1.0000	1.0000	1.0000	1.0000	1.0000
176.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9763	0.1998	0.9763	1.0000	1.0000	1.0000	1.0000	1.0000
187.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9948	0.1998	0.9948	1.0000	1.0000	1.0000	1.0000	1.0000
198.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9997	0.1998	0.9997	1.0000	1.0000	1.0000	1.0000	1.0000
209.	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.1998	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
220.	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.1998	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

TABLE A.44 COMMUNITY CENTER

THE POWER OF THE TEST OF THE HYPOTHESIS THAT $\mu_X = \mu_0$ WHEN THE SIGNIFICANCE LEVEL IS 0.10

N	(MX - μ_0)												
	-15.00	-12.50	-10.00	-7.50	-5.00	-2.50	0.00	2.50	5.00	7.50	10.00	12.50	15.00
11.	0.7456	0.6090	0.4578	0.3139	0.1983	0.1249	0.1000	0.1249	0.1983	0.3139	0.4578	0.6090	0.7456
22.	0.9558	0.8740	0.7216	0.5122	0.3014	0.1523	0.1000	0.1523	0.3014	0.5122	0.7216	0.8740	0.9558
33.	0.9950	0.9693	0.8784	0.6788	0.4067	0.1825	0.1000	0.1825	0.4067	0.6788	0.8784	0.9693	0.9950
44.	0.9996	0.9944	0.9555	0.8063	0.5115	0.2159	0.1000	0.2159	0.5115	0.8063	0.9555	0.9944	0.9996
55.	1.0000	0.9993	0.9867	0.8945	0.6125	0.2529	0.1000	0.2529	0.6125	0.8945	0.9867	0.9993	1.0000
66.	1.0000	0.9999	0.9968	0.9491	0.7064	0.2938	0.1000	0.2938	0.7064	0.9491	0.9968	0.9999	1.0000
77.	1.0000	1.0000	0.9994	0.9788	0.7897	0.3393	0.1000	0.3393	0.7897	0.9788	0.9994	1.0000	1.0000
88.	1.0000	1.0000	0.9999	0.9927	0.8597	0.3899	0.1000	0.3899	0.8597	0.9927	0.9999	1.0000	1.0000
99.	1.0000	1.0000	1.0000	0.9980	0.9146	0.4461	0.1000	0.4461	0.9146	0.9980	1.0000	1.0000	1.0000
110.	1.0000	1.0000	1.0000	0.9996	0.9539	0.5082	0.1000	0.5082	0.9539	0.9996	1.0000	1.0000	1.0000
121.	1.0000	1.0000	1.0000	0.9999	0.9788	0.5765	0.1000	0.5765	0.9788	0.9999	1.0000	1.0000	1.0000
132.	1.0000	1.0000	1.0000	1.0000	0.9922	0.6507	0.1000	0.6507	0.9922	1.0000	1.0000	1.0000	1.0000
143.	1.0000	1.0000	1.0000	1.0000	0.9979	0.7293	0.1000	0.7293	0.9979	1.0000	1.0000	1.0000	1.0000
154.	1.0000	1.0000	1.0000	1.0000	0.9997	0.8093	0.1000	0.8093	0.9997	1.0000	1.0000	1.0000	1.0000
165.	1.0000	1.0000	1.0000	1.0000	1.0000	0.8850	0.1000	0.8850	1.0000	1.0000	1.0000	1.0000	1.0000
176.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9473	0.1000	0.9473	1.0000	1.0000	1.0000	1.0000	1.0000
187.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9861	0.1000	0.9861	1.0000	1.0000	1.0000	1.0000	1.0000
198.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9990	0.1000	0.9990	1.0000	1.0000	1.0000	1.0000	1.0000
209.	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.1000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
220.	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.1000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

TABLE A.45 COMMUNITY CENTER

THE POWER OF THE TEST OF THE HYPOTHESIS THAT $\mu_X = \mu_0$ WHEN THE SIGNIFICANCE LEVEL IS 0.05

N	(MX - μ_0)												
	-15.00	-12.50	-10.00	-7.50	-5.00	-2.50	0.00	2.50	5.00	7.50	10.00	12.50	15.00
11.	0.6352	0.4846	0.3364	0.2107	0.1199	0.0671	0.0500	0.0671	0.1199	0.2107	0.3364	0.4846	0.6352
22.	0.9175	0.7969	0.6074	0.3877	0.2004	0.0864	0.0500	0.0864	0.2004	0.3877	0.6074	0.7969	0.9175
33.	0.9880	0.9401	0.8030	0.5593	0.2902	0.1083	0.0500	0.1083	0.2902	0.5593	0.8030	0.9401	0.9880
44.	0.9989	0.9869	0.9171	0.7086	0.3871	0.1332	0.0500	0.1332	0.3871	0.7086	0.9171	0.9869	0.9989
55.	0.9999	0.9979	0.9713	0.8253	0.4883	0.1616	0.0500	0.1616	0.4883	0.8253	0.9713	0.9979	0.9999
66.	1.0000	0.9998	0.9921	0.9068	0.5900	0.1943	0.0500	0.1943	0.5900	0.9068	0.9921	0.9998	1.0000
77.	1.0000	1.0000	0.9984	0.9569	0.6880	0.2319	0.0500	0.2319	0.6880	0.9569	0.9984	1.0000	1.0000
88.	1.0000	1.0000	0.9998	0.9833	0.7776	0.2754	0.0500	0.2754	0.7776	0.9833	0.9998	1.0000	1.0000
99.	1.0000	1.0000	1.0000	0.9948	0.8542	0.3257	0.0500	0.3257	0.8542	0.9948	1.0000	1.0000	1.0000
110.	1.0000	1.0000	1.0000	0.9988	0.9145	0.3839	0.0500	0.3839	0.9145	0.9988	1.0000	1.0000	1.0000
121.	1.0000	1.0000	1.0000	0.9998	0.9568	0.4513	0.0500	0.4513	0.9568	0.9998	1.0000	1.0000	1.0000
132.	1.0000	1.0000	1.0000	1.0000	0.9823	0.5286	0.0500	0.5286	0.9823	1.0000	1.0000	1.0000	1.0000
143.	1.0000	1.0000	1.0000	1.0000	0.9946	0.6162	0.0500	0.6162	0.9946	1.0000	1.0000	1.0000	1.0000
154.	1.0000	1.0000	1.0000	1.0000	0.9990	0.7124	0.0500	0.7124	0.9990	1.0000	1.0000	1.0000	1.0000
165.	1.0000	1.0000	1.0000	1.0000	0.9999	0.8120	0.0500	0.8120	0.9999	1.0000	1.0000	1.0000	1.0000
176.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9040	0.0500	0.9040	1.0000	1.0000	1.0000	1.0000	1.0000
187.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9703	0.0500	0.9703	1.0000	1.0000	1.0000	1.0000	1.0000
198.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9973	0.0500	0.9973	1.0000	1.0000	1.0000	1.0000	1.0000
209.	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0500	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
220.	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0500	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

TABLE A.46 GYMNASIUM

THE POWER OF THE TEST OF THE HYPOTHESIS THAT $\mu_X = \mu_0$ WHEN THE SIGNIFICANCE LEVEL IS 0.20

N	(MX - μ_0)												
	-15.00	-12.50	-10.00	-7.50	-5.00	-2.50	0.00	2.50	5.00	7.50	10.00	12.50	15.00
25.	0.8134	0.7021	0.5690	0.4312	0.3108	0.2289	0.1998	0.2289	0.3108	0.4312	0.5690	0.7021	0.8134
50.	0.9686	0.9094	0.7923	0.6160	0.4173	0.2596	0.1998	0.2596	0.4173	0.6160	0.7923	0.9094	0.9686
75.	0.9961	0.9775	0.9111	0.7554	0.5177	0.2923	0.1998	0.2923	0.5177	0.7554	0.9111	0.9775	0.9961
100.	0.9996	0.9955	0.9665	0.8541	0.6107	0.3270	0.1998	0.3270	0.6107	0.8541	0.9665	0.9955	0.9996
125.	1.0000	0.9993	0.9891	0.9193	0.6947	0.3638	0.1998	0.3638	0.6947	0.9193	0.9891	0.9993	1.0000
150.	1.0000	0.9999	0.9970	0.9592	0.7688	0.4029	0.1998	0.4029	0.7688	0.9592	0.9970	0.9999	1.0000
175.	1.0000	1.0000	0.9993	0.9814	0.8320	0.4444	0.1998	0.4444	0.8320	0.9814	0.9993	1.0000	1.0000
200.	1.0000	1.0000	0.9999	0.9925	0.8839	0.4884	0.1998	0.4884	0.8839	0.9925	0.9999	1.0000	1.0000
225.	1.0000	1.0000	1.0000	0.9974	0.9245	0.5348	0.1998	0.5348	0.9245	0.9974	1.0000	1.0000	1.0000
250.	1.0000	1.0000	1.0000	0.9993	0.9545	0.5837	0.1998	0.5837	0.9545	0.9993	1.0000	1.0000	1.0000
275.	1.0000	1.0000	1.0000	0.9998	0.9751	0.6348	0.1998	0.6348	0.9751	0.9998	1.0000	1.0000	1.0000
300.	1.0000	1.0000	1.0000	1.0000	0.9879	0.6877	0.1998	0.6877	0.9879	1.0000	1.0000	1.0000	1.0000
325.	1.0000	1.0000	1.0000	1.0000	0.9950	0.7419	0.1998	0.7419	0.9950	1.0000	1.0000	1.0000	1.0000
350.	1.0000	1.0000	1.0000	1.0000	0.9983	0.7962	0.1998	0.7962	0.9983	1.0000	1.0000	1.0000	1.0000
375.	1.0000	1.0000	1.0000	1.0000	0.9996	0.8490	0.1998	0.8490	0.9996	1.0000	1.0000	1.0000	1.0000
400.	1.0000	1.0000	1.0000	1.0000	0.9999	0.8980	0.1998	0.8980	0.9999	1.0000	1.0000	1.0000	1.0000
425.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9400	0.1998	0.9400	1.0000	1.0000	1.0000	1.0000	1.0000
450.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9719	0.1998	0.9719	1.0000	1.0000	1.0000	1.0000	1.0000
475.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9912	0.1998	0.9912	1.0000	1.0000	1.0000	1.0000	1.0000
500.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9988	0.1998	0.9988	1.0000	1.0000	1.0000	1.0000	1.0000

TABLE A.47 GYMNASIUM

THE POWER OF THE TEST OF THE HYPOTHESIS THAT $\mu_X = \mu_0$ WHEN THE SIGNIFICANCE LEVEL IS 0.10

N	(MX - μ_0)												
	-15.00	-12.50	-10.00	-7.50	-5.00	-2.50	0.00	2.50	5.00	7.50	10.00	12.50	15.00
25.	0.7008	0.5656	0.4228	0.2912	0.1874	0.1221	0.1000	0.1221	0.1874	0.2912	0.4228	0.5656	0.7008
50.	0.9329	0.8350	0.6738	0.4713	0.2787	0.1462	0.1000	0.1462	0.2787	0.4713	0.6738	0.8350	0.9329
75.	0.9892	0.9496	0.8375	0.6283	0.3721	0.1723	0.1000	0.1723	0.3721	0.6283	0.8375	0.9496	0.9892
100.	0.9988	0.9877	0.9291	0.7552	0.4657	0.2008	0.1000	0.2008	0.4657	0.7552	0.9291	0.9877	0.9988
125.	0.9999	0.9976	0.9733	0.8502	0.5573	0.2319	0.1000	0.2319	0.5573	0.8502	0.9733	0.9976	0.9999
150.	1.0000	0.9997	0.9915	0.9159	0.6446	0.2660	0.1000	0.2660	0.6446	0.9159	0.9915	0.9997	1.0000
175.	1.0000	1.0000	0.9978	0.9573	0.7253	0.3032	0.1000	0.3032	0.7253	0.9573	0.9978	1.0000	1.0000
200.	1.0000	1.0000	0.9995	0.9807	0.7971	0.3440	0.1000	0.3440	0.7971	0.9807	0.9995	1.0000	1.0000
225.	1.0000	1.0000	0.9999	0.9925	0.8584	0.3888	0.1000	0.3888	0.8584	0.9925	0.9999	1.0000	1.0000
250.	1.0000	1.0000	1.0000	0.9975	0.9078	0.4377	0.1000	0.4377	0.9078	0.9975	1.0000	1.0000	1.0000
275.	1.0000	1.0000	1.0000	0.9994	0.9450	0.4912	0.1000	0.4912	0.9450	0.9994	1.0000	1.0000	1.0000
300.	1.0000	1.0000	1.0000	0.9999	0.9707	0.5494	0.1000	0.5494	0.9707	0.9999	1.0000	1.0000	1.0000
325.	1.0000	1.0000	1.0000	1.0000	0.9866	0.6121	0.1000	0.6121	0.9866	1.0000	1.0000	1.0000	1.0000
350.	1.0000	1.0000	1.0000	1.0000	0.9950	0.6788	0.1000	0.6788	0.9950	1.0000	1.0000	1.0000	1.0000
375.	1.0000	1.0000	1.0000	1.0000	0.9986	0.7481	0.1000	0.7481	0.9986	1.0000	1.0000	1.0000	1.0000
400.	1.0000	1.0000	1.0000	1.0000	0.9997	0.8177	0.1000	0.8177	0.9997	1.0000	1.0000	1.0000	1.0000
425.	1.0000	1.0000	1.0000	1.0000	1.0000	0.8834	0.1000	0.8834	1.0000	1.0000	1.0000	1.0000	1.0000
450.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9390	0.1000	0.9390	1.0000	1.0000	1.0000	1.0000	1.0000
475.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9778	0.1000	0.9778	1.0000	1.0000	1.0000	1.0000	1.0000
500.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9961	0.1000	0.9961	1.0000	1.0000	1.0000	1.0000	1.0000

TABLE A.48 GYMNASIUM

THE POWER OF THE TEST OF THE HYPOTHESIS THAT $\mu_X = \mu_0$ WHEN THE SIGNIFICANCE LEVEL IS 0.05

N	(MX - μ_0)												
	-15.00	-12.50	-10.00	-7.50	-5.00	-2.50	0.00	2.50	5.00	7.50	10.00	12.50	15.00
25.	0.5838	0.4403	0.3045	0.1922	0.1118	0.0651	0.0500	0.0651	0.1118	0.1922	0.3045	0.4403	0.5838
50.	0.8816	0.7451	0.5538	0.3490	0.1821	0.0820	0.0500	0.0820	0.1821	0.3490	0.5538	0.7451	0.8816
75.	0.9764	0.9076	0.7483	0.5048	0.2599	0.1008	0.0500	0.1008	0.2599	0.5048	0.7483	0.9076	0.9764
100.	0.9966	0.9734	0.8758	0.6464	0.3437	0.1218	0.0500	0.1218	0.3437	0.6464	0.8758	0.9734	0.9966
125.	0.9997	0.9940	0.9470	0.7650	0.4319	0.1454	0.0500	0.1454	0.4319	0.7650	0.9470	0.9940	0.9997
150.	1.0000	0.9990	0.9808	0.8561	0.5221	0.1720	0.0500	0.1720	0.5221	0.8561	0.9808	0.9990	1.0000
175.	1.0000	0.9999	0.9942	0.9200	0.6116	0.2020	0.0500	0.2020	0.6116	0.9200	0.9942	0.9999	1.0000
200.	1.0000	1.0000	0.9986	0.9603	0.6972	0.2359	0.0500	0.2359	0.6972	0.9603	0.9986	1.0000	1.0000
225.	1.0000	1.0000	0.9997	0.9829	0.7758	0.2744	0.0500	0.2744	0.7758	0.9829	0.9997	1.0000	1.0000
250.	1.0000	1.0000	1.0000	0.9938	0.8443	0.3181	0.0500	0.3181	0.8443	0.9938	1.0000	1.0000	1.0000
275.	1.0000	1.0000	1.0000	0.9982	0.9003	0.3677	0.0500	0.3677	0.9003	0.9982	1.0000	1.0000	1.0000
300.	1.0000	1.0000	1.0000	0.9996	0.9425	0.4241	0.0500	0.4241	0.9425	0.9996	1.0000	1.0000	1.0000
325.	1.0000	1.0000	1.0000	0.9999	0.9712	0.4878	0.0500	0.4878	0.9712	0.9999	1.0000	1.0000	1.0000
350.	1.0000	1.0000	1.0000	1.0000	0.9880	0.5592	0.0500	0.5592	0.9880	1.0000	1.0000	1.0000	1.0000
375.	1.0000	1.0000	1.0000	1.0000	0.9962	0.6382	0.0500	0.6382	0.9962	1.0000	1.0000	1.0000	1.0000
400.	1.0000	1.0000	1.0000	1.0000	0.9992	0.7230	0.0500	0.7230	0.9992	1.0000	1.0000	1.0000	1.0000
425.	1.0000	1.0000	1.0000	1.0000	0.9999	0.8097	0.0500	0.8097	0.9999	1.0000	1.0000	1.0000	1.0000
450.	1.0000	1.0000	1.0000	1.0000	1.0000	0.8909	0.0500	0.8909	1.0000	1.0000	1.0000	1.0000	1.0000
475.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9550	0.0500	0.9550	1.0000	1.0000	1.0000	1.0000	1.0000
500.	1.0000	1.0000	1.0000	1.0000	1.0000	0.9906	0.0500	0.9906	1.0000	1.0000	1.0000	1.0000	1.0000

APPENDIX B

NUMBER OF BUILDINGS IN EACH STRATUM

This Appendix gives a contingency table for each building type showing the number of buildings listed on the 1980 F.W. Dodge Tapes that are in each of the 38 strata. The row totals show the number of buildings in each Census Division. The column totals show the number of buildings in each climate zone. Non-existent strata are identified by the symbol -, while a 0 indicates that the strata exists, but there were no construction starts or plans for 1980.

Large Office

<u>Census Division</u>	<u>Climate Zones</u>						<u>Totals</u>
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>6</u>	<u>7</u>	
New England (NE)	1	42	-	-	-	-	43
Mid-Atlantic (NE)	0	53	54	-	-	-	107
So. Atlantic (S)	0	0	69	49	47	10	175
E. So. Central (S)	-	-	10	14	2	1	27
W. So. Central (S)	-	-	0	32	105	65	202
E. No. Central (NC)	16	98	14	-	-	-	128
W. No. Central (NC)	18	10	31	0	-	-	59
Mountain (W)	5	6	4	0	21	7	83
Pacific (W)	3	1	24	177	4	6	215
<hr/>							
Totals	43	250	206	272	179	89	1039

Small Office

<u>Census Division</u>		<u>Climate Zones</u>						<u>Totals</u>
		<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>6</u>	<u>7</u>	
New England	(NE)	43	182	-	-	-	-	225
Mid-Atlantic	(NE)	10	230	237	-	-	-	477
So. Atlantic	(S)	9	5	345	576	969	91	1995
E. So. Central	(S)	-	-	118	198	58	49	423
W. So. Central	(S)	-	-	4	221	891	501	1617
E. No. Central	(NC)	203	1072	194	-	-	-	1469
W. No. Central	(NC)	185	156	189	0	-	-	530
Mountain	(W)	97	293	62	41	248	58	799
Pacific	(W)	72	41	294	1299	32	127	1865
<hr/>								
Totals		619	1979	1443	2335	2198	826	9400

High-Rise Apartment

<u>Census Division</u>	<u>Climate Zones</u>						<u>Totals</u>
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>6</u>	<u>7</u>	
New England (NE)	10	65	-	-	-	-	75
Mid-Atlantic (NE)	2	56	67	-	-	-	125
So. Atlantic (S)	0	0	61	18	407	7	493
E. So. Central (S)	-	-	9	16	4	1	30
W. So. Central (S)	-	-	0	6	17	13	36
E. No. Central (NC)	10	104	6	-	-	-	120
W. No. Central (NC)	27	7	17	0	-	-	51
Mountain (W)	15	21	0	0	6	0	42
Pacific (W)	3	0	34	84	20	2	143
<hr/>							
Totals	67	253	194	124	454	23	1115

Low-Rise Apartment

<u>Census Division</u>		<u>Climate Zones</u>						<u>Totals</u>
		<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>6</u>	<u>7</u>	
New England	(NE)	111	229	-	-	-	-	340
Mid-Atlantic	(NE)	27	241	244	-	-	-	512
So. Atlantic	(S)	7	8	354	682	2218	155	3424
E. So. Central	(S)	-	-	201	215	68	86	570
W. So. Central	(S)	-	-	3	190	581	304	1078
E. No. Central	(NC)	409	1261	285	-	-	-	1955
W. No. Central	(NC)	438	228	308	2	-	-	976
Mountain	(W)	161	340	69	40	508	74	1192
Pacific	(W)	102	43	461	2354	32	214	3206
<hr/>								
Totals		1255	2350	1925	3483	3407	833	13253

Elementary School

<u>Census Division</u>	<u>Climate Zones</u>						<u>Totals</u>
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>6</u>	<u>7</u>	
New England (NE)	8	1	-	-	-	-	9
Mid-Atlantic (NE)	0	9	4	-	-	-	13
So. Atlantic (S)	0	0	18	24	23	3	68
E. So. Central (S)	-	-	5	11	3	1	20
W. So. Central (S)	-	-	1	18	21	30	70
E. No. Central (NC)	5	24	6	-	-	-	35
W. No. Central (NC)	12	9	15	0	-	-	36
Mountain (W)	16	20	2	2	9	3	52
Pacific (W)	14	8	21	18	3	4	68
<hr/>							
Totals	55	71	72	73	59	41	371

Secondary School

<u>Census Division</u>	<u>Climate Zones</u>						<u>Totals</u>
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>6</u>	<u>7</u>	
New England (NE)	7	4	-	-	-	-	11
Mid-Atlantic (NE)	1	11	16	-	-	-	28
So. Atlantic (S)	0	0	19	29	32	11	91
E. So. Central (S)	-	-	9	22	7	10	48
W. So. Central (S)	-	-	3	34	48	82	167
E. No. Central (NC)	12	46	14	-	-	-	72
W. No. Central (NC)	10	12	22	0	-	-	44
Mountain (W)	19	23	3	7	12	1	65
Pacific (W)	18	10	21	16	5	0	70
<hr/>							
Totals	67	106	107	108	104	104	596

Clinic

<u>Census Division</u>	<u>Climate Zones</u>						<u>Totals</u>
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>6</u>	<u>7</u>	
New England (NE)	14	39	-	-	-	-	53
Mid-Atlantic (NE)	8	64	58	-	-	-	130
So. Atlantic (S)	1	1	70	123	177	23	395
E. So. Central (S)	-	-	42	72	15	20	149
W. So. Central (S)	-	-	1	57	92	92	242
E No. Central (NC)	56	227	50	-	-	-	333
W. No. Central (NC)	46	26	76	0	-	-	148
Mountain (W)	13	16	10	7	24	1	71
Pacific (W)	15	2	42	109	0	13	181
<hr/>							
Totals	153	375	349	368	308	149	1702

Hospital

<u>Census Division</u>	<u>Climate Zones</u>						<u>Totals</u>
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>6</u>	<u>7</u>	
New England (NE)	1	6	-	-	-	-	7
Mid-Atlantic (NE)	0	3	4	-	-	-	7
So. Atlantic (S)	0	0	5	14	10	2	31
E. So. Central (S)	-	-	4	2	1	2	9
W. So. Central (S)	-	-	0	6	9	3	18
E. No. Central (NC)	1	21	5	-	-	-	27
W. No. Central (NC)	4	4	2	0	-	-	10
Mountain (W)	6	7	0	1	1	1	16
Pacific (W)	3	2	6	7	0	1	19
<hr/>							
Totals	15	43	26	30	21	9	144

Nursing Home*

<u>Census Division</u>	<u>Climate Zones</u>						<u>Totals</u>
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>6</u>	<u>7</u>	
New England (NE)	0	0	-	-	-	-	0
Mid-Atlantic (NE)	0	0	0	-	-	-	0
So. Atlantic (S)	0	0	0	0	0	0	0
E. So. Central (S)	-	-	0	0	0	0	0
W. So. Central (S)	-	-	0	0	0	0	0
E No. Central (NC)	0	0	0	-	-	-	0
W. No. Central (NC)	0	0	0	0	-	-	0
Mountain (W)	0	0	0	0	0	0	0
Pacific (W)	1	4	6	7	1	0	19
<hr/>							
Totals	1	4	6	7	1	0	19

* Nursing Home is apparently an ill-defined category.

		Store						
<u>Census Division</u>		<u>Climate Zones</u>						<u>Totals</u>
		<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>6</u>	<u>7</u>	
New England	(NE)	18	103	-	-	-	-	121
Mid-Atlantic	(NE)	8	187	140	-	-	-	335
So. Atlantic	(S)	2	2	254	342	350	76	1206
E. So. Central	(S)	-	-	78	140	44	73	335
W. So. Central	(S)	-	-	1	153	402	284	840
E. No. Central	(NC)	103	651	125	-	-	-	879
W. No. Central	(NC)	128	125	157	0	-	-	410
Mountain	(W)	39	102	25	18	172	88	444
Pacific	(W)	22	8	79	676	13	106	904
<hr/>								
Totals		320	1178	859	1329	1161	627	5474

Shopping Center

<u>Census Division</u>	<u>Climate Zones</u>						<u>Totals</u>
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>6</u>	<u>7</u>	
New England (NE)	5	12	-	-	-	-	17
Mid-Atlantic (NE)	2	34	24	-	-	-	60
So Atlantic (S)	0	1	39	59	174	17	290
E. So. Central (S)	-	-	21	30	6	7	64
W. So. Central (S)	-	-	2	26	117	79	224
E No. Central (NC)	19	143	20	-	-	-	182
W. No. Central (NC)	11	12	17	0	-	-	40
Mountain (W)	15	32	0	7	37	7	98
Pacific (W)	11	6	23	171	2	18	231
<hr/>							
Totals	63	240	146	293	336	128	1206

Hotel/Motel

<u>Census Division</u>	<u>Climate Zones</u>						<u>Totals</u>
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>6</u>	<u>7</u>	
New England (NE)	8	11	-	-	-	-	19
Mid-Atlantic (NE)	2	18	9	-	-	-	29
So. Atlantic (S)	3	0	20	17	42	8	90
E. So. Central (S)	-	-	4	12	5	2	23
W. So. Central (S)	-	-	0	17	34	30	81
E. No. Central (NC)	14	41	8	-	-	-	63
W. No. Central (NC)	18	8	19	0	-	-	45
Mountain (W)	18	21	2	2	15	4	62
Pacific (W)	2	1	20	57	7	14	101
<hr/>							
Totals	65	100	82	105	103	58	513

Warehouse

<u>Census Division</u>	<u>Climate Zones</u>						<u>Totals</u>
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>6</u>	<u>7</u>	
New England (NE)	35	162	-	-	-	-	197
Mid-Atlantic (NE)	9	227	255	-	-	-	491
So. Atlantic (S)	4	1	317	466	1074	79	1941
E. So. Central (S)	-	-	111	164	46	35	356
W. So. Central (S)	-	-	2	190	670	524	1386
E. No. Central (NC)	190	1091	215	-	-	-	1496
W. No. Central (NC)	219	137	194	0	-	-	550
Mountain (W)	40	180	46	42	187	38	533
Pacific (W)	64	10	150	704	44	126	1098
<hr/>							
Totals	561	1808	1290	1566	2021	802	8048

Theater/Auditorium

<u>Census Division</u>		<u>Climate Zones</u>						<u>Totals</u>
		<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>6</u>	<u>7</u>	
New England	(NE)	3	2	-	-	-	-	5
Mid-Atlantic	(NE)	0	5	1	-	-	-	6
So. Atlantic	(S)	0	0	4	3	14	2	23
E. So. Central	(S)	-	-	6	11	3	0	20
W. So. Central	(S)	-	-	0	11	14	15	40
E. No. Central	(NC)	1	16	5	-	-	-	22
W. No. Central	(NC)	2	2	7	0	-	-	11
Mountain	(W)	2	4	1	1	4	1	13
Pacific	(W)	3	2	8	16	1	8	38
<hr/>								
Totals		11	31	32	42	36	26	178

Community Center

<u>Census Division</u>	<u>Climate Zones</u>						<u>Totals</u>
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>6</u>	<u>7</u>	
New England (NE)	0	1	-	-	-	-	1
Mid-Atlantic (NE)	0	7	1	-	-	-	8
So. Atlantic (S)	0	0	5	2	13	1	21
E. So. Central (S)	-	-	4	8	0	0	12
W. So. Central (S)	-	-	1	3	2	5	11
E. No. Central (NC)	9	10	3	-	-	-	22
W. No. Central (NC)	4	1	7	0	-	-	12
Mountain (W)	7	17	1	2	2	1	30
Pacific (W)	13	12	31	42	7	1	106
<hr/>							
Totals	33	48	53	57	24	8	223

Gymnasium

<u>Census Division</u>	<u>Climate Zones</u>						<u>Totals</u>
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>6</u>	<u>7</u>	
New England (NE)	4	18	-	-	-	-	22
Mid-Atlantic (NE)	0	28	15	-	-	-	43
So. Atlantic (S)	1	0	27	51	42	6	127
E. So. Central (S)	-	-	5	19	4	1	29
W. So. Central (S)	-	-	1	31	45	52	129
E. No. Central (NC)	7	50	13	-	-	-	70
W. No. Central (NC)	12	4	21	0	-	-	37
Mountain (W)	7	17	0	3	9	3	39
Pacific (W)	9	8	20	38	2	5	82
<hr/>							
Totals	40	125	102	142	102	67	578

DISTRIBUTION LIST

No. of
Copies

No. of
Copies

OFFSITE

ONSITE

A. A. Churm
DOE Patent Division
9800 S. Cass Avenue
Argonne, IL 60439

DOE Richland Operations Office

H. E. Ransom

27 DOE Technical Information Center

22 Pacific Northwest Laboratory

1 H. Misuriello
W. S. Fleming & Associates, Inc.
Two Metro Plaza
Suite 204
8240 Professional Place
Landover, Maryland 20785

W. M. Bowen (5)
D. E. Deonigi
T. J. Foley
J. A. Mahaffey
A. L. Nieves (5)
A. R. Olsen
T. L. Willke
Publishing Coordination (2)
Technical Information (5)

1 Gilford Deringer and Company
719 8th Street, S.E.
Washington, D.C. 20003

5 R. Menge
Building & Community Systems
Department of Energy
Forrestal Bldg.
1000 Independence Avenue
Washington, D.C. 20585