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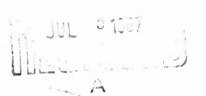
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TABLES OF JOINT PROBABILITIES USEFUL IN EVALUATING MIXED ACCEPTANCE SAMPLING PLANS

by

E. G. Schilling

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1. INTRODUCTION

This report supplements Technical Reports No. N-26 [1] and No. N-27 [2] and provides tables for the evaluation of OC curves and associated measures of dependent mixed variables-attributes sampling plans for the case of single specification limit, and known standard deviation, assuming a normal distribution. The tables give values of $P_n(i,x>A)$, the joint probability of a sample mean greater than some limit A and exactly i defectives in a sample, for sample sizes n=4 to 10, values of i=0, 1, 2, and fraction defective p=.005, .01, .02, .05, .10, .15, .20.

These tables can be used in assessing the properties of various types of dependent mixed plans, by setting up the appropriate equations for such measures as the probability of acceptance (P_a), average sample number (ASN), average outgoing quality (AOQ), and average total inspection (ATI). The method for evaluating one such plan of particular importance is presented below for reference.

2. PROCEDURE AND EVALUATION

2.1 Procedure

Technical Report No. N-27 presented a generalized dependent mixed

The material in this report is based in part on work being done in preparation of a doctoral dissertation at Rutgers - The State University.

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procedure, with provision for two attributes acceptance numbers, which is felt to be especially advantageous because of its potential and flexibility. This procedure is given below together with the formulas that apply to it. The formulas are given for the case of an upper specification limit (U). When a lower specification limit (L) is involved, the procedure and the formulas are easily modified by reversing all inequalities in the variables constituent of the plan and changing the sign of the argument in the tables given in the appendix to convert to tables of $P_n(i,x\leq A)$.

Let:

N = lot size

n₁ = first sample size

n₂ = second sample size

 $A = acceptance limit^2$ on sample mean (\bar{x})

c₁ = attributes acceptance number on first sample

c₂ = attributes acceptance number on second sample.

The steps for carrying out the generalized plan are as follows:

- 1. Determine the parameters of the mixed plan: n₁, n₂, A, c₁, c₂.
- 2. Take a random sample of n, from the lot.
- 3. If the sample average $x \le A$, accept the lot.
- 4. If the sample average $\overline{x} > A$, examine the first sample for the number of defectives d_1 therein.
- 5. If $d_1 > c_1$, reject the lot.
- 6. If d₁ ≤ c₁, take a second random sample of n₂ from the lot and determine the number of defectives d₂ therein.

²Of the several methods of specifying the variables constituent of known standard deviation (σ) variables plans, designation by sample size (n_1) and acceptance limit on the sample average (A) is used here since it simplifies the notation somewhat. Note that $A = (U - k\sigma)$ for upper specification limit (U) and standard variables acceptance factor k. $A = (L + k\sigma)$ if a lower specification limit (L) is employed.

- 7. If in the combined sample of $n = n_1 + n_2$, the total number of defectives $d = d_1 + d_2 \le c_2$, accept the lot.
- 8. If $d > c_2$, reject the lot.

When semi-curtailed inspection is employed, a desirable practice and normally to be recommended, the procedure remains the same, except that if c₂ is exceeded at any time during the inspection of the second sample, inspection is stopped at once and the lot is rejected.

The operating characteristic curve and associated measures of the plan can be determined using the formulas shown in Table 1, where,

- P(V) = probability of V
- P(V,W) = joint probability of V and W
- P(i;n) = probability of i defectives in a sample of n. Under semi-curtailed inspection the formulas for P_a , ATI, and AOQ remain the same as for complete inspection of the second sample and are as shown in Table 1; hever, the average sample number under curtailed inspection (ASN_c) becomes that shown in Table 1.

TABLE 1
FORMULAS FOR PROBABILITY OF ACCEPTANCE AND ASSOCIATED MEASURES

Measure	Formula
Probability of Acceptance (Pa)	$P_{\mathbf{a}} = P(\overline{\mathbf{x}} \leq \mathbf{A}) + \sum_{\mathbf{j}=0}^{\mathbf{c}_{1}} \sum_{\mathbf{j}=0}^{\mathbf{c}_{2}-\mathbf{i}} (\mathbf{i}, \overline{\mathbf{x}} > \mathbf{A}) P(\mathbf{j}; \mathbf{n}_{2})$
Average Sample Number (ASN)	$ASN = n_1 + n_2 \sum_{i=0}^{c_1} P_{n_1}(i, \overline{x} > A)$
Average Sample Number for Semi-curtailed Inspection (ASN _c)	$ASN_{c} = n_{1} + \sum_{i=0}^{c_{1}} P_{n_{1}}(i, \bar{x} > A) \begin{bmatrix} & & & \\ & \ddots & & \\ & & & \\ & \frac{c_{2}-i+1}{p} & \sum_{k=c_{2}-i+2}^{n_{2}+1} & P(k; n_{2}+1) + n_{2} \sum_{j=0}^{c} P(j; n_{2}) \end{bmatrix}$
Average Total Inspection (ATI)	ATI = ASN + (N-n ₁) $\sum_{i=c_1+1}^{n_1} P_{n_1}(i,\overline{x} > A) +$ $(N-n_1-n_2)(1-P_a - \sum_{i=c_1+1}^{n_1} P_{n_1}(i,\overline{x} > A))$
Average Outgoing Quality (AOQ)	$AOQ = \frac{p}{N} \left[P(\overline{x} \le A)(N-n_1) + (P_a-P(\overline{x} \le A))(N-n_1-n_2) \right]$

It is possible to evaluate the expressions shown above using tables of $P_n(i,\overline{x}>A)$ for a "standard normal universe" (i.e., normal, $\mu=0$, $\sigma=1$) as given in the appendix of this report. To accomplish this the value of $P_n(i,\overline{x}>A)$ for a particular application can be found by use of the z transformation.

Let:

μ = population (process) mean

 σ = population (process) standard deviation - known

p = population (process) fraction defective

x = sample mean.

Then:

$$P_n(i,\overline{x} > A) = P_n(i,\overline{z} > z_A)$$

where \overline{z} and $z_{\underline{A}}$ are standard normal deviates such that

$$\frac{1}{z} = \frac{1}{\sigma}$$

and

$$z_A = \frac{A - 1}{\sigma}$$
.

The tables in the appendix are entered with these values for the sample mean and the acceptance limit. Directions for their use are given in the appendix. Note that for values of z < -2.50,

$$P_n(i,\overline{z} > z_A) \simeq P(i;n)$$

Variables plans to be incorporated in a mixed procedure are often expressed in terms of sample size, n, and acceptance factor k. The relationship between k, A, z_A and z_U is shown in Figure 1.

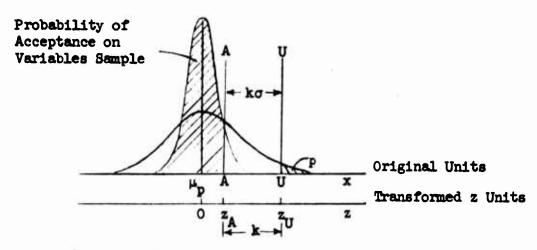


Figure 1 - Relationship Between k, A, z_A and z_U

2.2 Example

As an illustration of the method of evaluating a given plan, consider the following example:

The maximum temperature of operation for a certain device is specified as 209.0°F. The standard deviation of the process producing these devices is known to be 4.0°F from past experience substantiated by a control chart. Suppose, arbitrarily, the plan³ to be applied is as follows:

Here:

$$U = 209.0^{\circ}F$$

$$\sigma = 4.0^{\circ}F$$

$$A = U - k\sigma = 209.0 - 2.0(4.0) = 201.0^{\circ}F.$$

For this the procedure would be carried out as follows:

Normally we would not expect to use $c_1=1$ for a small sample of $n_1=5$, but it is used here to show more fully what calculations may be involved.

STEP	RESULT OR ACTION
1. Determine parameters of plan.	$n_1 = 5$, $n_2 = 20$, $A = 201.0$, $c_1 = 1$, $c_2 = 2$.
2. Take sample of n ₁ = 5 from lot.	First sample results: 205, 202, 208, 198, 207.
3. If $\overline{x} \le A$, accept the lot.	$\bar{x} = 204$; not $\leq A = 201.0$, so go to next step.
4. If x > A, examine first sample for number of defectives, d ₁ , therein.	No sample value > $U = 209.0$, so $d_1 = 0$.
5. If $d_1 > c_1$, reject the lot.	$d_1 = C$; not > $c_1 = 1$, so go to next step.
<pre>6. If d₁ ≤ c₁ take second sample of n₂ = 20 and determine number of defectives, d₂, therein.</pre>	Second sample results: 3 defectives, in $n_2 = 20$, so $d_2 = 3$.
7. If in combined sample, total defectives d = d ₁ + d ₂ \le c ₂ , accept the lot.	$d = d_1 + d_2 = 0 + 3 = 3 \text{ not } \le c_2 = 2, \text{ so}$ go to next step.
8. If d > c ₂ , reject the lot.	$d = 3 > c_2 = 2$; reject the lot.

Suppose the probability of acceptance and associated measures are to be calculated for fraction defective p=.02.

Thus, since the distribution is normal, p=.02 implies the distribution of individuals for p=.02 will be as indicated in Figure 2, and from a normal probability table we find $z_U=.205$ for p=.02. Thus⁴,

$$z_A = z_U - k = 2.05 - 2.0 = 0.05$$

⁴The example is for a mixed plan specified in terms of n_1 , k, n_2 , c_1 and c_2 . For plans having variables constituent specified directly in terms of acceptance limit A and first sample size n_1 , determine z_A as $z_A = z_U - (\frac{U-A}{\sigma})$. The relationship between μ , A, U, z_A , z_U and k is shown in Figure 1.

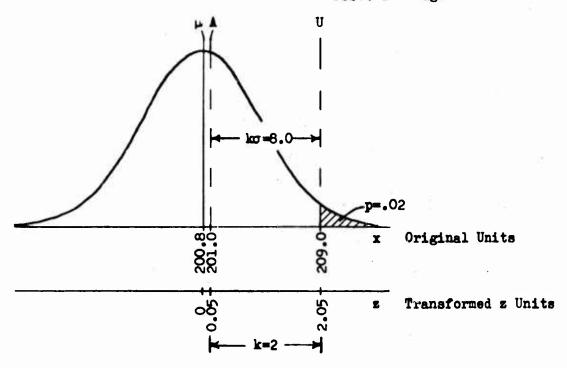


Figure 2 - Distribution When p=.02, Known g=4.0

The following, then; are the probability of acceptance and associated measures of the plan given above. Note, that in calculating the probability of acceptance under the variables part of the plan, $P(\overline{x} \le A)$, z_A is adjusted by multiplying by $\sqrt{n_1}$ to express the deviation of A from μ in terms of the standard error of the mean, $\sigma_{\overline{x}} = \sigma_{/\!/\overline{n}}$, so that the standard normal probability tables can be used. No such adjustment is necessary in finding values of $P_n(1,\overline{x} > A)$ in the appendix since the tables are constructed to be evaluated directly in terms of the standard deviation of individuals, σ .

1. Probability of Acceptance (at r = .02)

$$P_{\mathbf{a}} = P(\overline{\mathbf{x}} \leq \mathbf{A}) + \sum_{\mathbf{j}=0}^{C_{2}-\mathbf{i}} \sum_{\mathbf{j}=0}^{C_{1}} P_{\mathbf{n}}(\mathbf{i}, \overline{\mathbf{x}} > \mathbf{A}) P(\mathbf{j}; 20)$$

$$= P(\overline{\mathbf{x}} \leq \sqrt{n_{1}} \mathbf{z}_{i}) + P_{5}(0, \overline{\mathbf{z}} > \mathbf{z}_{i}) \sum_{\mathbf{j}=0}^{C} P(\mathbf{j}; 20) + P_{5}(1, \overline{\mathbf{z}} > \mathbf{z}_{i}) \sum_{\mathbf{j}=0}^{C} (\mathbf{j}; 20)$$

$$= P(\overline{\mathbf{z}} \leq \sqrt{5}(0.05)) + P_{5}(0, \overline{\mathbf{z}} > 0.05) \sum_{\mathbf{j}=0}^{C} P(\mathbf{j}; 20) + P_{5}(1, \overline{\mathbf{z}} > 0.05) \sum_{\mathbf{j}=0}^{C} (\mathbf{j}; 20)$$

$$= .5445 + .3736(.9929) + .078(.9401)$$

$$= .988$$

2. Average Sample Number (at p = .02)

ASN =
$$n_1 + n_2 \sum_{i=0}^{c_1} P_{n_1}(i, \overline{x} > A)$$

= $5 + 20 \sum_{i=0}^{c} P_{5}(i, \overline{z} > z_A)$
= $5 + 20 \sum_{i=0}^{c} P_{5}(i, \overline{z} > 0.05)$
= $5 + 20 [.3736 + .078]$
= 14.04

= 13.99

3. Average Sample Number Under Semi-Curtailed Inspection (at p = .02)

$$ASN_{\mathbf{c}} = n_{1} + \sum_{\mathbf{i}=0}^{\mathbf{c}_{1}} P_{\mathbf{n}_{1}}(\mathbf{i}, \mathbf{x} > \mathbf{A}) \left[\frac{\mathbf{c}_{2} - \mathbf{i} + \mathbf{1}}{p} \sum_{\mathbf{k} = \mathbf{c}_{2} - \mathbf{i} + 2}^{\mathbf{n}_{2} + \mathbf{1}} + n_{2} \sum_{\mathbf{j} = 0}^{\mathbf{c}_{2} - \mathbf{i}} P(\mathbf{j}; \mathbf{n}_{2}) \right]$$

$$= 5 + \sum_{\mathbf{i}=0}^{\mathbf{l}} P_{\mathbf{j}}(\mathbf{i}, \mathbf{z} > 0.05) \left[\frac{2 - \mathbf{i} + \mathbf{1}}{p} \sum_{\mathbf{k} = \mathbf{c}_{2} - \mathbf{i} + 2}^{20 + \mathbf{1}} P(\mathbf{k}; 20 + \mathbf{1}) + 20 \sum_{\mathbf{j} = 0}^{20} P(\mathbf{j}; 20) \right]$$

$$= 5 + .3736 \left[\frac{3 - 0}{.02} \sum_{\mathbf{k} = 4 - 0}^{21} P(\mathbf{k}; 21) + 20 \sum_{\mathbf{j} = 0}^{20} P(\mathbf{j}; 20) \right]$$

$$+ .078 \left[\frac{3 - 1}{.02} \sum_{\mathbf{k} = 4 - 1}^{21} P(\mathbf{k}; 21) + 20 \sum_{\mathbf{j} = 0}^{2-1} P(\mathbf{j}; 20) \right]$$

$$= 5 + .3736 \left[150(.0007) + 20(.9929) \right] + .078 \left[100(.0081) + 20(.9401) \right]$$

4. Average Total Inspection, for Lot Size N=1000 (at p = .02)

ATI = ASN +
$$(N-n_1)$$
 $\sum_{i=c_1+1}^{n_1} P_{n_1}(i,\overline{x} > A) + (N-n_1-n_2) (1-P_a - \sum_{i=c_1+1}^{n_1} P_{n_1}(i,\overline{x} > A))$

= ASN + (1000-5)
$$\sum_{i=1+1}^{20} P_5(i,\overline{z} > 0.05) + (1000-5-20) (1-P_a - \sum_{i=1+1}^{n_1} P_5(i,\overline{z} > 0.05))$$

but

$$\sum_{i=2}^{5} P_{5}(i, \overline{x} > A) = P(\overline{x} > A) - \sum_{i=0}^{1} P_{5}(i, \overline{x} > A)$$

$$\sum_{i=0}^{5} P_{5}(i, \overline{z} > 0.05) = P(\overline{z} > \sqrt{5}(0.05)) - \sum_{i=0}^{1} P_{5}(i, \overline{z} > 0.05)$$

$$= .4555 - (.3736 + .078)$$

80

= .004

5. Average Outgoing Quality, for Lot Size = 1000 (at p = .02)

$$AOQ = \frac{p}{N} \left[P(\overline{x} \le A)(N-n_1) + (P_a-P(\overline{x} \le A))(N-n_1-n_2) \right]$$

$$= \frac{O2}{1000} \left[P(\overline{z} \le \sqrt{n_1}z_A)(1000-5) + (.988-P(\overline{z} \le \sqrt{n_1}z_A))(1000-5-20) \right]$$

$$= .00002 \left[.5445(995) + (.998-.5445)(975) \right]$$

$$= .0197$$

3. VALUES OF
$$P_n(i, \bar{x} > A)$$

3.1 The Nature of $P_n(i, \bar{x} > A)$

As indicated in Technical Report N-26 [1], the probability $P_n(i,\overline{x} > A)$ can be evaluated by use of the formulas:

$$P_{n}(i,\overline{z} > z_{A}) = \int_{z_{A}}^{z_{U}} \sqrt{\frac{nt^{2}}{2\pi}} e \qquad F_{n}(z_{U}-t)dt \qquad , i = 0$$

and,

$$P_{n}(i,\overline{z} > z_{A}) = {n \choose i} \int_{z_{U}}^{\infty} \frac{z_{U}}{2\pi} e^{-\frac{1}{2}[iw^{2}+(n-i)y^{2}]}$$

$$z_{U} = \frac{nz_{A}-iw}{n-i}$$

$$\mathbf{F_i}(\mathbf{w}-\mathbf{z_U})\mathbf{F_{n-i}}(\mathbf{z_U}-\mathbf{y})d\mathbf{y}d\mathbf{w}$$
, $\mathbf{i} > 0$

where

 $z_{\underline{A}} = z$ value of acceptance limit for the sample mean

 $z_{H} = z$ value of the upper specification limit

z = z value of a sample mean

t, y, w = variables of integration

 $F_n(u) = \text{cumulative probability of the extreme deviate from the sample mean in studentized form (u) from a sample of n as tabulated by Nair [3] and Grubbs [4].$

 $P_n(i,\overline{z}>z_A)$, then, represents the probability desired for samples taken from a standard normal universe, i.e. a normal distribution having mean 0 and standard deviation 1. Using the z transformation, for a particular value of i:

$$P_n(i,\overline{x} > A) = P_n(i,\overline{z} = (\frac{\overline{x}-\mu}{\sigma}) > z_A = (\frac{A-\mu}{\sigma}))$$

and conversely

$$P_{n}(i,\overline{z} > z_{A}) = P_{n}(i,\overline{x} = (\overline{z}\sigma + \mu) > A = (z_{A}\sigma + \mu))$$

3.2 Computation of Tables

Values of $P_n(i,\overline{x}>A)$ for samples from a standard normal universe were calculated on the 7040 computer at the Computation Center of Rutgers.— The State University using a program based on the scheme presented in [1]. This program integrates, using the extended Simpson's rule, with a provision for varying the number of intervals automatically to achieve less than a predetermined residual error in the resulting answer. All interpolations are performed using the Lagrangian six point formula which has proved to be more than adequate in most cases. The routine was designed to accept either the Nair [3] or the Grubbs [4] tables of $F_n(u)$ as input⁵. For samples of size less than 10, Nair's tables are to be preferred because of smaller increments in the argument and greater precision. Grubbs' tables can be employed for sample sizes 10 to 25. Tables of $P_n(0,\overline{x}>A)$ were prepared and used as input for computation of $P_n(i,\overline{x}>A)$ for acceptance numbers greater than zero as indicated in [1].

The program was designed to calculate the residual error for each integration; if the error exceeded a predetermined limit the number of intervals was automatically increased until the error was made small enough or until the number of intervals reached 1000. The final printout included the residual error for each integration. Residual error for all entries in the appendix is less than 5×10^{-6} .

Generated and propagated error were also investigated. Forward difference tables were prepared on all input data, i.e., $F_{\rm n}(u)$ and

 $^{^{5}}F_{n}(u)$ is the cumulative probability of the extreme deviate from the sample mean in studentized form.

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 $P_n(0,\overline{z}>z_A)$, to assess the generated error resulting from the interpolations performed and to check their accuracy. Propagated error throughout the entire program was investigated by examining the increment of the function involved as approximated by the total differential. Thus, an upper bound was determined for the magnitude of the maximum error 6 . Because of the extremely conservative nature of this approach the actual error in the tabulated values is expected to be much less than the upper bound. As a result the values presented in the appendix are believed to be accurate to 4 places when c=0 and 3 places when c=1, 2.

For sample sizes less than 10 the <u>upper bound</u> was determined as 5×10^{-5} for c = 0; 5×10^{-5} for c = 1, 2. For sample size 10 the upper bound was 5×10^{-5} for c = 0; 6×10^{-3} for c = 1 and 2×10^{-2} for c = 2.

4. REFERENCES

- [1] Schilling, E. G. and H. F. Dodge. On Some Joint Probabilities Useful in Mixed Acceptance Sampling. Technical Report No. N-26. Rutgers The State University Statistics Center, December, 1966.
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- [4] Grubbs, F. E. "Sample Criteria for Testing Outlying Observations,"

 Annals of Mathematical Statistics, March, 1950, pp. 27-58.

APPENDIX - TABLES

The following tables give values of the joint probability of a sample man greater than a given limit $\mathbf{z}_{\mathbf{A}}$ and i defectives in the sample, for samples from the standard normal distribution, i.e. one having mean 0, and standard deviation 1.

To use these tables to evaluate $P_n(i, \overline{x} > A)$ for some specified fraction defective p, with known standard deviation σ , upper specification limit U, and acceptance limit A, for i defectives in a sample of n, proceed as follows:

- (1) Determine the standard normal deviate cutting off an upper tail area of p in the normal distribution. Call this z_U . By definition, this corresponds to the z-value of U.
- (2) Calculate:

$$z_A = z_U - (\frac{U-A}{\sigma}) = z_U - k$$
.

(3) From the appropriate table for n and i, find the probability desired in the column headed with the specified value of p and in the row corresponding to z.

For example, to obtain $P_5(0,\overline{x} > 201.0)$ for fraction defective p = .02, with known standard deviation $\sigma = 4.0$, upper specification limit 209.0 and acceptance limit A = 201.0 for exactly i = 0 defectives in a sample of n = 5:

(1) From normal tables, the z value cutting off an upper tail area of p = .02 is:

$$z_{11} = 2.05$$

(2) Calculate

$$z_A = 2.05 - (\frac{209.0 - 201.0}{4.0}) = .05$$

(3) From the table for n = 5, i = 0, under fraction defective p = .02, the probability corresponding to $z_A = .05$ as the argument is: $P_5(0, \overline{x} > 201.0) = .3736$.

4. APPENDIX

JOINT PROBABILITY OF

SAMPLE MEAN GREATER THAN z_A AND EXACTLY i DEFECTIVES, IN SAMPLES FROM A NORMAL DISTRIBUTION (μ =0, σ =1)

(z_A -DEVIATION OF ACCEPTANCE LIMIT, A, FROM PROCESS MEAN IN UNITS OF KNOWN STANDARD DEVIATION OF INDIVIDUALS)

n = 4 i = 0

MEAN	FRACTION DEFECTIVE, p								
z	•005	•01	.02	•05	.10	.15	.20		
-							1006		
-2.50	.9801	•9606	•9224	.8145	•6561	•5220	.4096		
-2.45	•9801	•9606	•9224	.8145	.6561	•5220	•4096		
-2.40	•9801	•9606	•9224	.8145	.6561	•5220	.4096		
-2.35	•9801	•9606	•9224	.8145	.6561	•5220	•4096		
-2.30	•9801	•9606	•9224	.8145	.6561	•5220	•4096		
- 2.25	.9801	•9606	•9224	.8145	.6561	•5220	•4096		
-2.20	•9801	•9606	•9224	.8145	•6561	•5220	•4096		
-2.15	•9801	•9606	•9224	.8145	.6561	•5220	•4096		
-2.10	•9801	•9606	.9224	.8145	•6561	•5220	.40 96		
-2.05	•9801	•9606	.9223	.8145	.6561	•5220	•4096		
-2.00	•9801	•9606	•9223	.8145	•6561	•5220	•4036		
-1.95	•9801	•9605	•9223	.8145	•6561	•5220	•4096		
-1.90	.9801	•9605	•9223	.8144	•6560	.5219	•4095		
-1.85	•9800	•9605	.9223	.8144	•6560	•5219	•4095		
-1.80	•9800	.9604	.9222	.8143	•6559	•5218	.4094		
-1.75	•9799	.9604	.9221	.8143	•6559	.5218	.4094		
-1.70	•9798	•9603	.9220	.8142	•6558	•5217	•4093		
-1.65	•9797	.9601	.9219	.8140	.6556	•5215	.4091		
-1.60	•9795	9599	.9217	.8138	6554	.5213	4089		
-1.55	•9792	•9596	.9214	.8135	.6551	.5210	•4086		
-1.50	•9788	•9592	.9210	.8132	.6548	•5207	.4083		
-1.45	.9783	9587	•9205	.8126	.6542	.5201	.4078		
-1.40	•9776	•9580	.9198	.8120	.6536	-5195	.4071		
-1.35	9767	.9571	.9189	.8110	•6526	•5186	.4062		
-1.30	•9755	•9559	.9177	.8098	.6515	•5174	.4050		
-1.25	9739	•9544	.9162	.8083	•6499	•5159	•4035		
-1.20	.9720	9524	.9142	.8063	.6479	.5139	.4016		
-1.15	•9694	•9499	.9116	.8038	•6454	.5114	3992		
-1.10	.9662	•9467	.9085	.8006	6423	•5083	.3961		
-1.05	.9623	.9427	.9045	.7967	6384	.5045	•3924		
-1.00	•9574	•9378	.8996	.7918	.6336	•4998	.3878		
-0.95	•9514	•9319	.8937	.7859	.6277	•4941	3823		
-0.90	-9442	.9247	.8865	.7787	.6207	4872	•3757		
-0.85	•9356	.9160	.2778	.7701	.6122	•4790	.3678		
-0.80	•9254	•9058	.8676	.7600	.6023	•4694	•3587		
-0.75	•9133	•89 3 8	•8556	.7481	•5907	•4583	3482		
-0.70	•9177 •8994	•8799	•8417	•7343	•5774	•4455	.3362		
-0. 65	•8834	•86 3 8	•8417 •8257	•1343 •7185	•5774 •5621	•4455	• 3227		
-0.60			.8075	.7006			•3221		
	.8651	•8456		•6804	•5448 5356	.4148 3067			
-0. 55	•8445 8315	•8250 8031	•7870		•5256	•3967 3770	.2913		
-0. 50	.8215	•8021	•7642	•6580	•5043	• 3770	•2735		

MEAN	FRACTION DEFECTIVE, p								
z _A	•005	.01	•02	.05	.10	•15	.20		
-0.45	.7962	.7768	.7390	•6333	•4810	•3557	•2545		
-0.40	.7684	•7490	.7114	•6065	•4559	• 3330	•2345		
-0.35	•7383	•7190	•6816	•5775	•4292	•3090	.2138		
-0.30	.7061	•6869	•6497	•5467	•4010	·2841	•1927		
-0.25	.6719	•6528	.6159	.5143	.3716	•2586	.1715		
-0.20	•6359	.6170	•5805	•4804	•3415	•2328	.1505		
-0.15	•5985	•57 9 8	•5437	•4456	•3108	•2071	•1301		
-0.10	•5600	•5415	•5060	•4101	. 2802	•1820	.1106		
-0.05	•5208	•5025	•4677	•3744	•2498	•1577	.0924		
0.00	•4811	•4632	•4291	.3388	.2203	.1346	•0756		
0.05	•4416	•4240	• 3908	•3039	.1919	.1131	•0606		
0.10	•4024	. 3853	• 3532	•2699	•1651	.0934	.0474		
0.15	•3642	•3475	•3165	•2 374	.1400	•0757	.0362		
0.20	•3271	.3110	.2813	•2065	.1170	•0601	•0268		
0.25	•2915	•2760	•2477	.1777	.0963	.0467	.0192		
0.30	•2578	•2430	.2162	.1511	.0779	.0354	.0132		
0.35	.2261	.2120	.1868	.1269	•0619	.0261	.0087		
0.40	.1966	•1834	.1599	•1052	.0482	.0187	•0055		
0.45	•1696	.1571	.1354	•0860	•0368	.0129	.0032		
0.50	•1449	•1334	•1135	.0693	.0274	.0086	.0018		
0.55	•1228	•1121	•0940	•0550	.0199	•0055	•0009		
0.60	.1030	•0933	.0770	.0430	.0141	•0033	.0004		
0.65	.0 856	•0768	•0623	.0330	•0097	.0019	•0001		
0.70	•0705	•0626	•0498	.0248	•0064	.0010	.0000		
0.75	•0575	•0504	.0393	.0183	.0041	.0005	.0000		
0.80	•0463	.0401	.0305	.0133	.0025	.0002	.0000		
C.85	•0370	•0316	.0234	.0094	.0014	.0001	.0000		
0.90	•0292	•0246	.0177	•0065	•0008	.0000	.000		
0.95	•0228	.0189	.0132	.0043	.0004	.0000	.0000		
1.00	.0176	.0143	•0096	•0028	.0002	.0000	.0000		
1.05	.0134	.0107	•0069	.0018	.0001	.0000	•0000		
1.10	•0101	•0079	.0049	.0011	.0000	.0000	.0000		
1.15	•0075	•0057	•0034	•0006	•0000	•0000	.0000		
1.20	•0055	.0041	.0023	•0003	•0000	.0000	•0000		
1.25	•0040	•0029	•0015	.0002	.0000	•0000	.0000		
1.30	•0029	•0020	.0010	.0001	.0000	•0000	.0000		
1.35	•0020	.0013	.0006	.0000	.0000	.0000	.0000		
1.40	.0014	•0009	.0004	.0000	.0000	.0000	.0000		
1.45	•0010	•0006	.0002	.0000	.0000	.0000	.0000		
1.50	•0006	.0004	.0001	.0000	.0000	.0000	.0000		
1.55	•0004	.0002	.0001	.0000	.0000	.0000	.0000		
1.60	•0003	.0001	.0000	.0000	.0000	.0000	.0000		
1.65	•0002	.0001	.0000	.0000	.0000	.0000	.0000		
1.70	.0001	.0000	.0000	.0000	.0000	.0000	.0000		
1.75	.0001	•0000	.0000	.0000	.0000	.0000	.0000		
1.80	•0000	.0000	.0000	.0000	.0000	.0000	.0000		

(z_-DEVIATION OF ACCEPTANCE LIMIT, A, FROM PROCESS MEAN IN UNITS OF KNOWN STANDARD DEVIATION OF INDIVIDUALS)

 $\begin{array}{ccc}
a & = & 4 \\
i & = & 1
\end{array}$

MEAN		FRACTION DEFECTIVE, p									
^E A	•005	.01	.02	•05	•10	•15	.20				
						2.					
- 2.50	•020	•039	•075	•171	•292	• 368	•410				
-2.45	•020	•039	•075	.171	•292	• 368	•410				
-2.40	•020	•039	•075	.171	•292	• 368	.410				
- 2.35	•020	•039	•075	•171	•292	•368	.410				
-2.30	•020	•039	•075	.171	•292	. 368	.410				
- 2.25	•020	•039	•075	•171	•292	• 368	•410				
-2.20	•020	•039	•075	.171	•292	•368	.410				
-2.15	•020	•039	.075	•171	•292	•368	.410				
-2.10	•020	•039	•075	.171	•292	• 368	.410				
-2.05	•050	•039	•075	.171	•292	• 368	.410				
-2.00	•020	•039	•075	.171	•292	•368	.410				
-1.95	•020	•039	•075	.171	•292	•368	.410				
-1.90	•020	•039	•075	.171	•292	, 368	.410				
-1.85	•020	•039	•075	.171	•292	•368	.410				
-1.80	•020	•039	•075	.171	•292	•368	.410				
-1.75	•020	•039	•075	.171	•292	•368	.410				
-1.70	•020	•039	•075	•171	•292	•368	.410				
-1.65	.020	•039	•075	.171	•292	. 368	.410				
-1.60	•020	•039	•075	.171	•292	. 368	•410				
-1.55	•020	•039	•075	.171	•292	. 368	.410				
-1.50	•020	•039	•075	•171	•292	•368	•410				
-1.45	•020	•039	•075	.171	• 29 2	•368	.410				
-1.40	.020	•039	•075	.171	•292	• 368	.410				
-1.35	•050	•039	•075	.171	•292	•368	.410				
-1.30	•020	•039	•075	.171	•292	•368	.410				
-1.25	.020	•039	•075	.171	•292	.36 8	.410				
-1.20	•020	•039	•075	.171	•292	•368	•409				
-1.15	.020	•039	•075	.171	•292	. 36 8	•409				
-1.10	•020	•039	.075	•171	•291	. 368	•409				
-1.05	•020	•039	.075	.171	•291	•368	•409				
-1.00	•020	.039	•075	.171	•291	. 368	•409				
-0.95	•020	•039	•075	.171	•291	•368	•408				
-0.90	.0 20	•039	•075	.171	•291	•367	•408				
-0.85	•020	•039	•075	.171	•291	• 367	•407				
-0.80	•020	•039	•075	.171	•291	•366	•406				
-0.75	•020	•039	•075	.171	•290	•365	•404				
-0.70	•020	•039	•075	.171	•290	. 364	•402				
-0.65	•020	.039	•075	.171	• 289	.363	•400				
-0.60	•0≥0	•039	•075	.170	•288	.361	•396				
-0.55	.020	•039	•075	.170	•286	•358	•392				
-0.50	•020	•039	•075	. 169	•285	• 355	•387				

MEAN		FRACTION DEFECTIVE, p								
z _A	•005	.01	•02	•05	.10	.15	•20			
A										
-0.45	•020	•039	•075	•169	•283	•351	.381			
-0.40	.020	.038	.074	.168	.280	•346	•373			
-0.35	.020	.038	.074	.166	•277	•340	.364			
-0.30	.019	.038	.074	.165	272	•332	•353			
-0.25	.019	.03 8	.073	.163	•268	•324	.341			
-0.20	•019	.038	.073	.161	•262	.314	•326			
-0.15	.019	.038	.072	.158	•255	•302	•310			
-0.10	.019	.037	.071	.155	-247	.289	.292			
-0.05	.019	.037	.070	.151	•238	.275	.273			
0.00	.019	•036	•068	.1.47	•228	•259	.252			
0.05	.018	.036	.067	142	.217	.241	.230			
0.10	.018	•035	.065	.137	•205	.223	.207			
0.15	.018	.034	.063	.131	•191	.204	.184			
0.20	.017	.033	.061	.124	.177	.184	.160			
0.25	.017	.032	.058	.117	.163	.164	.138			
0.30	.016	.031	.056	.109	•148	.144	.116			
0.35	.016	•029	.053	.102	.133	.124	•096			
0.40	.015	.028	•050	.093	.118	.106	.078			
0.45	. 014	.026	•046	•085	.103	.0 88	.061			
0.50	.014	.025	.043	.076	.089	.072	.047			
0.55	.013	.023	.039	.068	•075	.058	.035			
0.60	.012	.021	•036	.060	•063	•045	.026			
0.65	.011	.019	.032	•052	•051	•035	.018			
0.70	.010	.018	.029	•045	.041	•026	.012			
0.75	.009	.016	.025	.038	.033	.019	.008			
0.80	•008	.014	.022	•032	.025	.013	•005			
0.85	.007	.012	.019	.026	•019	.009	.003			
0.90	•007	.011	.016	•021	.014	•006	•002			
0.95	•006	•009	.014	.017	.010	.004	.001			
1.00	•005	•008	•011	.013	.007	•002	•001			
1.05	.004	.007	.009	.010	•005	.001	•000			
1.10	•004	•006	•008	•007	.003	•001	•000			
1.15	.003	•005	.006	•005	•005	•000	•000			
1.20	•003	•004	•005	•004	.001	.000	•000			
1.25	•002	•003	.004	•003	.001	•000	.000			
1.30	•002	•002	.003	•002	•000	•000	•000			
1.35	•001	•002	.002	•001	•000	•000	•000			
1.40	•001	•001	•002	•001	•000	•000	•000			
1.45	•001	•001	•001	•000	•000	•000	•000			
1.50	•001	.001	•001	•000	.000	•000	•000			
1.55	•000	•001	•001	•000	.000	•000	.000			
1.60	•000	•000	.000	.000	.000	.000	.000			
1.65	•000	•000	•000	.000	.000	•000	•000			
1.	•000	•000	•000	.000	•000	•000	.000			
1	•000	•000	.000	.000	.000	.000	.000			
1.00	•000	•000	•000	•000	•000	•000	.000			

(z_-DEVIATION OF ACCEPTANCE LIMIT, A, FROM PROCESS MEAN IN UNITS OF KNOWN STANDARD DEVIATION OF INDIVIDUALS)

n = 4 1 = 2

zA .005 .01 .02 .05 .10 .15 .20 -2.50 .000 .001 .002 .014 .049 .098 .154 -2.45 .000 .001 .002 .014 .049 .098 .154 -2.35 .000 .001 .002 .014 .049 .098 .154 -2.35 .000 .001 .002 .014 .049 .098 .154 -2.35 .000 .001 .002 .014 .049 .098 .154 -2.25 .000 .001 .002 .014 .049 .098 .154 -2.15 .000 .001 .002 .014 .049 .098 .154 -2.20 .000 .001 .002 .014 .049 .098 .154 -2.15 .000 .001 .002 .014 .049 .098 .154 -2.10 .000 .001 .002<	MEAN	FRACTION DEFECTIVE, p						
-2.50		-005	-01			• •	.15	•20
-2.45	A		••-	•••	•••	4- 4	4- 2	•••
-2.40	-2.50	•000	•001	.002	.014			
-2.35	-2.45	•000	.001	•002	.014	•049		
-2.30	-2.40	•000	.001	•002				
-2.25	-2.35	•000	•001	.00 2	.014			
-2.20	-2.30	•000	.001					
-2.15	-2.25	•000	.001	•002	.014	.049		
-2.10	-2.20	•000	.001	•002	.014	•049	•098	.154
-2.05	-2.15	•000	•001	.002	.014	•049	•098	•154
-2.00	-2.10	•000	•001		.014			
-1.95	-2.05	.000	•001					
-1.90	-2.00	.000	•001			•049		
-1.85	-1.95	•000	.001		•014			
-1.80	-1.90	.000	.001	•003	.014			
-1.75	-1.85	•000	.001	•002	.014			
-1.70	-1.80	•000	•001	•002	.014	•049		
-1.65	-1.75	•000	.001	•002	.014	•049		
-1.60	-1.70	•000	.001	•002	•014	•049		
-1.55	-1.65	•000	.001	•002	.014			
-1.50	-1.60	•000	•001	.002	.014	•049		
-1.45	-1.55	•000	.001	•002	.014	•049		
-1.40	-1.50	•000	•001	.002		•049		
-1.35	-1.45	•000	•001					
-1.30	-1.40							
-1.25	-1.35							
-1.20	-1.30							
-1.15								
-1.10								
-1.05								
-1.00								
-0.95								
-0.90 .000 .001 .002 .014 .049 .098 .154 -0.85 .000 .001 .002 .014 .049 .098 .154 -0.80 .000 .001 .002 .014 .049 .098 .154 -0.75 .000 .001 .002 .014 .049 .098 .154 -0.70 .000 .001 .002 .014 .049 .098 .154 -0.65 .000 .001 .002 .014 .049 .098 .154 -0.60 .000 .001 .002 .014 .049 .098 .154 -0.55 .000 .001 .002 .014 .049 .098 .154			-					
-0.85 .000 .001 .002 .014 .049 .098 .154 -0.80 .000 .001 .002 .014 .049 .098 .154 -0.75 .000 .001 .002 .014 .049 .098 .154 -0.70 .000 .001 .002 .014 .049 .098 .154 -0.65 .000 .001 .002 .014 .049 .098 .154 -0.60 .000 .001 .002 .014 .049 .098 .154 -0.55 .000 .001 .002 .014 .049 .098 .154	-0.95							
-0.80 .000 .001 .002 .014 .049 .098 .154 -0.75 .000 .001 .002 .014 .049 .098 .154 -0.70 .000 .001 .002 .014 .049 .098 .154 -0.65 .000 .001 .002 .014 .049 .098 .154 -0.60 .000 .001 .002 .014 .049 .098 .154 -0.55 .000 .001 .002 .014 .049 .098 .154						-		
-0.75 .000 .001 .002 .014 .049 .098 .154 -0.70 .000 .001 .002 .014 .049 .098 .154 -0.65 .000 .001 .002 .014 .049 .098 .154 -0.60 .000 .001 .002 .014 .049 .098 .154 -0.55 .000 .001 .002 .014 .049 .098 .154								
-0.70 .000 .001 .002 .014 .049 .098 .154 -0.65 .000 .001 .002 .014 .049 .098 .154 -0.60 .000 .001 .002 .014 .049 .098 .154 -0.55 .000 .001 .002 .014 .049 .098 .154								
-0.65 .000 .001 .002 .014 .049 .098 .154 -0.60 .000 .001 .002 .014 .049 .098 .154 -0.55 .000 .001 .002 .014 .049 .098 .154	_							
-0.60 .000 .001 .002 .014 .049 .098 .154 -0.55 .000 .001 .002 .014 .049 .098 .154	-0.70							
-0.55 .000 .001 .002 .014 .049 .098 .154								
-0.50 .000 .001 .002 .014 .049 .098 .153	-0.50	•000	•001	•002	.014	•049	•098	.153

MEAN		FRACTION DEFECTIVE, p							
z _A	•005	.01	•02	•05	.10	•15	•20		
A									
-0.45	•000	•001	•002	.014	•049	•098	.153		
-0.40	.000	.001	.002	.014	.049	.097	.153		
-0.35	•000	.001	•002	.014	.049	•097	.153		
-0.30	•000	.001	•002	.014	.049	•097	•153		
-0.25	•000	.001	•002	•014	•049	.097	.152		
-0.20	•000	.001	.002	.014	•048	•097	•151		
-0.15	•000	.001	.002	.014	.048	, 097	.150		
-0.10	•000	.001	.002	.014	.048	.096	.149		
-0.05	.000	.001	•002	.014	.048	•096	.147		
0.00	•000	.001	•002	.013	•048	•095	.145		
0.05	•000	.001	•002	.013	•048	•094	.143		
0.10	•000	.001	•002	.013	•047	•092	•139		
0.15	•000	•001	.002	•013	.047	.091	.135		
0.20	•000	.001	.002	.013	.046	•089	.130		
0.25	•000	.001	.002	.013	.046	•086	.124		
0.30	•000	•001	.002	.013	.045	•083	.118		
0.35	•000	.001	•002	.013	.044	.080	.110		
0.40	.000	.001	•002	.013	•042	.076	.102		
0.45	. •000	.001	•002	•013	.041	.071	.093		
0.50	•000	.001	•002	•012	.039	•066	.084		
0.55	•000	.001	.002	.012	•037	.061	.074		
0.60	•000	•001	•005	•012	•035	•055	.064		
0.65	•000	•001	•002	.011	•032	•049	•055		
0.70	•000	.001	•002	.011	•029	•043	.046		
0,75	•000	•001	•005	•010	.027	•037	.037		
0.80	•000	•001	•002	•009	•024	•031	•029		
0.85	•000	•001	•002	•009	•021	•026	•023		
0.90	•000	•001	•002	•008	•018	.021	.017		
0.95	•000	•000	•002	•007	•015	•016	.013		
1.00	•000	•000	•002	•007	.013	.013	•009		
1.05	•000	•000	•002	•006	•010	•009	.007		
1.10	•000	•000	.001	•005	•008	•007	•004		
1.15	•000	•000	•001	•004	•006	•005	.003		
1.20	•000	•000	•001	•004	•005	•003	•002		
1.25	•000	•000	.001	•003	•004	•002	.001		
1.30	•000	•000	•001	•002	.003	•002	.001		
1.35	•000	•000	.001	•002	•002	•001	.001		
1.40	•000	•000	•001	.001	.001	.001	•000		
1.45	•000	•000	.001	•001	.001	•000	.000		
1.50	•000	•000	.000	•001	.001	•000	•000		
1.55	•000	•000	.000	.001	•000	.000	•000		
1.60	•000	.000	•000	•000	•000	•000	.000		
1.65	•000	•000	•000	•000	.000	•000	.000		
1.70	•000	•000	•000	•000	•000	.000	.000		
1.75	•000	•000	•000	•000	.000	•000	.000		
1.80	•000	•000	•000	•000	.000	•000	.000		

JOINT PROBABILITY OF

SAMPLE MEAN GREATER THAN z_A AND EXACTLY 1 DEFECTIVES, IN SAMPLES FROM A NORMAL DISTRIBUTION (μ =0, σ =1)

(z_A -DEVIATION OF ACCEPTANCE LIMIT, A, FROM PROCESS MEAN IN UNITS OF KNOWN STANDARD DEVIATION OF INDIVIDUALS)

n = 5 1 = 0

			1 - 0				
MEAN			FRAC	TION DEFE	CTIVE, p		
z _A	•005	.01	•02	•05	•10	•15	•20
A							
-2.50	•9752	•9510	•9039	•7 73 8	•5905	•4437	•3277
-2.45	•9752	.9510	.9039	.7738	•5905	•4437	•3277
-2.40	•9752	.9510	.9039	.7738	•5905	•4437	.3277
-2.35	•9752	.9510	•9039	.7738	•5905	•4437	•3277
-2.30	•9752	.9510	.9039	.7738	•5905	•4437	3277
2.25	•9752	.9510	.9039	•7738	•5905	-4437	•3277
-2.20	•9752	.9510	.9039	.7738	•5905	•4437	•3277
-2.15	•9752	.9510	.9039	.7738	•5905	•4437	•3277
-2.10	•9752	.9510	.9039	.7738	•5905	-4437	•3277
-2.05	•9752	•9510	.9039	.7738	•5905	•4437	•3277
-2.00	9752	.9510	•9039	.7738	•5905	•4437	•3277
-1.95	•9752	.9510	•9039	•7738	•5905	•4437	•3277
-1.90	•9752	.9510	.9039	.7738	•5905	•4437	.3277
-1.85	•9752	9510	.9039	•7738	•5905	-4437	.3277
-1.80	•9752	.9510	.9039	.7738	•5905	•4437	•3277
-1.75	•9752	•9509	•9039	•7737	•5904	•4437	.3276
-1.70	•9752	•9509	•9038	•7737	•5904	•4436	.3276
-1.65	.9751	•9509	•9038	•7737	•5904	•4436	.3276
-1.60	•9751	•9508	.9037	•7737	•5903	•4435	•3275
-1.55	•9750	•9507	.9037	.7735	•5902	•4434	•3274
-1.50	•9749	•9506	•9035	•7734	•5901	•4433	•3273
-1.45	•9747	•9504	•9033	.7732	•5899	•4431	.3271
-1.40	•9744	•9501	•9030	•7729	•5 896	•4428	•3268
-1.35	•9740	•9497	.9027	•7725	•5892	•4425	•3264
-1.30	•9734	•9492	•9021	•7720	.5887	•4419	.325 9
-1.25	•9727	•9484	.9013	.7712	•5879	•4412	•3252
-1.20	•9716	•9473	•9003	.7701	•5869	•4401	.3242
-1.15	•9702	•9459	.8989	.7687	•5855	•4388	•3228
-1.10	•9683	•9440	.8970	. 7669	•5836	- 370	.3211
-1.05	•9658	•9416	8945	7644	•5812	•-, 346	•3188
-1.00	•9626	•9383	.8913	.7612	•5780	•4315	•3159
-0.95	•9584	•9342	.8871	•75 7 1	•5740	•4276	.3121
-0.90	•9532	•9289	•8819	•7518	•5689	•4227	•3075
-0.85	•9466	•9223	. 8753	•7453	•5626	.4167	.3018
-0. 80	•9384	•9142	.8672	•7 <i>3</i> 73	∙ 5548	•4093	•2949
- 0.75	•9285	•9043	.8573	. 7275	•5454	•4004	. 2867
-0.70	•9165	•8923	. 8453	.7158	. 5342	• 3899	.2771
-0.65	•9022	.8780	.8311	.7018	•5209	•3776	.2660
-0.60	•8854	.8613	.8144	•6855	•5055	•3634	•2533
- 0 . 55	•8659	•8418	•7951	•6666	•4878	•3473	.2391
- 0 , 50	•8436	•8195	. 7729	.6451	. 4678	• 3294	•2235

MEAN	FRACTION DEFECTIVE, p							
z _A	•005	.01	.02	•05	.10	•15	.20	
A								
-0.45	. 8182	•7942	•7478	.6208	•4456	.3096	.2067	
-0.40	.7899	.7660	.7198	•5939	.4211	.2883	.1889	
-0.35	.7586	.7348	.6890	•5644	•3947	.2656	.1703	
-0.30	•7245	.7008	•6554	•5325	•3666	.2419	.1513	
-0.25	.6877	.6642	.6193	•4985	.3371	.2176	.1323	
-0.20	.6486	.6254	.5811	•4628	.3067	.1930	.1137	
-0.15	.6075	•5846	•5411	•4258	•2758	.1687	.0959	
-0.10	•5649	•5424	•4998	• 3 880	•2449	.1452	.0792	
-0.05	•5213	•4992	•4578	• 3500	.2146	.1227	.0639	
0.00	•4771	•4557	•4155	.3123	.1854	.1018	.0503	
0.05	•4331	•4123	•3736	•2755	.1577	.0828	.0386	
0.10	• 4 991	•3696	•3326	.2401	.1320	.0659	.0287	
0.15	•3475	•3282	•2930	.2066	.1086	.0511	.0206	
0.19	.3070	• 2886	•2554	.1754	.0876	.0387	.0143	
0.25	•2685	.2512	.2201	.1468	.0694	•0285	.0095	
0.30	•2326	.2163	.1875	.1210	.0537	.0203	.0060	
		.1842	.1577	.0982	.0407	.0140	.0036	
0.35	.1993		.1311	.0784	.0300	.0093	•0020	
0.40	.1690	.1551		.0615	.0216	.0059	.0010	
0.45	.1418	.1291	.1075			•0036	.0005	
0.50	.1176	.1061	.0869	•0474	.0151	-	.0003	
0.55	.0964	.0861	.0693	.0358	.0102	•0020		
0.60	.0781	.0691	.0545	.0265	.0066	.0011	.0001	
0.65	•0625	•0546	.0421	.0191	.0042	•0005	•0000	
0.70	.0494	.0426	.0321	.0135	.0025	.0002	.0000	
0.75	.0386	.0328	.0240	.0093	.0014	.0001 .0000	.0000	
0.80	.0297	.0249	.0177	•0063	.0008		.0000	
0.85	•0226	.0186	.0128	.0041	.0004	.0000	.0000	
0.90	.0169	.0136	.0091	.0026	.0002	.0000	.0000	
0.95	.0125	.0099	.0063	.0016	.0001	.0000	•0000	
1.00	.0091	•0070	.0043	.0009	.0000		.0000	
1.05	•0066	.0049	.0028	.0005	•0000	.0000	.0000	
1.10	.0046	.0034	.0018	.0003	.0000		.0000	
1.15	.0032	.0023	.0012	.0001	.0000	.0000		
1.20	.0022	.0015	•0007	.0001	•0000	.0000	.0000	
1.25	.0015	.0010	.0004	.0000	.0000	.0000	.0000	
1.30	.0010	.0006	.0003	.0000	.0000	.0000	.0000	
1.35	.0006	.0004	.0001	.0000	.0000	.0000	.0000	
1.40	.0004	.0002	.0001	.0000	.0000	.0000	.0000	
1.45	.0003	.0001	.0000	.0000	.0000	.0000	.0000	
1.50	.0002	.0001	.0000	.0000	.0000	.0000	.0000	
1.55	.0001	.0000	.0000	.0000	.0000	.0000	.0000	
1.60	.0001	.0000	.0000	.0000	.0000	•0000	.0000	
1.65	.0000	.0000	.0000	.0000	.0000	.0000	.0000	
1.70	•0000	•0000	•0000	•0000	.0000	.0000	.0000	
1.75	•0000	•0000	.0000	.0000	.0000	•0000	.0000	
1.80	•0000	•0000	•0000	•0000	.0000	•0000	•0000	

(z_A-DEVIATION OF ACCEPTANCE LIMIT, A, FROM PROCESS MEAN IN UNITS OF KNOWN STANDARD DEVIATION OF INDIVIDUALS)

n = 5

MEAN			FRAC	CTION DEFI	SCTIVE, p		
z A	•005	•01	•02	•05	.10	•15	•20
Α							
- 2•50	.024	.048	.092	.204	•328	•391	.410
-2.45	.024	.048	.092	.204	•328	.391	•410
-2.40	.024	.048	.092	204	•328	•391	.410
-2.35	.024	.048	.092	204	•328	•391	-410
-2.30	.024	.048	.092	.204	• 328	.391	.410
-2.25	.024	.048	.092	.204	• 328	.391	.410
-2.20	.024	•048	.092	.204	•328	.391	.410
-2.15	•024	.048	•092	•204	•328	.391	.410
-2.10	₂ 024	.048	.092	•204	• 328	.391	.410
-2.05	•024	.048	•092	•204	•328	.391	.410
-2.00	.024	•048	•092	.204	•328	.391	.410
-1.95	.024	.048	.092	•204	•328	.391	.410
-1.90	.024	.048	•092	204	•328	.391	.410
-1.85	.024	•048	•092	204	•328	•391	.410
-1. 80	.024	•048	.092	•204	• 328	.391	.410
-1.75	.024	•048	.092	.204	•328	.391	.410
-1.70	.024	•048	•092	•204	•328	.391	.410
-1.65	.024	•048	.092	•204	•328	•391	.410
-1.60	.024	.048	.092	.204	•328	.391	.410
-1.55	.024	.048	.0y2	.204	•328	.391	.410
-1.50	.024	.048	.092	•204	• 328	.391	.410
-1.45	.024	.048	.092	.204	• 328	.391	.410
-1.40	.024	.048	•092	•204	•328	•391	.410
-1.35	.024	.048	.092	204	•328	•391	.410
-1.30	•024	•048	•092	.204	•328	•391	.410
-1.25	.024	•048	.092	•204	•328	.391	•409
-1.20	.024	.048	.092	.204	• 328	.391	.409
-1.15	.024	.048	.092	•204	•328	•391	•409
-1.10	.024	.048	.092	204	•328	•391	•409
-1.05	.024	.048	•092		•328	•391	•409
-1.00	.024	•048	•092	.204	•328	.391	•409
-0.95	.024	.048	•092	203	•328	•391	408
-0.90	.024	.048	.092	.203	•327	•390	•408
-0.85	•024	.048	•092	.203	•327	•390	.407
-0.80	•024	•048	.092	•203	•327	•389	•406
-0.75	.024	•048	.092	.203	•326	. 388	•404
-0.70	.024	.048	.092	.203	.326	.387	•402
-0.65	.024	•048	.092	.202	.325	• 3 85	• 398
-0.60	.024	.048	.092	.202	•323	.382	• 394
-0.55	•024	.048	•092	.201	.321	•379	389
-0.50	.024	.048	.091	.201	.319	•374	.383
		- ,-	- , –	-			

MEAN		FRACTION DEFECTIVE, p							
z _A	•005	.01	•02	•05	.10	.15	.20		
A									
-0.45	•024	•048	.091	•199	.316	•369	•375		
-0.40	.024	.047	.091	.198	.312	.362	.365		
-0.35	.024	.047	.090	.196	.307	•353	.353		
-0.30	.024	.047	•090	.194	.301	•343	.339		
-0.25	.024	.047	.089	.191	.294	.331	.322		
-0.20	.024	.046	.088	.187	.285	.317	.304		
-0.15	.024	.046	.086	.183	•275	.302	.283		
-0.10	.023	.045	.085	.178	.263	.284	.261		
-0.05	.023	.044	.083	.172	.250	.264	.237		
0.00	.023	.043	.081	.165	.236	.243	.212		
0.05	.022	.042	.078	.158	.220	.221	.187		
0.10	.022	.041	.075	.149	.203	.198	.161		
0.15	.021	.039	.072	.140	.185	.175	.136		
0.20	.020	.038	.068	.130	.167	.151	.113		
0.25	.019	.036	.064	.120	.148	.129	.091		
0.30	.018	.034	.060	.109	.129	.108	.072		
0.35	.017	.032	.055	.098	.111	.088	.055		
0.40	.016	.029	.051	.087	.094	.070	.041		
0.45	.015	.027	.046	.077	.078	•055	.029		
0.50	.014	.025	.041	.066	.064	.041	.020		
0.55	.013	.022	.037	.057	.051	.030	.014		
0.60	.011	.020	.032	.047	.039	.022	.009		
0.65	.010	.018	.028	.039	.030	.015	.005		
0.70	.009	.015	.024	.032	.022	.010	.003		
0.75	.008	.013	.020	.025	.016	•006	.002		
0.80	•007	.011	.017	.020	.011	.004	.001		
0.85	.006	.009	.014	.015	.007	.002	.000		
0.90	•005	.008	.011	.011	.005	.001	.000		
0.95	.004	.006	.009	.008	.003	.001	.000		
1.00	.003	.005	.007	•006	.002	.000	.000		
1.05	.003	.004	•005	.004	.001	.000	.000		
1.10	.002	.003	.004	.003	.001	.000	.000		
1.15	.002	.002	.003	.002	.000	.000	.000		
1.20	.001	.002	.002	.001	.000	.000	.000		
1.25	.001	.001	.001	.001	.000	.000	.000		
1.30	.001	.001	.001	.000	.000	.000	.000		
1.35	.001	.001	.001	.000	.000	.000	.000		
1.40	.000	.000	.000	.000	.000	.000	.000		
1.45	.000	.000	.000	.000	.000	.000	.000		
1.50	.000	.000	.000	.000	.000	.000	.000		
1.55	.000	.000	.000	.000	.000	.000	.000		
1.60	.000	.000	.000	.000	.000	.000	.000		
1.65	.000	.000	.000	.000	.000	.000	.000		
1.70	.000	.000	.000	.000	.000	.000	.000		
1.75	.000	.000	.000	.000	.000	.000	.000		
1.80	.000	.000	.000	.000	.000	.000	.000		
1.00	•000	•000	•000	• 000	•000	•000	.000		

(z_-DEVIATION OF ACCEPTANCE LIMIT, A, FROM PROCESS MEAN IN UNITS OF KNOWN STANDARD DEVIATION OF INDIVIDUALS)

n = 5 i = 2

			- 0, -				
MEAN			FRA	CTION DEF	ECTIVE, p		
z A	•005	•01	•02	•05	.10	•15	•20
<u> </u>							
-2.50	•000	•001	.004	.021	.073	.138	•205
-2.45	•000	.001	.004	.021	.073	.138	.205
-2.40	•000	.001	.004	.021	.073	.138	•205
-2.35	•000	.001	.004	.021	.073	.138	.205
-2.30	•000	.001	.004	.021	.073	.138	.205
-2.25	•000	•001	•004	.021	.073	.138	.205
-2.20	•000	.001	.004	.021	•073	.138	.205
-2.15	.000	.001	•004	.021	.073	.138	.205
-2.10	.000	.001	.004	.021	.073	.138	.205
-2.05	.000	.001	.004	.021	.073	.138	.205
-2.00	•000	.001	.004	.021	.073	.138	.205
-1.95	.000	.001	.004	.021	.073	.138	.205
-1.90	•000	.001	•004	.021	.073	.138	.205
-1.85	•000	.001	.004	.021	.073	.138	.205
-1.80	•000	.001	.004	.021	.073	.138	.205
-1.75	•000	.001	•004	.021	.073	.138	.205
-1.70	•000	.001	.004	.021	•073	.138	.205
-1.65	.000	.001	.004	.021	.073	.138	.205
-1.60	•000	.001	.004	.021	.073	.138	.205
-1.55	•000	.001	.004	.021	.073	.138	.205
-1.50	•000	.001	.004	.021	.073	.138	.205
-1.45	•000	.001	.004	.021	.073	.138	.205
-1.40	•000	.001	.004	.021	•073	.138	.205
-1.35	.000	.001	.004	.021	.073	.138	.205
-1.30	•000	.001	•004	.021	.073	.138	.205
-1.25	•000	.001	.004	•021	.073	.138	.205
-1.20	.000	.001	•004	.021	•073	.138	.205
-1.15	•000	.001	.004	.021	.073	.138	.205
-1.10	•000	.001	•004	.021	.073	.138	•205
-1.05	.000	.001	•004	.021	.073	.138	.205
-1.00	•000	.001	.004	.021	•073	.138	.205
-0.95	•000	.001	•004	.021	•073	.138	.205
-0.90	•000	.001	•004	•021	•073	.138	•205
-0.85	•000	.001	•004	•021	•073	.138	•205
-0.80	•000	•001	.004	.021	•073	.138	.205
-0.75	•000	•001	.004	.021	.073	.138	.205
-0.70	•000	.001	.004	.021	.073	.138	•205
-0.65	.000	.001	•004	.021	.073	.138	•205
-0.60	.000	•001	.004	.021	•073	.138	•205
-0.55	.000	.001	.004	.021	.073	.138	•204
-0.50	.000	•001	.004	.021	•073	.138	.204

MEAN			FRAC	TION DEF	ECTIVE, p		
z.	•005	.01	.02	•05	.10	•15	.20
A							
-0.45	•000	.001	•004	.021	.073	.138	.204
-0.40	•000	.001	•004	.021	.073	.138	.203
-0.35	.000	.001	.004	.021	.073	.137	.202
-0.30	.000	.001	.004	.021	.073	.137	•201
-0.25	.000	.001	.004	.021	.072	.136	.199
-0.20	.000	.001	.004	.021	.072	.135	.197
-0.15	.000	.001	.004	.021	.072	.134	.194
-0.10	•000	.001	.004	.021	.072	.133	.191
-0.05	.000	.001	.004	.021	.071	.131	.186
0.00	•000	.001	.004	.021	.070	.128	.180
0.05	.000	.001	.004	.021	.069	.125	.173
0.10	.000	.001	.004	.021	•068	.121	.165
0.15	.000	.001	.004	.021	•066	.116	.155
0.20	•000	.001	.004	.020	.065	.111	.144
0.25	.000	.001	.004	.020	.062	.105	.132
0.30	.000	.001	.004	.020	•060	.097	.119
0.35	.000	•001	.004	.019	.056	•090	.105
0.40	.000	.001	.004	.018	.053	.081	.091
0.45	•000	.001	.003	.018	.049	.072	.078
0.50	•000	.001	•003	.017	.045	.063	.065
0.55	.000	.001	.003	.016	.041	.054	.052
0.60	•000	.001	.003	.015	.036	.046	.041
0.65	.000	.001	.003	.014	.031	.037	.031
0.70	.000	.001	.003	.012	.027	.030	.023
0.75	.000	•001	.003	.011	.023	.023	.017
0.80	•000	.001	.002	.010	.018	.018	.012
0.85	•000	.001	.002	.009	.015	.013	.008
0.90	.00	.001	.002	.007	.012	•009	•005
0.95	•000	•001	.002	.006	.009	•006	.003
1.00	•000	.001	.002	•005	.007	.004	.002
1.05	•000	•000	.001	.004	.005	.003	.001
1.10	.000	.000	.001	.003	.003	.002	.001
1.15	•000	.000	.001	.003	.002	•001	.000
1.20	•000	•000	.001	•002	.001	•001	.000
1.25	•000	•000	.001	.001	.001	.000	.000
1.30	•000	•000	.001	•001	.001	.000	•000
1.35	•000	•000	.000	.001	•000	•000	•000
1.40	•000	.000	.000	.000	•000	.000	•000
1.45	•000	•000	•000	.000	•000	.000	•000
1.50	•000	•000	•000	•000	.000	.000	.000
1.55	•000	.000	•000	•000	•000	.000	•000
1.60	•000	•000	.000	.000	.000	.000	•000
1.65	.000	.000	.000	.000	.000	•000	.000
1.70	•000	•000	•000	.000	.000	•000	•000
1.75	•000	.000	•000	•000	•000	•000	.000
1.80	•000	.000	.000	.000	.000	.000	•000

JOINT PROBABILITY OF

SAMPLE MEAN GREATER THAN z_A AND EXACTLY 1 DEFECTIVES, IN SAMPLES FROM A NORMAL DISTRIBUTION (μ =0, σ =1)

(z_A -DEVIATION OF ACCEPTANCE LIMIT, A, FROM PROCESS MEAN IN UNITS OF KNOWN STANDARD DEVIATION OF INDIVIDUALS)

n = 6 i = 0

MEAN			FRAC	TION DEFE	CTIVE, p		
z_	•005	.01	.02	•05	.10	•15	•20
A							
-2.50	•9704	•9415	. 8 85 8	.7351	•5314	•3771	.2621
-2.45	.9704	.9415	.8858	•7351	•5314	.3771	.2621
-2.40	.9704	.9415	.8858	.7351	•5314	•3771	.2621
- 2.35	•9704	•9415	.8858	•7351	•5314	•3771	.2621
-2.30	•9704	•9415	.8858	•7351	•5314	•3771	.2621
-2.25	•9704	•9415	. 8858	•7351	•5314	•3771	.2621
-2.20	•9704	•9415	•8858	•7351	•5314	.3771	.2621
-2.15	•9704	•9415	•8858	•7351	•5314	•3771	.2621
-2.10	•9704	•9415	. 8858	•7351	•5314	•3771	.2621
-2.05	•9704	•9415	.8858	•7351	.5314	•3771	.2621
-2.00	.9704	•9415	.8858	•7351	•5314	.3771	.2621
-1.95	•9704	•9415	.8858	•7351	•5314	·3771	.2621
-1.90	•9704	•9415	. 8858	•7351	.5314	•3771	.2621
-1. 85	.9704	.9415	. 8858	•735⊥	•5314	•3771	.2621
-1.80	•9704	•9415	. 8858	•7351	•5314	•3771	.2621
-1. 75	•9704	•9415	.885 8	•7351	•5314	•3171	.2621
-1.70	•9704	•9415	.885 8	•7351	•5314	•3771	•2621
-1.65	•9703	•9415	•8858	•7351	•5314	•3771	.2621
-1. 60	•9703	.9414	•8 85 8	•7350	•5314	•377.1	•2621
-1.55	•9703	•9414	. 8858	.7350	.534	•3771	.2621
-1.5 0	•9703	•9414	∙ 8857	•7350	•5313	<i>•3</i> 770	•2620
-1.45	•9702	•9413	•8857	•7349	•5313	•3770	•2620
-1.40	•9701	•9412	. 8855	•7348	•5311	<i>-3</i> 769	.2619
-1.35	•9699	•94.10	•8854	•7346	•5310	•3767	•2617
-1.30	•9696	•9408	. 8851	•7344	•5307	•3764	•2614
-1.25	•9693	•9404	.8847	•7340	•5304	.3761	.2611
-1.20	•9687	•9398	•8842	•7335	•5298	•3756	•2606
-1,15	•9679	•9391	•8834	•7327	•5291	. 5748	•2599
-1.10	•9680	•9380	.8823	•7316	•5280	•3738	•2589
-1.05	•9653	•9364	.8808	.7301	•5265	•3723	•2575
-1.00	•9632	•9343	.8787	.7280	•5245	.3704	•2557
-0.95	•9604	•9315	•8 7 59	•7252	•5218	.3678	•2532
-0.90	•9566	•9277	.8721	.7215	.5182	• 3644	.2500
-0.85	.9517	•9228	.8672	.7167	.5135	•3600	•2460
-0.80	•9454	.9165	.8609	.7104	•5076	• 3544	•2409
-0.75	•9373	•9084	. 8529	.7026	.5001	•3475	•2346
-0.70	•9272	•8982 •8982	.8428	•6927	•4908	.3390	.2271
-0. 65	•9147	•8859 9709	•8305	.6807	•4795	•3287	.2181
-0.60	•8996 883.5	•8708 9539	•8155	.6661	•4660	•3166 •306	.2076
-0. 55	.8815	•8528 0715	•7976	•6488	•4502	•3026	.1956
- 0.50	. 8602	. 8315	•7765	•6285	•4318	. 2866	•1823

MEAN		FRACTION DEFECTIVE, p						
z _A	•005	.01	•02	•05	.10	•15	•20	
A								
-0.45	.8354	. 8068	.7521	.6052	.4110	.2687	.1677	
-0.40	.8071	.7786	•7242	•5788	•3877	•2492	.1521	
-0.35	•7751	•7469	•6929	•5493	•3622	.2282	.1358	
-0.30	•7397	.7117	•6583	.5170	• 3347	.2061	.1191	
-0.25	.7010	.6733	.6206	•4822	•3057	.1834	.1025	
-0.20	.6593	.6320	•5803	•4453	2756	.1605	.0864	
-0.15	.6151	•5882	•5377	•4068	2451	.1380	.0712	
-0.10	•5689	•5427	•4934	.3674	.2147	.1164	.0571	
-0.05	.5215	4959	•4483	.3278	.1851	.0961	.0446	
0.00	.4734	•4486	.4028	2887	.1568	.0776	.0338	
0.05	•4254	.4016	•3579	2507	.1304	.0611	•0248	
0.10	.3783	• 3555	.3142	.2146	.1063	.0469	.0175	
0.15	•3327	.3111	.2724	.1808	•0849	.0349	.0119	
0.20	-2893	.2690	.2331	.1499	.0662	.0252	.0077	
0.25	.2486	.2298	.1967	.1221	•0504	.0176	.0048	
0.30	.2110	.1937	.1637	.0977	.0374	.0118	.0028	
0.35	.1769	.1611	.1342	.0767	.0270	.0076	.0015	
0.40	.1464	.1322	.1083	•0590	•0189	.0047	.0008	
0.45	•1195	.1069	.0861	.0445	.0128	.0027	.0003	
0.50	.0963	.0852	.0672	.0327	.0084	.0015	.0001	
0.55	.0764	•0669	.0516	.0235	.0053	.0008	.0000	
0.60	.0598	.0517	.0389	.0165	.0032	.0004	.0000	
0.65	.0462	•0393	•0288	.0113	.0018	.0002	.0000	
0.70	.0351	•0294	.0209	•0075	•0010	.0001	.0000	
0.75	•0262	.0216	.0149	.0048	.0005	.0000	.0000	
0.80	.0193	.0156	.0104	.0030	.0002	.0000	.0000	
0.85	.0140	.0110	.0071	.0018	.0001	.0000	.0000	
0.90	.0100	.0077	.0047	.0010	•0000	.0000	.0000	
0.95	.0070	•0052	.0031	.0006	•0000	.0000	.0000	
1.00	•0048	.0035	.0019	.0003	•0000	.0000	.0000	
1.05	•0032	•0023	.0012	.0002	.0000	.0000	.0000	
1.10	.0021	•0015	.0007	.0001	.0000	.0000	.0000	
1.15	.0014	.0009	.0004	.0000	•0000	.0000	.0000	
1.20	•0009	•0006	.0002	.0000	.0000	.0000	.0000	
1.25	•0006	•0003	.0001	.0000	.0000	.0000	.0000	
1.30	.0003	•0005	.0001	•0000	•0000	.0000	.0000	
1.35	.0002	.0001	.0000	•0000	•0000	.0000	.0000	
1.40	.0001	.0001	•0000	.0000	•0000	.0000	.0000	
1.45	•0001	.0000	.0000	•0000	.0000	.0000	.0000	
1.50	.0000	•0000	.0000	.0000	.0000	.0000	.0000	
1.55	•0000	.0000	.0000	.0000	•0000	.0000	.0000	
1.60	.0000	.0000	.0000	.0000	.0000	.0000	.0000	
1.65	•0000	.0000	.0000	.0000	.0000	.0000	.0000	
1.70	.0000	.0000	.0000	.0000	.0000	.0000	.0000	
1.75	.0000	•0000	•0000	•0000	.0000	.0000	•0000	
1.80	•000C	•0000	.0000	.0000	•0000	.0000	.0000	

(zA-DEVIATION OF ACCEPTANCE LIMIT, A, FROM PROCESS MEAN IN UNITS OF KNOWN STANDARD DEVIATION OF INDIVIDUALS)

n = 6 i = 1

MEAN			FRAC	CTION DEFI	ECTIVE, p		
z _A	•005	•01	.02	•05	.10	.15	.20
A							
-2.50	020	057	.108	232	35.4	•399	303
-2.45	•029	•057		•232	• 354		•393
	•029	•057	.108	•232	• 354	•399	•393
-2.40	•029	•057	.108	,232	• 354	•399	•393
-2.35	•029	•057	.108	•232	• 354	•399	•393
-2.30	•029	•057	.108	.232	• 354	• 399	• 393
-2.25	•029	•057	.108	.232	• 354	•399	• 393
-2.20	•029	•057	.108	•232	• 354	• 399	• 393
-2.15	•029	•057	.108	.232	• 354	• 399	• 393
-2.10	•029	•057	.108	•232	■354	•399	• 393
-2.05	•029	•057	•108	•232	• 354	•399	• 393
-2.00	•029	•057	.108	•232	354	•399	•393
-1.95	•029	•057	.108	•232	•354	• 399	•393
-1.90	•029	•057	.108	•232	•354	•399	•393
-1. 85	•029	•057	.108	•232	•354	•399	• 393
-1.80	•029	•057	.108	.232	• 354	•399	•393
-1.75	•029	•057	.108	•232	•354	•399	• 393
-1.70	•029	•057	.108	•232	•354	• 399	• 393
-1.65	•029	•057	.108	.232	• 354	•399	• 393
-1.60	•029	•057	.108	•232	• 354	•399	• 393
-1.55	.029	•057	.108	•232	•354	•399	•393
-1.50	•029	.057	.108	.232	•354	•399	•393
-1.45	•029	•057	.108	.232	• 354	• 399	•393
-1.40	•029	•057	.108	•232	• 354	•399	•393
-1.35	•029	•057	"10 8	.232	• 354	•399	•393
-1.30	•029	•057	.108	.232	•354	•399	•393
-1.25	•029	•057	.108	•232	•354	•399	•393
-1.20	•029	.057	.108	.232	•354	•399	•393
-1.15	•029	•057	.108	•232	• 354	• 399	• 393
-1.10	•029	.057	.108	.232	•354	•399	•393
-1.05	•029	•057	.108	•232	•354	•399	• 393
-1.00	•029	•057	.108	•232	•354	•399	•393
-0.95	•029	•057	.108	.232	•354	•399	•392
-0.90	•029	.057	.108	.232	•354	•398	•392
-0.85	•029	•057	.108	.232	• 354	•398	• 391
-0.80	•029	•057	.108			•397	•389
-0.75	•029	.057	.108	.232	•353	.396	.388
-0.70	.029	.057	.108	.231	•352	•394	.385
-0.65	•029	•057	.108	.231	.351	•392	.382
-0.60	•029	.057	.108	.230	•349	•389	•378
-0.55	.029	•057	.108	•229	•347	.385	.372
-0.50	•029	•057	.107	•228	• 344	.380	•364
		U -21	1		- 244	.,00	• 704

MEAN			FRAC	CTION DEF	ECTIVE. p		
	•005	•01	.02	.05	.10	.15	•20
^z A	•00)	•••	***				
-0.45	•029	•056	.107	•227	•340	•373	•355
-0.49	•029	• 0 56	.106	•225	•335	•365	•343
-0.35	.029	•056	.106	.222	•328	• 355	.330
	.029	.056	.105	.219	.321	•342	.313
-0.30		•055	.103	•215	.311	•327	•294
-0.25	.028		.102	.210	.300	.310	.273
-0.20	•028	.054			•286	.291	.250
-0.15	•028	.054	.100	•204		•269	•225
-0.10	•027	•053	•098	.197	.271		
-0.05	•027	.051	•095	.189	•254	.246	.199
0.00	•026	•050	.091	.179	•236	.221	.172
0.05	.02F	•048	.088	.169	.216	.195	.146
0.10	•025	•046	.083	.157	.194	.170	.121
0.15	.024	•044	.079	•145	.173	.144	.097
0.20	.022	.042	.074	.132	.151	.120	.076
0.25	.021	•039	•068	.119	.130	•098	.058
0.30	.0 20	•036	.062	.106	.109	•077	.043
0.35	•018	•033	•056	•092	•090	.060	.030
0.40	.017	•030	•050	.079	•073	.045	.021
0.45	•015	.027	.044	•067	.057	.032	.013
0.50	.014	.024	.038	•056	•044	.023	.008
0.55	.012	.021	•033	•045	:033	•015	.005
0.60	.011	.018	.028	.036	.024	.010	.003
0.65	•009	•015	.023	•028	.017	•006	.001
0.70	•008	.013	.019	.022	•011	.004	.001
0.75	.007	.011	.015	.016	•007	•002	.000
0.80	•005	•009	.012	.012	•005	.001	.000
0.85	•004	.007	•009	•008	.003	.001	.000
0.90	.004	•005	.007	•006	.002	.000	.000
0.95	.003	•004	•005	.004	.001	.000	.000
1.00	.002	.003	.004	.002	.000	.000	.000
1.05	.002	.002	.003	.002	.000	.000	.000
1.10	.001	•002	.002	.001	.000	.000	.000
1.15	.001	.001	.001	.001	.000	.000	.000
1.20	•001	.001	.001	.000	.000	.000	.000
1.25	.000	.001	.001	•000	•000	.000	.000
1.30	.000	.000	•000	•000	•000	.000	.000
1.35	.000	.000	•000	.000	.000	•000	.000
1.40	.000	•000	.000	.000	.000	.000	.000
1.45	.000	.000	.000	.000	•000	•000	.000
1.50	.000	.000	.000	.000	•000	.000	.000
1.55	•000	.000	.000	.000	.000	.000	.000
1.60	•000	.000	.000	•000	.000	.000	.000
1.65	.000	•000	.000	.000	.000	.000	.000
	•000	•000	•000	.000	.000	.000	.000
1.70		•000	.000	•000	.000	.000	.000
1.75	•000					.000	.000
1.80	•000	.000	•000	.000	.000	•000	•000

 $(z_A-deviation \ of \ acceptance \ limit, \ a, \ from \ Process \ mean in units of known standard deviation of individuals)$

n = 6 i = 2

MEAN			TO A C	CTION DEFE	ת העדעים		
MEAN	•005	.01	.02	.05	.10	•15	.20
^z A	•005	.01	•02	•0)	.10	•1)	.20
	200	001	006	071	000	176	246
-2.50	.000	.001	.006	.031	• 0 98	.176	.246
-2.45	.000	.001	•006	.031	•098	.176	•246
-2.40	.000	.001	.006	.031	.098	.176	.246
-2.35	•000	.001	.006	.031	•098	.176	.246
-2.30	•000	.001	.006	.031	•098	.176	.246
-2.25	•000	.001	•006	.031	.098	.176	•246
-2.20	•000	.001	.006	.031	.098	.176	.246
-2.15	.000	.001	.006	.031	•098	.176	•246
-2.10	.000	.001	•006	.031	•098	.176	.246
-2.05	.000	.001	.006	.031	.098	.176	.246
-2.00	.000	.001	•006	•031	•098	.176	.246
-1.95	.000	.001	.006	•031	•098	.176	.246
-1.90	.000	.001	.006	.031	.098	.176	.246
-1.85	•000	.001	.006	•031	•098	.176	.246
-1.80	•000	.001	.006	•031	•098	.176	•246
-1.75	•000	•001	.006	.031	.098	.176	.246
-1.70	•000	.001	•006	.031	•098	.176	•246
-1.65	.000	.001	•006	•031	.098	•176	•246
-1.60	•000	.001	•006	.031	•098	.176	.246
-1.55	•000	.001	.006	•031	.098	.176	.246
-1.50	•000	.001	•006	.031	•098	.176	•246
-1.45	•000	•001	.006	.031	•098	.176	•246
-1.40	•000	.001	•006	.031	.098	.176	•246
-1.35	•000	.001	•006	.031	.098	.176	•246
-1.30	•000	•001	.006	.031	•098	.176	• 246
-1.25	•000	.001	.006	.031	•098	.176	•246
-1.20	•000	.001	•006	•031	.098	.176	•246
-1.15	•000	.001	.006	.031	.098	.176	.246
-1.10	.000	.001	.006	.031	•098	.176	.246
-1.05	.000	.001	•006	•031	•098	.176	•246
-1.00	•000	.001	•006	.031	•098	.176	.246
-0.95	.000	.001	.006	.031	•098	.176	•246
-0.90	•000	.001	.006	.031	•098	.176	•246
- 0.85	•000	.001	•006	•031	•098	.176	•246
-0.80	•000	.001	.006	•031	•098	.176	•246
-0.75	.000	•001	.006	.031	• 09 8	.176	•246
-0.70	•000	.001	.006	.031	•098	.176	•246
-0.65	•000	•001	•006	.031	• 09 8	.176	.245
-0.60	•000	•001	.006	.031	•098	.176	•245
-0.55	.000	.001	•006	.031	•098	.176	•245
-0.50	•000	•001	•006	•031	.09 8	.176	•244

MEAN							
z _A	•005	.01	.02	CTION DEF	.10	•15	•20
A	, , , , ,			-			
-0.45	•000	.001	•006	.031	•098	.175	•243
-0.40	•000	.001	.006	.031	•098	.175	•242
-0.35	•000	.001	•006	.030	•098	.174	-240
-0.30	•000	.001	•006	.030	•098	•173	•2 3 8
-0.25	•000	.001	.006	.030	.097	.172	•234
-0.20	.000	.001	•006	.030	•097	.170	230
-0.15	•000	.001	•006	.030	.096	.167	.224
-0.10	•000	.001	•006	•030	•095	.164	.217
-0. 05	•000	.001	•005	.030	•094	.160	.208
0.00	•000	.001	•005	.030	•092	.154	.197
0.05	•000	.001	•005	.029	•092	.148	.185
0.10	.000	.001	•005	.029	•087	.140	.170
0.15	.000	.001	•005	.029	.083	.131	•175 •155
0.20	•000	.001	•005	.028	.079	.122	.138
0.25	•000	.001	•005	.028	.075	.111	.120
0.30	•000	.001	•005	.027			
0.35	•000	.001	•005		.069	.099	.103
0.40	•000		-	.025	.064	.087	•086
		.001	•005	•023	•057	.075	.069
0.45	000	.001	•005	.022	.051	•063	.054
0.50	•000	.001	.004	.020	.044	•051	.041
0.55	•000	.001	.004	.018	.038	.041	.030
0.60	•000	.001	.004	.016	.032	•032	•022
0.65	•000	.001	•004	.014	•026	.024	.015
0.70	•000	.001	.003	.012	.021	.017	•010
0.75	•000	.001	•003	.010	.016	.012	•006
0.80	•000	.001	•003	.009	.012	•008	•004
0.85	.000	.001	.002	.007	•009	•005	•002
0.90	.000	•001	•002	•006	•006	.003	•001
0.95	•000	.001	.002	•004	.004	•002	.001
1.00	•000	.001	.001	.003	.003	.001	.000
1.05	•000	.000	.001	.002	•002	.001	•000
1.10	•000	•000	.001	.002	•001	•000	•000
1.15	•000	•000	.001	.001	•001	•000	•000
1.20	•000	•000	•001	•001	•000	•000	•000
1.25	•000	.000	•000	.001	•000	.000	•000
1.30	•000	•000	•000	•000	•000	•000	•000
1.35	•000	•000	•000	•000	.000	•000	.000
1.40	•000	•000	•000	•000	•000	•000	.000
1.45	•000	•000	.000	.000	•000	.000	.000
1.50	•000	.000	.000	•000	•000	.000	•000
1.55	•000	•000	.000	.000	.000	•000	.000
1.60	•000	•000	.000	.000	•000	•000	.000
1.65	•000	•000	•000	•000	.000	.000	.000
1.70	•000	.000	•000	•000	•000	.000	•000
1.75	•000	.000	•000	.000	.000	•000	.000
1.80	•000	.000	.000	•000	.000	.000	.000

(z_A-DEVIATION OF ACCEPTANCE LIMIT, A, FROM PROCESS MEAN IN UNITS OF KNOWN STANDARD DEVIATION OF INDIVIDUALS)

n = 7 i = 0

MENAN			1370 A	ממר ארבות	ο Λ ΜΤ3Πο		
MEAN	005	.01	•02	CTION DEFI	OTIVE, p	•15	.20
^Z A	•005	•01	•02	•05	•10	•19	• 20
- 2•50	•9655	•9321	•8681	•6983	•4783	.3206	.2097
-2.45	•9655	•9321	.8681	•6983	•4783	•3206	.2097
-2.40	-9 655	.9321	.8681	.6983	•4783	• 3206	.2097
-2.35	•9655	•9321	.8681	•6983	•4783	•3206	.2097
-2.30	•9655	•9321	.8681	•6983	•4783	•3206	.2097
- 2.25	•9655	•9321	.8681	•6983	.4783	•3206	.2097
-2.20	•9655	•9321	.8681	•6983	•4783	•3206	.2097
-2.15	•9655	•9321	.8681	∙ 6983	•4783	•3206	.2097
-2.10	•9655	•9321	.8681	•6983	•4783	•3206	•2097
- 2.05	•9655	•9321	. 8681	•6983	•4783	•3206	.2097
-2.00	•9655	•9321	.8681	•6983	•4783	• 3206	•2097
-1. 95	•9655	•9321	.8681	•6983	•4783	•3206	•2097
-1.90	•9655	•9321	•8681	•6983	•4783	•3206	•2097
-1.85	•9655	•9321	•8681	•6983	•4783	•3206	•2097
-1.80	•9655	•9321	•8681	•6983	•4783	•3206	•2097
-1.75	•9655	•9321	.8681	•6983	•4783	• 3206	.2097
-1.70	•9655	•9321	.8681	•6983	.4783	•3206	•2097
-1.65	•9655	•9321	•8681	•6983	•4783	•3206	.2097
-1.60	•9655	•9321	•8681	. 6983	•4783	•3206	•2097
-1.55	•9655	•9320	.8681	.69 83	•4783	•3206	.2097
-1. 50	•9655	•9320	•8681	•6983	•4783	•3205	.2097
-1.45	•9655	•9320	.8681	6983	•4782	•3205	•2097
-1.40	•9654	•9320	.8680	•6983	•4782	•3205	•2096
-1.35	•9653	•9319	.8679	.69 82	•478 1	• 3204	.2095
-1.30	•9652	•9318	.8678	•6980	.4781	.3203	.2094
-1. 25	•9650	•9316	.8677	•6979	•4778	.3201	.2093
-1.20	•9648	•9313	. 867 4	•6976	•4776	•3199	.2090
-1.15	•9643	•9309	. 8670	•6972	•4772	•3195	. 2086
-1.10	•9637	•9303	.8663	•6965	•4765	•3189	.2081
-1.05	•9628	•9293	.8654	.6956	•4756	.3180	.2073
-1.00	•9614	•9280	.8641	•6943	•4744	•3168	.2061
-0.95	•9595	•9261	•8622	•6924	•4726	•3151	.2046
-0.90	•9569	•9234	•8 5 95	•6898	.4701	•3128	.2024
-0.85	•9533	•9198	. 85 5 9	•6863	•4667	•3096	.1996
-0.80	•9484	•9149	.8511	.6815	•4622	• 3055	.1959
-0.75	.9419	9085	.8446	•6753	•4563	.3001	.1911
-0.70	•9335	.9001	.8363	.6672	.4488	•2933	.1853
-0.65	•9228	.8894	.8257	.6569	•4394	.2850	.1781
-0.60	•9094	.8760	.8124	.6441	•4277	.2748	.1696
-0.55	8928	8595	.7961	.6285	.4137	.2627	.1596
-0.50	.87 27	.8396	•7763	6097	• 3970	.2487	.1484
·				_			

MEAN			FRAC	TION DEFE	CTIVE, p		
z A	•005	.01	•02	•05	.10	•15	•20
A							
-0.45	. 8489	.8158	•7529	•5875	•3778	•2327	.1359
-0.40	.8209	.7880	•7256	•5620	•3559	.2150	.1225
-0.35	.7888	.7562	.6943	•5330	.3316	.1959	.1084
-0.30	.7526	.7203	.6591	•5007	•305 2	.1756	•0939
-0.25	.7124	.6805	.6203	•4655	.2771	-1547	.0796
-0.20	.6686	.6372	.5783	.4279	•2478	.1337	•0659
-0.15	.6217	•5910	•5336	. 3885	.2181	.1132	.0530
-0.10	•5724	•5424	.4869	•3481	.1886	.0937	.0414
-0.05	•5214	•4924	•4390	•3074	.1601	.0756	.0314
0.00	•4697	.4419	•3909	.2674	.1331	•0594	•0229
0.05	.4182	•3916	•3435	.2288	.1083	•0454	.0161
0.10	. 367 7	•3426	•2976	.1924	.0861	•03 56	.0108
0.15	.3192	•2957	•2540	•1589	.0668	•0240	.0069
0.20	•2734	.2516	.2135	.1288	•0504	•0165	•0042
0.25	.2309	.2110	.1766	.1022	.0370	.0109	.0024
0.30	•1923	.1743	.1436	•0794	.0263	•0069	.0013
0.35	.1577	.1417	.1148	.0603	.0181	.0042	.0006
0.40	.1274	.1133	.0901	.0448	.0120	.0024	.0003
0.45	.1013	.0891	.0694	.0324	.0077	.0013	.0001
0.50	.0793	•0688	•0524	•0228	•0047	•0006	.0000
0.55	.0610	•052 2	.0388	.0156	•0028	•0003	.0000
0.60	.0462	•0389	.0281	.0104	•0015	.0001	.0000
0.65	.0343	.0285	.0199	.0067	.0008	•0000	.0000
0.70	.0251	.0204	.0138	.0042	.0004	.0000	.0000
0.75	.0180	.0143	.0093	.0025	.0002	.0000	.0000
0,80	.0127	•0099	.0061	.0015	.0001	.0000	.0000
0.85	•0087	•0066	•0039	•0008	.0000	.0000	.0000
0.90	•0059	.0044	.0025	.0004	.0000	.0000	.0000
0.95	•0039	.0028	.0015	.0002	•0000	•0000	•0000
1.00	•0025	.0018	.0009	.0001	.0000	•0000	.0000
1.05	•0016	.0011	.0005	.0000	.0000	.0000	.0000
1.10	•0010	•0006	.0003	.0000	.0000	.0000	•0000
1.15	•0006	.0004	.0001	.0000	.0000	.0000	.0000
1.20	•0004	.0002	•0001	.0000	•0000	.0000	.0000
1.25	•0002	.0001	.0000	.0000	•0000	•0000	.0000
1.30	•0001	.0001	.0000	.0000	.0000	•0000	.0000
1.35	•0001	•0000	.0000	•0000	.0000	•0000	•0000
1.40	•0000	.0000	.0000	.0000	.0000	.0000	.0000
1.45	.0000	.0000	•0000	•0000	.0000	.0000	•0000
1.50	•0000	•0000	•0000	.0000	.0000	.0000	.0000
1.55	.0000	.0000	.0000	.0000	•0000	.0000	.0000
1.60	•0000	.0000	.0000	.0000	.0000	•0000	.0000
1.65	•0000	•0000	.0000	.0000	.0000	.0000	.0000
1.70	•0000	•0000	.0000	.0000	•0000	•0000	.0000
1.75	.0000	•0000	•0000	.0000	.0000	.0000	.0000
1.80	•0000	•0000	.0000	.0000	.0000	.0000	•0000

JOINT PROBABILITY OF SAMPLE MEAN GREATER THAN z_A AND EXACTLY i DEFECTIVES, IN SAMPLES FROM A NORMAL DISTRIBUTION ($\mu=0,\sigma=1$)

(z_A -DEVIATION OF ACCEPTANCE LIMIT, A, FROM PROCESS MEAN IN UNITS OF KNOWN STANDARD DEVIATION OF INDIVIDUALS)

n = 7i = 1

MEAN			FRAC	TTON DEFI	ECTIVE, p		
	.005	•01	•02	•05	.10	•15	•20
^Z A	•••	•••	•••	•0)	•		• • • •
-2.50	•034	•066	.124	.257	•372	.396	•367
-2.45	•034	.066	.124	•257	•372	•396	•367
-2.40	•034	.066	.124	•257	•372	•396	•367
-2.35	•034	•066	.124	•257	•372	•396	.367
-2.30	•034	•066	.124	•257	•372	• 3 96	.367
-2.25	•034	.066	.124	•257	•372	•396	.367
-2.20	•034	.066	.124	•257	•372	•396	•367
-2•15	•034	.066	.124	•257	•372	•396	.367
-2.10	•034	.066	.124	•257	•372	•396	•367
-2.10	•034	.066	.124	•257	•372	•396	.367
-2.00	•034	.066	.124	•257	•372	•396	.367
-1.95	•034	•066	.124	•257	•372	•396	.367
-1. 90	•034	.066	.124	•257	•372	•396	.367
-1.85	.034	•066	.124	•257	•372	•396	.367
-1. 80	•034	.066	.124	•257	•372	•396	•367
-1.75	•034	•066	.124	•257	•372	•396	•367
-1.70	•034	•066	.124	•257	•372	•396	•367
-1.65	•034	.066	.124	.257	•372	•396	.367
-1.60	•034	.066	.124	•257	•372	•396	.367
-1.55	•034	.066	.124	•257	•372	• 396	.367
-1.50	•034	•066	•124	•257	•372	•396	367
-1.45	•034	•066	.124	•257	•372	•396	•367
-1.40	•034	.066	.124	•257	•372	•396	.367
-1.35	.034	.066	.124	•257	•372	•396	367
-1.30	.034	.066	.124	•257	•372	• 396	.367
-1.25	•034	•066	.124	•257	•372	•396	•367
-1.20	•034	•066	.124	•257	•372	•396	.367
-1.15	•034	•066	.124	•257	•372	•396	.367
-1.10	.034	.066	.124	•257	•372	• 396	.367
-1.05	.034	•066	.124	•257	•372	• 396	.367
-1.00	•034	•066	.124	•257	•372	• 396	.366
-0.95	•034	.066	.124	•257	•372	• 395	.366
-0.90	•034	•066	•124	•257	•372	• 395	•366
-0.85	.034	.066	.124	.257	•371	• 395	• 365
-0.80	•034	•066	.124	•257	•371	• 394	• 364
-0.75	.034	•066	.124	•257	.370	• 393	.362
-0.70	.034	•066	.124	.256	•369	• 391	•360
-0.65	.034	.066	.124	.256	•368	• 389	•356
-0.60	.034	•066	.123	•255	•366	.386	•352
-0.55	•034	•066	.123	•254	.364	• 3 82	.346
-0.50	•034	•065	•123	253	.361	•376	.338
-		-	-				

z _A .005 .01 .02 .05 .10 .15 .20 -0.45 .034 .065 .122 .251 .356 .368 .328 -0.40 .034 .065 .122 .249 .550 .359 .316 -0.35 .033 .064 .119 .241 .333 .331 .283 -0.25 .033 .063 .118 .236 .321 .316 .262 -0.20 .032 .062 .115 .230 .307 .296 .240 -0.15 .032 .061 .113 .222 .291 .274 .215 -0.10 .031 .060 .110 .213 .273 .249 .189 -0.05 .031 .058 .106 .202 .252 .223 .165 -0.05 .031 .058 .106 .127 .207 .169 .111 0.10 .027 .051 .090	MEAN			FRAC	CTION DEFE	CTIVE, p		
-0.45	Z ,	•005	.01	.02	•05	.10	.15	.20
-0.40	А							
-0.40	-O 45	034	.065	.122	- 251	- 356	- 368	.328
-0.35								
-0.30								
-0.25								
-0.00								
-0.15								
-0.10					-			
-0.05 0.30 0.30 0.56 0.00 0.30 0.56 0.101 0.190 0.230 0.196 0.15 0.100 0.27 0.51 0.906 0.177 0.207 0.169 0.111 0.100 0.27 0.51 0.206 0.200 0.24 0.45 0.201 0.25 0.230 0.41 0.707 0.131 0.134 0.935 0.956 0.201 0.25 0.23 0.41 0.707 0.115 0.111 0.702 0.350 0.25 0.23 0.41 0.707 0.115 0.111 0.702 0.350 0.25 0.303 0.21 0.334 0.56 0.84 0.71 0.399 0.16 0.400 0.17 0.300 0.45 0.17 0.300 0.45 0.17 0.300 0.45 0.191 0.34 0.56 0.84 0.71 0.39 0.16 0.400 0.17 0.300 0.45 0.15 0.26 0.402 0.57 0.41 0.18 0.06 0.500 0.13 0.22 0.35 0.41 0.700 0.55 0.11 0.19 0.29 0.35 0.21 0.07 0.02 0.600 0.100 0.16 0.25 0.27 0.14 0.04 0.01 0.65 0.08 0.13 0.19 0.20 0.090 0.000 0.700 0.700 0.07 0.001 0.015 0.014 0.006 0.001 0.000 0.75 0.005 0.008 0.013 0.019 0.020 0.009 0.000 0.85 0.007 0.008 0.009 0.009 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.00000 0.000000								
0.00 .050 .056 .101 .190 .230 .196 .136 0.05 .029 .054 .096 .177 .207 .169 .111 0.10 .027 .051 .090 .162 .182 .142 .088 0.15 .026 .048 .084 .147 .158 .117 .068 0.20 .024 .045 .077 .131 .134 .093 .050 0.25 .023 .041 .070 .115 .111 .072 .036 0.30 .021 .038 .063 .100 .090 .054 .024 0.35 .019 .034 .056 .084 .071 .039 .016 0.40 .017 .030 .049 .070 .055 .028 .010 0.45 .015 .026 .042 .057 .041 .018 .006 0.55 .013 .022 .035 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
0.05 .029 .054 .096 .177 .207 .169 .111 0.10 .027 .051 .090 .162 .182 .142 .088 0.15 .026 .048 .084 .147 .158 .117 .068 0.20 .024 .045 .077 .131 .134 .093 .050 0.25 .023 .041 .070 .115 .111 .072 .036 0.30 .021 .038 .063 .100 .090 .054 .024 0.35 .019 .034 .056 .084 .071 .039 .016 0.40 .017 .030 .049 .070 .055 .028 .010 0.45 .015 .026 .042 .057 .041 .018 .006 0.50 .013 .022 .035 .045 .029 .012 .003 0.55 .011 .019 .029 <td>-</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	-							
0.10 .027 .051 .090 .162 .182 .142 .088 0.15 .026 .048 .084 .147 .158 .117 .068 0.20 .024 .045 .077 .131 .134 .093 .050 0.25 .023 .041 .070 .115 .111 .072 .036 0.30 .021 .038 .063 .100 .090 .054 .024 0.35 .019 .034 .056 .084 .071 .039 .016 0.45 .015 .026 .042 .057 .041 .018 .006 0.50 .013 .022 .035 .045 .029 .012 .003 0.55 .011 .019 .029 .035 .021 .007 .002 0.55 .011 .019 .029 .035 .021 .007 .002 0.56 .010 .016 .023 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
0.15 .026 .048 .084 .147 .158 .117 .068 0.20 .024 .045 .077 .131 .134 .093 .050 0.25 .023 .041 .070 .115 .111 .072 .036 0.30 .021 .038 .063 .100 .090 .054 .024 0.35 .019 .034 .056 .084 .071 .039 .016 0.40 .017 .030 .049 .070 .055 .028 .010 0.45 .015 .026 .042 .057 .041 .018 .006 0.55 .011 .019 .029 .035 .045 .029 .012 .003 0.55 .011 .019 .029 .035 .021 .007 .002 0.55 .011 .019 .029 .035 .021 .007 .002 0.66 .013 .019 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
0.20 .024 .045 .077 .131 .134 .093 .050 0.25 .023 .041 .070 .115 .111 .072 .036 0.30 .021 .038 .063 .100 .090 .054 .024 0.35 .019 .034 .056 .084 .071 .039 .016 0.40 .017 .030 .049 .070 .055 .028 .010 0.45 .015 .026 .042 .057 .041 .018 .006 0.50 .013 .022 .035 .045 .029 .012 .003 0.55 .011 .019 .029 .035 .021 .007 .002 0.66 .010 .016 .025 .027 .014 .004 .001 0.65 .008 .013 .019 .020 .009 .002 .000 0.70 .007 .010 .015 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
0.25 .023 .041 .070 .115 .111 .072 .036 0.30 .021 .038 .063 .100 .090 .054 .024 0.35 .019 .034 .056 .084 .071 .039 .016 0.40 .017 .030 .049 .070 .055 .028 .010 0.45 .015 .026 .042 .057 .041 .018 .006 0.50 .013 .022 .035 .045 .029 .012 .003 0.55 .011 .019 .029 .035 .021 .007 .002 0.60 .010 .016 .025 .027 .014 .004 .001 0.65 .008 .013 .019 .020 .009 .002 .000 0.70 .007 .010 .015 .014 .006 .001 .000 0.75 .005 .008 .011 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
0.30 .021 .038 .063 .100 .090 .054 .024 0.35 .019 .034 .056 .084 .071 .039 .016 0.40 .017 .030 .049 .070 .055 .028 .010 0.45 .015 .026 .042 .057 .041 .018 .006 0.50 .013 .022 .035 .045 .029 .012 .003 0.55 .011 .019 .029 .035 .021 .007 .002 0.60 .010 .016 .025 .027 .014 .004 .001 0.65 .008 .013 .019 .020 .009 .002 .000 0.70 .007 .010 .015 .014 .006 .001 .000 0.75 .005 .008 .011 .010 .003 .001 .000 0.85 .003 .005 .006 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
0.355 .019 .034 .056 .084 .071 .039 .016 0.40 .017 .030 .049 .070 .055 .028 .010 0.45 .015 .026 .042 .057 .041 .018 .006 0.50 .013 .022 .035 .045 .029 .012 .003 0.55 .011 .019 .029 .035 .021 .007 .002 0.60 .010 .016 .025 .027 .014 .004 .001 0.65 .008 .013 .019 .020 .009 .002 .000 0.70 .007 .010 .015 .014 .006 .001 .000 0.75 .005 .008 .011 .010 .003 .001 .000 0.85 .003 .005 .006 .004 .001 .000 .000 0.95 .002 .003 .003 </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
0.440 .017 .030 .049 .070 .055 .028 .010 0.45 .015 .026 .042 .057 .041 .018 .006 0.50 .013 .022 .035 .045 .029 .012 .003 0.55 .011 .019 .029 .035 .021 .007 .002 0.60 .010 .016 .025 .027 .014 .004 .001 0.65 .008 .013 .019 .020 .009 .002 .000 0.70 .007 .010 .015 .014 .006 .001 .000 0.75 .005 .008 .011 .010 .003 .001 .000 0.80 .004 .006 .008 .007 .002 .000 .000 0.85 .003 .005 .006 .004 .001 .000 .000 0.95 .002 .003 .003 </td <td>-</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	-							
0.45 .015 .026 .042 .057 .041 .018 .006 0.50 .013 .022 .035 .045 .029 .012 .003 0.55 .011 .019 .029 .035 .021 .007 .002 0.60 .010 .016 .025 .027 .014 .004 .001 0.65 .008 .013 .019 .020 .009 .002 .000 0.70 .007 .010 .015 .014 .006 .001 .000 0.75 .005 .008 .011 .010 .003 .001 .000 0.80 .004 .006 .008 .007 .002 .000 .000 0.85 .003 .005 .006 .004 .001 .000 .000 0.95 .002 .003 .003 .002 .001 .000 .000 0.95 .002 .003 .003 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
0.50 .013 .022 .035 .045 .029 .012 .003 0.55 .011 .019 .029 .035 .021 .007 .002 0.60 .010 .016 .025 .027 .014 .004 .001 0.65 .008 .013 .019 .020 .009 .002 .000 0.70 .007 .010 .015 .014 .006 .001 .000 0.75 .005 .008 .011 .010 .003 .001 .000 0.80 .004 .006 .008 .007 .002 .000 .000 0.85 .003 .005 .006 .004 .001 .000 .000 0.90 .002 .003 .003 .001 .000 .000 .000 1.00 .001 .002 .002 .001 .000 .000 .000 1.05 .001 .001 .001 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
0.555 .011 .019 .029 .0355 .021 .007 .002 0.60 .010 .016 .025 .027 .014 .004 .001 0.65 .008 .013 .019 .020 .009 .002 .000 0.70 .007 .010 .015 .014 .006 .001 .000 0.75 .005 .008 .011 .010 .003 .001 .000 0.80 .004 .006 .008 .007 .002 .000 .000 0.85 .003 .005 .006 .004 .001 .000 .000 0.90 .002 .004 .004 .003 .001 .000 .000 0.95 .002 .003 .003 .002 .000 .000 .000 0.95 .002 .003 .003 .002 .000 .000 .000 .000 1.00 .001 .002<								
0.60 .010 .016 .025 .027 .014 .004 .001 0.65 .008 .013 .019 .020 .009 .002 .000 0.70 .007 .010 .015 .014 .006 .001 .000 0.75 .005 .008 .011 .010 .003 .001 .000 0.80 .004 .006 .008 .007 .002 .000 .000 0.85 .003 .005 .006 .004 .001 .000 .000 0.90 .002 .003 .003 .003 .003 .000 .000 .000 0.95 .002 .003 .003 .003 .000 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>								
0.65 .008 .013 .019 .020 .009 .002 .000 0.70 .007 .010 .015 .014 .006 .001 .000 0.75 .005 .008 .011 .010 .003 .001 .000 0.80 .004 .006 .008 .007 .002 .000 .000 0.85 .003 .005 .006 .004 .001 .000 .000 0.90 .002 .004 .004 .003 .001 .000 .000 0.95 .002 .003 .003 .002 .001 .000 .000 1.00 .001 .002 .002 .001 .000 .000 .000 1.05 .001 .001 .001 .001 .000 .000 .000 1.10 .001 .001 .001 .000 .000 .000 .000 1.20 .000 .001 .001 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
0.70 .007 .010 .015 .014 .006 .001 .000 0.75 .005 .008 .011 .010 .003 .001 .000 0.80 .004 .006 .008 .007 .002 .000 .000 0.85 .003 .005 .006 .004 .001 .000 .000 0.90 .002 .004 .004 .003 .001 .000 .000 0.95 .002 .003 .003 .002 .000 .000 .000 1.00 .001 .002 .002 .001 .000 .000 .000 1.05 .001 .001 .001 .001 .000 .000 .000 1.10 .001 .001 .001 .000 .000 .000 .000 1.20 .000 .001 .001 .000 .000 .000 .000 1.25 .000 .000 .000 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
0.75 .005 .008 .011 .010 .003 .001 .000 0.80 .004 .006 .008 .007 .002 .000 .000 0.85 .003 .005 .006 .004 .001 .000 .000 0.90 .002 .004 .004 .003 .001 .000 .000 0.95 .002 .003 .003 .002 .000 .000 .000 1.00 .001 .002 .002 .001 .000 .000 .000 1.05 .001 .001 .001 .001 .000 .000 .000 1.10 .001 .001 .001 .000 .000 .000 .000 1.15 .000 .001 .001 .000 .000 .000 .000 1.20 .000 .000 .000 .000 .000 .000 .000 1.25 .000 .000 .000 <td></td> <td></td> <td>-</td> <td></td> <td></td> <td></td> <td></td> <td></td>			-					
0.80 .004 .006 .008 .007 .002 .000 .000 0.85 .003 .005 .006 .004 .001 .000 .000 0.90 .002 .004 .004 .003 .001 .000 .000 0.95 .002 .003 .002 .001 .000 .000 .000 1.00 .001 .002 .002 .001 .000 .000 .000 1.05 .001 .001 .001 .001 .000 .000 .000 1.10 .001 .001 .001 .000 .000 .000 .000 1.15 .000 .001 .001 .000 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>								
0.85 .003 .005 .006 .004 .001 .000 .000 0.90 .002 .004 .004 .003 .001 .000 .000 0.95 .002 .003 .003 .002 .000 .000 .000 1.00 .001 .002 .002 .001 .000 .000 .000 1.05 .001 .001 .001 .001 .001 .000 .000 .000 1.10 .001 .001 .001 .001 .000 .000 .000 1.15 .000 .001 .001 .000 .000 .000 .000 .000 .000 1.20 .000 .000 .000 .000 .000 .000 .000 .000 .000 .000 1.30 .000 .000 .000 .000 .000 .000 .000 .000 .000 1.40 .000 .000 .000 .000								
0.90 .002 .004 .003 .001 .000 .000 0.95 .002 .003 .003 .002 .000 .000 .000 1.00 .001 .002 .002 .001 .000 .000 .000 1.05 .001 .001 .001 .001 .000 .000 .000 1.10 .001 .001 .001 .000 .000 .000 .000 1.15 .000 .001 .001 .000 .000 .000 .000 1.20 .000 .000 .000 .000 .000 .000 .000 1.25 .000 .000 .000 .000 .000 .000 .000 1.30 .000 .000 .000 .000 .000 .000 .000 .000 1.40 .000 .000 .000 .000 .000 .000 .000 .000 1.45 .000 .000 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
0.95 .002 .003 .002 .000 .000 .000 1.00 .001 .002 .002 .001 .000 .000 1.05 .001 .001 .001 .001 .000 .000 .000 1.10 .001 .001 .001 .000 .000 .000 .000 1.15 .000 .001 .001 .000 .000 .000 .000 1.20 .000 .000 .000 .000 .000 .000 .000 1.25 .000 .000 .000 .000 .000 .000 .000 1.30 .000 .000 .000 .000 .000 .000 .000 1.35 .000 .000 .000 .000 .000 .000 .000 1.40 .000 .000 .000 .000 .000 .000 .000 1.45 .000 .000 .000 .000 .000 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
1.00 .001 .002 .001 .000 .000 .000 1.05 .001 .001 .001 .001 .000 .000 .000 1.10 .001 .001 .001 .000 .000 .000 .000 1.15 .000 .001 .001 .000 .000 .000 .000 1.20 .000 .000 .000 .000 .000 .000 .000 1.25 .000 .000 .000 .000 .000 .000 .000 1.30 .000 .000 .000 .000 .000 .000 .000 1.35 .000 .000 .000 .000 .000 .000 .000 1.40 .000 .000 .000 .000 .000 .000 .000 1.45 .000 .000 .000 .000 .000 .000 .000 1.50 .000 .000 .000 .000 .000 .000 .000 1.55 .000 .000 .000 </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
1.05 .001 .001 .001 .000 .000 .000 .000 1.10 .001 .001 .001 .000 .000 .000 .000 1.15 .000 .001 .001 .000 .000 .000 .000 1.20 .000 .000 .000 .000 .000 .000 .000 1.25 .000 .000 .000 .000 .000 .000 .000 .000 1.30 .000 .000 .000 .000 .000 .000 .000 .000 1.35 .000 .000 .000 .000 .000 .000 .000 .000 1.40 .000 .000 .000 .000 .000 .000 .000 .000 1.45 .000 .000 .000 .000 .000 .000 .000 .000 1.50 .000 .000 .000 .000 .000 .000 .000 .000 1.55 .000 .000 .000 .000 .000<					•			
1.10 .001 .001 .000 .000 .000 .000 .000 1.15 .000 .001 .001 .000 .000 .000 .000 .000 1.20 .000 .000 .000 .000 .000 .000 .000 .000 .000 1.25 .000 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>								
1.15 .000 .001 .000 .000 .000 .000 1.20 .000 .000 .000 .000 .000 .000 .000 1.25 .000 .000 .000 .000 .000 .000 .000 .000 1.30 .000 .000 .000 .000 .000 .000 .000 .000 1.35 .000 .000 .000 .000 .000 .000 .000 .000 .000 1.40 .000 .000 .000 .000 .000 .000 .000 .000 .000 1.45 .000 .000 .000 .000 .000 .000 .000 .000 .000 1.50 .000 .000 .000 .000 .000 .000 .000 .000 .000 1.60 .000 .000 .000 .000 .000 .000 .000 .000	· ·							.000
1.20 .000	1.15	•000					.000	
1.25 .000						.000		.000
1.30 .000							.000	.000
1.35 .000								.000
1.40 .000 .000 .000 .000 .000 .000 .000 1.45 .000 .000 .000 .000 .000 .000 .000 1.50 .000 .000 .000 .000 .000 .000 .000 1.55 .000 .000 .000 .000 .000 .000 .000 1.60 .000 .000 .000 .000 .000 .000 .000							.000	.000
1.45 .000 .000 .000 .000 .000 .000 .000 1.50 .000 .000 .000 .000 .000 .000 .000 .000 1.55 .000 .000 .000 .000 .000 .000 .000 .000 1.60 .000 .000 .000 .000 .000 .000 .000							.000	.000
1.50 .000								
1.55 .000							.000	.000
1.60 .000 .000 .000 .000 .000 .000								.000
1.65 .000 .000 .000 .000 .000 .000 .000	1.65	.000	.000	•000	.000	•000	.000	.000
1.70 .000 .000 .000 .000 .000 .000								
1.75 .000 .000 .000 .000 .000 .000								.000
.000 .000 .000 .000 .000 .000							.000	.000

JOINT PROBABILITY OF SAMPLE MEAN GREATER THAN z_A AND EXACTLY i DEFECTIVES, IN SAMPLES FROM A NORMAL DISTRIBUTION (μ =0, σ =1)

(z_A-DEVIATION OF ACCEPTANCE LIMIT, A, FROM PROCESS MEAN IN UNITS OF KNOWN STANDARD DEVIATION OF INDIVIDUALS)

n = 7 i = 2

MEAN			FRAC	TION DEF	ECTIVE, p		
z _A	•005	.01	.02	•05	.10	.15	•20
Α							
-2.50	•001	.002	•008	.041	.124	.210	.275
-2.45	.001	.002	.008	.041	.124	.210	.275
-2.40	.001	.002	.008	.041	.124	.210	.275
-2.35	.001	.002	.008	.041	.124	.210	.275
-2.30	.001	.002	.008	.041	.124	.210	.275
-2.25	.001	•002	.008	.041	.124	.210	.275
-2.20	.001	.002	.008	.041	.124	.210	.275
-2.15	.001	•002	.008	.041	.124	.210	.275
-2.10	.001	.002	.008	.041	.124	.210	•275
-2.05	.001	.002	.008	.041	.124	.210	•275
-2.00	.001	.002	•008	.041	.124	.210	•275
-1.95	.001	•002	•008	.041	.124	.210	•275
-1. 90	.001	•002	•008	.041	•124	.210	•275
-1.85	.001	•002	•008	.041	.124	.210	•275
-1.80	.001	•002	.008	.041	.124	.210	•275
-1.75	.001	•002	•008	.041	.124	.210	•275
-1.70	.001	.002	•008	.041	.124	.210	•275
-1.65	.001	•002	.008	.041	.124	.210	•275
-1.60	.001	.002	.008	.041	.124	.210	•275
-1.55	.001	.002	.008	.041	.124	.210	•275
-1.50	.001	.002	.008	.041	.124	.210	• 275
-1.45	•001	•002	.008	.041	.124	.210	. 275
-1.40	.001	•002	•008	.041	.124	.210	•275
-1.35	.001	.002	.008	.041	.124	.210	•275
-1.30	.001	.002	•008	.041	.124	.210	•275
-1.25	•001	.002	.008	.041	.124	.210	•275
-1.20	.001	.002	.008	.041	.124	.210	•275
-1.15	.001	.002	.008	.041	.124	.210	• 275
-1.10	.001	.002	.008	.041	.124	.210	• 275
-1.05	.001	•002	.008	.041	.124	.210	•275
-1.00	.001	.002	.008	.041	.124	.210	•275
-0.95	.001	•002	.008	.041	.124	.210	•275
-0.90	•001	•002	.008	.041	.124	.210	•275
-0.85	.001	.002	.008	.041	.124	.210	• 275
-0.80 -0.75	.001	•002	.008	.041	.124	.210	•275
-0.75	•001	.002	.008	.041	.124	.210	•275
-0.70	.001	.002	•008	.041	.124	.210	•275
-0.65	.001	•002	800	.041	.124	•209	•275
-0.60	.001	.002	•008 •009	.041	.124	•209	•274
-0.55	.001	•002	.008	.041	.124	.209	•274
- 0.50	•001	.002	.008	.041	.124	.209	•273

MEAN			FRAC	TION DEF	ECTIVE, p		
^z A	•005	.01	.02	•05	.10	.15	.20
A							
-C.45	.001	•002	.008	.041	.124	• 208	.271
-0.40	.001	.002	.008	.041	.123	.207	.269
-0.35	.001	•002	.008	.041	.123	•206	.266
-0.30	.001	.002	•008	.040	.122	.204	.262
-0.25	.001	•002	.008	.040	.122	• 20 2	.256
-0.20	.001	.002	.008	.040	.121	•198	•249
-0.15	.001	.002	.008	.040	.119	.194	.240
-0.10	.001	.002	.008	.040	.117	.188	.229
-0.05	.001	•002	.007	•039	.115	.181	.215
0.00	.001	•002	.007	•039	.111	•172	.199
0.05	.001	•002	.007	.03 8	.107	.162	.181
0.10	.001	.002	.007	•037	.102	.150	.162
0.15	.001	.002	.007	•036	•096	.13 6	.141
0.20	•000	•002	.007	•035	•090	.122	.120
0.25	•000	.002	.007	•033	.082	.107	.100
0.30	.000	.002	.007	.031	.074	•092	.080
0.35	•000	•002	.006	•029	.065	•076	•062
0.40	•000	•002	•006	•026	•057	•062	.047
0.45	.000	.002	.006	•024	.048	.049	.034
0.50	.000	.002	•005	.021	•040	.037	.023
0.55	•000	.001	•005	.019	•032	.027	.016
0.60	•000	•001	•004	.016	•025	.019	.010
0.65	•000	.001	•004	.013	.019	.013	•006
0.70	.000	.001	.003	.011	.014	•009	.003
0.75	•000	.001	.003	•009	.010	.005	.002
0.80	•000	.001	•002	.007	•007	.003	.001
0.85	.000	•001	•002	.005	.005	.002	•000
0.90	.000	.001	•002	.004	.003	•001	.000
0.95	.000	.001	.001	.003	.002	.000	.000
1.00	.000	.000	.001	.002	.001	.000	.000
1.05	.000	.000	.001	.001	.001	.000	.000
1.10	•000	.000	.001	.001	.000	.000	.000
1.15	•000	.000	.000	.001	.000	.000	.000
1.20	•000	.000	.000	.000 .000	.000 .000	•000	.000
1.25	•000	.000	.000 .000	.000	.000	.000	.000
1.30	•000	.000 .000	•000	.000	•000	.000	.000
1.35	.000 .000	•000	•000	.000	.000	.000	.000
1.40	•000	.000	•000	.000	.000	.000	.000
1.45	.000	•000	•000	.000	•000	.000	.000
1.50	.000	•000	.000	.000	.000	.000	.000
1.55 1.60	.000	•000	.000	.000	.000	.000	.000
1.65	.000	.000	.000	.000	.000	.000	.000
1.70	.000	•000	.000	.000	.000	.000	.000
1.75	•000	•000	•000	.000	•000	•000	.000
1.80	•000	•000	.000	.000	.000	.000	.000
1,000	•000	•000	•000				

JOINT PROBABILITY OF SAMPLE MEAN GREATER THAN z_{A} AND EXACTLY 1 DEFECTIVES, IN SAMPLES FROM A NORMAL DISTRIBUTION (μ =0, σ =1)

(z_A-DEVIATION OF ACCEPTANCE LIMIT, A, FROM PROCESS MEAN IN UNITS OF KNOWN STANDARD DEVIATION OF INDIVIDUALS)

n = 8 i = 0

MEAN	FRACTION DEFECTIVE, p							
z _A	•005	.01	.02	•05	.10	.15	•20	
A								
-2.50	•9607	.9227	.8508	.6634	.4305	.2725	.1678	
-2.45	.9607	.9227	.8508	.6634	4305	.2725	.1678	
-2.40	.9607	9227	8509	.6634	.4305	•2725	.1678	
-2.35	.9607	.9227	.8508	.6634	4305	2725	.1678	
-2.30	.9607	9227	.8508	.6634	.4305	.2725	.1678	
-2.25	.9607	.9227	.8508	.6634	•4305	.2725	.1678	
-2.20	.9607	.9227	8508	.6634	.4305	.2725	.1678	
-2.15	.9607	.9227	.8508	.6634	4305	.2725	.1678	
-2.10	.9607	•9227	.8508	.6634	.4305	.2725	.1678	
-2.05	•9607	.9227	.8508	.6634	.4305	.2725	.1678	
-2.00	.9607	.9227	.8508	.6634	•4305	2725	.1678	
-1.95	.9607	9227	.8508	.6634	.4305	.2725	.1678	
-1.90	.9607	9227	.8508	.6634	•4305	.2725	.1678	
-1.85	•9607	•9227	.8508	.6634	•4305	.2725	.1578	
-1.80	.9607	•9227	. 8508	.6634	.4305	.2725	.1678	
-1.75	•9607	•9227	.8508	•6634	•4305	·2725	.1678	
-1.70	.9607	•9227	. 8508	•6634	•4305	.2725	.1678	
-1.65	•9607	.9227	. 8508	•6634	•4305	.2725	.1678	
-1.60	.9607	.9227	.8508	.6634	•4305	.2725	.1678	
-1.55	•9607	•9227	.8508	•6634	•4305	.2725	.1678	
-1.50	•9607	•9227	. 8508	•6634	•4305	•2725	.1678	
-1.45	•9607	•9227	.8507	•6634	•4304	. 2725	.1678	
-1.40	•9607	•9227	.8507	.6634	•4304	•2725	.1678	
-1.35	•9606	•9227	.8507	•6634	•4304	•2724	.1677	
-1.30	•9606	•9226	.8506	.6633	•4304	.2724	.1677	
-1.25	•9605	•9225	.8506	.6632	•4304	•2723	.1676	
-1.20	•9603	•9224	.8504	•6631	.4301	.2722	.1675	
1.15	•9601	•9222	.8502	.6629	•4299	.2720	.1673	
-1.10	•9598	.9218	.8498	.6625	.4296	.2716	.1670	
-1.05	•9592	.9213	•8493	.6619	.4290	.2711	.1665	
-1.00	•9584	•9204	.8484	.6611	•4282	.2704	.1658	
-0.95	•9571	•9191	.8472	•6599	•4270	.2693	.1648	
-0.90	•9552	•9173	.8453	•6581	•4253	.2677	.1633	
-0.85	•9526	.9147	.8427	•6555	•4229	•2654	.1614	
-0. 80	•948 <u>9</u>	.9109	.8390	.6519	•4195	.2624	.1587	
-0.75	.9438	•9058	.8339	.6470	.4150	.2583	.1552	
-0. 70	.9369	. 8990	.8271	.6404	.4089	.2530	.1507	
-0.65	•9277	. 8899	.8181	.6317	.4011	.2462	.1450	
-0.60	•9159	.8781	.8065	.6206	.3912	•2377	.1381	
-0. 55	•9009	. 8632	.7917	•6066 5004	.3789	•2274	.1300	
-0.50	.8822	. 8446	•7734	•5894	•3640	.2152	.1206	

MEAN			FRAC	TION DEFE	CTIVE, p		
z A	•005	•01	.02	•05	.10	.15	•20
A							
-0.45	.8594	.8219	.7511	. 5686	•3464	.2012	.1100
-0.40	.8522	•7949	.7246	•5441	•3261	.1854	.0986
-0.35	.8002	.7632	•6937	•5158	•3032	.1681	.0865
-0.30	.7636	.7270	.6583	•4840	.2780	.1497	.0742
-0.25	.7223	.6862	.6188	.4488	.2510	.1307	.0620
-0.20	.6767	.6413	•5754	.4109	•2229	.1.116	.0503
-0.15	.6275	•5929	•5289	.3710	.1943	.0931	.0396
-0.10	•5753	•5418	.4801	•3298	.1660	.0756	.0302
-0.05	•5212	•4889	.4300	.2885	.1388	•0597	.0221
0.00	.4662	•4354	•3796	•2480	.1133	.0457	.0156
0.05	.4114	•3823	•3300	•2092	.0903	•0339	.0105
0.10	•3580	•3307	•2823	.1731	.0700	.0242	.0067
0.15	.30 69	.2816	.2374	.1402	.0527	.0166	.0041
0.20	•2590	•2359	.1962	.1110	.0385	•0109	.0023
0.25	.215 2	.1944	.1591	•0859	.0272	•0069	.0012
0.30	•1758	.1573	. 1265	•0648	.0186	.0041	.0006
0.35	.1412	.1250	•0986	.0477	.0122	•0023	•0003
0.40	.1114	.0975	.0753	.0341	.0077	.0012	.0001
0.45	•0863	.0746	.0562	•0237	.0046	•0006	.0000
0.50	•0656	•0559	.0410	.0160	.0027	•0003	.0000
0.55	•0490	.0411	.0293	.0104	.0015	.0001	.0000
0.60	.0358	.0295	•0204	•0066	.0007	•0000	•0000
0.65	.0257	.0208	.0138	•0040	.0004	•0000	.0000
0.70	.0180	.0143	.0091	.0024	•0002	.0000	.0000
0.75	.0124	•0096	•0059	.0013	.0001	.0000	.0000
0.80	.0083	.0063	•0037	.0007	.0000	•0000	.0000
0.85	•0055	.0040	•0022	.0004	.0000	.0000	.0000
0.90	•0035	.0025	.0013	.0002	.0000	.0000	.0000
0.95	.0022	.0015	.0007	•0001	.0000	.0000	.0000
1.00	.0014	•0009	.0004	.0000	.0000	.0000	.0000
1.05	•0008	•0005	.00 02	•0000	.0000	.0000	•0000
1.10	•0005	.0003	.0001	•0000	.0000	.0000	.0000
1.15	•0003	.0002	.0001	.0000	.0000	.0000	.0000
1.20	•0002	.0001	•0000	•0000	.0000	.0000	.0000
1.25	.0001	•0000	.0000	.0000	•0000	.0000	.0000
1.30	.0000	•0000	.0000	•0000	.0000	.0000	.0000
1.35	•0000	.0000	.0000	.0000	.0000	.0000	.0000
1.40	•0000	.0000	.0000	•0000	.0000	•0000	.0000
1.45	•0000	.0000	.0000	.0000	.0000	.0000	.0000
1.50	.0000	.0000	.0000	.0000	.0000	.0000	.0000
1.55	•0000	.0000	.0000	.0000	.0000	.0000	.0000
1.60	.0000	.0000	.0000	.0000	.0000	.0000	.0000
1.65	.0000	.0000	.0000	.0000	.0000	.0000	.0000
1.70	.0000	•0000	.0000	.0000	.0000	.0000	.0000
1.75	.0000	.0000	.0000	•0000	.0000	.0000	.0000
1.80	.0000	.0000	•0000	.0000	•0000	.0000	.0000

JOINT PROBABILITY OF SAMPLE MEAN GREATER THAN z_A AND EXACTLY 1 DEFECTIVES, IN SAMPLES FROM A NORMAL DISTRIBUTION (μ =0, σ =1)

(z_-DEVIATION OF ACCEPTANCE LIMIT, A, FROM PROCESS MEAN IN UNITS OF KNOWN STANDARD DEVIATION OF INDIVIDUALS)

n = 8 i = 1

			1 = 1				
MEAN			FRAC	CTION DEFI	ECTIVE. p		
ZA	•005	•01	.02	•05	.10	.15	•20
A			-		-		
-2.50	•039	.074	•139	•279	•383	• 3 85	•336
-2.45	.039	.074	•139	.279	•383	• 385	•336
-2.40	.039	.074	.139	•279	.383	.385	.336
-2.35	.039	.074	.139	•279	• 3 83	• 385	.336
-2.30	.039	.074	.139	•279	• 383	• 385	.336
-2.25	.039	.074	.139	•279	.383	.385	.336
-2.20	.039	.074	.139	.279	.383	.385	.336
-2.15	.039	.074	.139	279	.383	.385	.336
-2.10	.039	.074	.139	•279	•383	.385	.336
··2•05	.039	.074	.139	.279	.383	.385	.336
-2.00	.039	.074	.139	.279	.383	.385	.336
-1.95	.039	.074	.139	.279	.383	.385	.336
-1.90	.039	.074	.139	.279	•383	.385	.336
-1.85	.039	.074	.139	•279	.383	.385	.336
-1.80	.039	.074	.139	.279	.383	.385	. 336
-1.75	.039	.074	.139	.279	.383	.385	.336
-1.70	.039	.074	.139	.279	.383	.385	.336
-1.65	.039	.074	.139	279	.383	.385	.336
-1.60	.039	.074	.139	279	.383	.385	.336
-1.55	.039	.074	.139	.279	.383	.385	.336
-1.50	.039	.074	.139	•279	.383	.385	.336
-1.45	.039	.074	.139	•279	.383	.385	.336
-1.40	•039	.074	.139	.279	.383	.385	.336
-1.35	.039	.074	.139	•279	.383	.385	.336
-1.30	.039	.074	.139	.279	•383	.385	.336
-1.25	.039	.074	.139	.279	.383	.385	.336
-1.20	•039	.074	.139	.279	.383	. 385	• 335
-1.15	.039	.074	.139	•279	•383	.385	•335
-1.10	•039	.074	.139	.279	.383	• 385	• 335
-1.05	.039	.074	.139	•279	.383	•385	• 335
-1.00	•039	.074	.139	.279	• 382	•384	• 335
- 9•95	.039	.074	.139	.279	•382	•384	• 335
-0.90	.039	.074	.139	.279	.38 2	.384	• 335
-0.85	•039	.074	.139	•279	• 3 82	. 384	• 334
-0.80	•039	.074	.139	.279	.382	•383	•333
-0.75	.039	.074	.139	•279	.381	.382	.331
-0.70	.039	.074	.139	.278	•380	.380	•329
-0.65	.039	.074	.138	.278	•379	• 3 78	• 326
-0.60	.038	.074	.138	•277	• 377	• <i>3</i> 75	.322
-0.55	.03 8	.074	.138	.276	• 375	.371	.316
-0.50	•038	.074	.138	•275	.371	•365	.308

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MEAN		FRACTION DEFECTIVE, p						
	•005	.01	.02	.05	.10	.15	.20	
z A								
-0.45	•038	.074	.137	.273	•366	•357	•2 9 8	
-0.40	.038	.073	.136	.270	•359	•347	.285	
-0.35	• 03 8	.073	.135	.266	•350	• 334	.269	
-0.30	.038	.072	.133	.261	. 340	.318	.251	
-0.25	.037	.071	.131	•255	.326	•299	.23 0	
-0.20	•037	.070	.128	.247	•310	.278	. 207	
-0.15	.036	.069	.125	•237	.291	•254	.182	
-0.10	.035	.067	.121	.226	.270	.227	.157	
-0.05	.034	.065	.116	.213	.246	.200	.131	
0.00	.033	.062	.110	198	.221	.171	.106	
0.05	.032	.059	.104	.182	.195	.144	.084	
0.10	.030	.055	.097	.165	.168	.117	.063	
0.15	•028	.051	.089	.147	.142	.093	.046	
0.20	.026	.047	.080	.128	.117	.071	.032	
0.25	•024	.043	.072	.110	.094	.052	.022	
0.30	.022	.038	.063	.092	.073	.037	.014	
0.35	.019	.034	•054	.076	.055	.025	.006	
0.40	.017	029	.046	.061	.040	.017	.005	
0.45	.015	.025	.038	.048	.029	.010	.002	
0.50	.012	.021	.031	.037	.019	.006	.001	
0.55	.010	.017	.025	.027	.013	.003	.001	
0.60	.009	.014	.020	.020	.008	.002	.000	
0.65	.007	.011	.015	.014	.005	.001	.000	
0.70	.005	.008	.011	.009	•003	.000	.000	
0.75	•004	•006	.008	.006	.001	.000	.000	
0.80	.003	.005	.006	.004	.001	.000	.000	
0.85	•002	.003	.004	.002	•000	.000	.000	
0.90	.002	.002	.003	.001	.000	.000	.000	
0.95	.001	.002	.002	.001	.000	.000	.000	
1.00	.001	.001	.001	.000	•000	.000	.000	
1.05	.001	.001	.001	.000	•000	.000	.000	
1.10	.000	.000	.000	.000	.000	.000	.000	
1.15	.000	.000	.000	.000	.000	.000	·000	
1.20	.000	.000	.000	.000	.000	.000	.000	
1.25	•000	•000	.000	.000	.000	.000	.000	
1.30	.000	•000	.000	.000	.000	.000	.000	
1.35	•000	.000	.000	•000	.000	•000	.000	
1.40	.000	.000	.000	.000	.000	•000	.000	
1.45	•000	.000	.000	.000	.000	.000	.000	
1.50	•000	•000	.000	.000	.000	.000	.000	
1.55	•000	•000	.000	.000	.000	.000	.000	
1.60	.000	•000	.000	•000	•000	•000	.000	
1.65	•000	.000	.000	.000	•000	.000	.000	
1.70	•000	.000	.000	.000	.000	.000	.000	
1.75	.000	.000	.000	.000	•00C	.000	.000	
1.80	.000	.000	•000	.000	.000	.000	.000	

SAMPLE MEAN GREATER THAN z_A AND EXACTLY i DEFECTIVES, IN SAMPLES FROM A NORMAL DISTRIBUTION $(\mu=0,\sigma=1)$

(z_A-DEVIATION OF ACCEPTANCE LIMIT, A, FROM PROCESS MEAN IN UNITS OF KNOWN STANDARD DEVIATION OF INDIVIDUALS)

n = 8 i = 2

MEAN		FRACTION DEFECTIVE, p							
z _A	•005	.01	.02	•05	.10	•15	.20		
A									
- 2 . 50	•001	•003	.010	.051	.149	•2 3 8	, 294		
-2.45	.001	•003	.010	.051	.149	.238	-294		
-2.40	.001	•003	.010	.051	.149	.238	•294		
-2.35	.001	.003	.010	.051	.149	.238	.294		
-2.30	•001	•003	.010	•051	.149	•238	.294		
-2.25	•001	•003	.010	.051	.149	•238	•294		
-2.20	.001	•003	.010	.051	.149	•238	•294		
- 2.15	.001	•003	•010	•051	.149	. 2 3 8	.294		
-2.10	.001	•003	.010	•051	.149	. 2 3 8	•294		
-2.05	.001	•003	.010	•051	•149	•2 3 8	.294		
-2.00	•001	•003	.010	•051	•149	•238	•294		
-1. 95	.001	•003	.010	.051	•149	. 2 3 8	•294		
-1.90	.001	.003	.010	.051	.149	•238	•294		
-1.85	.001	.003	.010	.051	.149	. 2 3 8	•294		
-1.80	.001	•003	.010	•051	•149	•238	.294		
-1. 75	.001	.003	.010	•051	.149	•238	•294		
-1.70	•001	•003	.010	.051	.149	.23 8	•294		
-1.65	•001	•003	.010	•051	.149	.23 8	•294		
-1.60	.001	.003	.010	.051	.149	•2 3 8	•294		
-1.5 5	.001	•003	.010	•051	.149	. 2 3 8	.294		
-1.5 0	.001	•003	.010	•051	.149	•2 3 8	•294		
-1.45	.001	•003	.010	.051	.149	•2 3 8	.294		
-1.40	.001	•003	.010	.051	.149	•2 3 8	•294		
-1.35	.001	•003	.010	.051	.149	•2 3 8	•294		
-1.30	•001	•003	.010	.051	.149	·2 3 8	•294		
-1. 25	.001	•003	.010	.051	•149	•2 3 8	-294		
-1.20	.001	•003	.010	.051	•149	.238	•294		
-1.15	.001	•003	.010	.051	.149	•2 3 8	•294		
-1.10	.001	•003	.010	.051	.149	.238	•294		
-1.05	•001	•003	.010	.051	.149	•238	294		
-1.00	.001	•003	.010	.051	.149	.238	•294		
-0.95	.001	•003	.010	.051	.149	.238	•294		
-0.90	.001	.003	.010	.051	.149	.238	•294		
-0.85	.001	•003	.010	.051	.149	.238	•294		
-0.80	.001	•003	.010	.051	.149	.238	•293		
-0.75	.001	.003	.010	.051	.149	.238	•293		
-0,70	.001	•003	.010	•051	.149	•237	•293		
-0.65	•001	.003	•010	•051	.149	•237	•293		
-0.60	.001	.003	.010	.051	.149	•237	.292		
-0.55	.001	.003	.010	.051	.149	•237	•291		
-0.50	.001	•003	.010	.051	.148	•236	•290		

MEAN			FRAC	CTION DEFI	ECTIVE, p		
z _A	•005	.01	•02	.05	.10	•15	•20
A							
-0,45	.001	.003	.010	•051	.148	•235	. 288
-0.40	•001	.003	.010	.051	.148	.234	.285
-0.35	.001	•003	.010	.051	.147	.232	.281
-0.30	.001	.003	.010	.051	.146	•229	.275
-0.25	.001	.003	.010	.051	.145	•225	.267
-0.20	.001	.003	.010	.051	.143	.220	• 257
-0.15	.001	.003	.010	.050	.141	.214	•244
-0.10	.001	•003	.010	•050	.138	.205	.229
-0.05	.001	.003	.010	.049	.133	•194	.211
0.00	.001	.003	.010	•048	.128	.182	.190
0.05	.001	.003	.010	.047	.122	. 167	.168
0.10	.001	.003	.009	.045	.114	.151	.145
0.15	.001	.003	.009	.043	.105	.134	.121
0.20	.001	.002	.009	.041	.096	.115	•098
0.25	.001	.002	.009	.038	.085	•097	.077
0.30	.001	.002	.008	.035	.074	.079	•058
0.35	.001	.002	.008	.032	.063	.063	.042
0.40	.001	•002	.007	.029	.053	.048	.029
0.45	.001	.002	.007	.025	.042	.035	.019
0.50	.001	•002	•006	.021	•033	.025	.012
0.55	.000	•002	.005	.018	.025	.017	.007
0.60	.000	.001	.005	.015	.019	.011	•004
0.65	•000	.001	•004	.012	.013	.007	.002
0.70	.000	.001	.003	.009	•009	.004	.001
0.75	.000	.001	.003	.007	•006	.002	.001
0.80	.000	•001	.002	.005	.004	.001	•000
0.85	•000	.001	.002	.004	.002	.001	•000
0.90	.000	.001	.001	•002	.001	.000	.000
0.95	.000	.000	.001	•002	.001	.000	•000
1.00	.000	.000	.001	.001	•000	.000	.000
1.05	.000	.000	.000	.001	.000	.000	.000
1.10	.000	•000	.000	•000	•000	.000	•000
1.15	•000	•000	.000	•000	.000	•000	.000
1.20	•000	.000	•000	•000	•000	.000	.000
1.25	•000	.000	.000	.000	•000	.000	•000
1.30	•000	•000	.000	•000	•000	.000	•000
1.35	•000	•000	.000	.000	.000	.000	.000
1.40	•000	•000	.000	•000	.000	•000	.000
1.45	.000	•000	•000	.000	•000	•000	.000
1.50	•000	•000	.000	.000	.000	.000	.000
1.55	.000	•000	.000	.000	•000	•000	•000
1.60	.000	.000	.000	.000	•000	.000	.000
1.65	.000	•000	•000	.000	.000	•000	.000
1.70	.000	•000	.000	•000	•000	•000	.000
1.75	.000	.000	•000	.000	.000	.000	•000
1.80	.000	.000	.000	•000	.000	.000	.000

SAMPLE MEAN GREATER THAN z_A AND EXACTLY i DEFICTIVES, IN SAMPLES FROM A NORMAL DISTRIBUTION ($\mu=0,c=1$)

(z_A -DEVIATION OF ACCEPTANCE LIMIT, A, FROM PROCESS MEAN IN UNITS OF KNOWN STANDARD DEVIATION OF INDIVIDUALS)

n = 9 i = 0

MEAN			FRACT	TION DEFEC	TIVE. D		
ZA	•005	.01	•02	•05	.10	•15	.20
A				•			
-2.50	•9559	•9135	.8337	.6302	•3874	.2316	.1342
-2.45	•9559	.9135	.8337	.6302	•3874	.2316	.1342
-2.40	•9559	.9135	.8337	.6302	3874	.2316	.1342
-2.35	•9559	.9135	·8337	.6302	•3874	.2316	.1342
-2.30	•9559	.9135	.8337	.6302	.3874	.2316	.1342
-2.25	•9559	.9135	.8337	.6302	•3874	.2316	.1342
-2.20	•9559	•9135	8337	.6302	3874	.2316	.1342
-2.15	•9559	.9135	.8337	.6302	.3874	.2316	.1342
-2.10	•9559	.9135	.8337	.6302	.3874	.2316	.1342
-2.05	•9559	.9135	.8337	.6302	.3874	.2316	.1342
-2.00	•9559	.9135	.8337	.6302	.3874	.2316	.1342
-1.95	•9559	.9135	.8337	.6302	.3874	.2316	.1342
-1.90	,9559	.9135	.8337	.6302	.3874	.2316	.1342
-1.85	•9559	.9135	8337	.6302	.3874	.2316	.1342
-1.80	•9559	.9135	.8337	.6302	.3874	.2316	.1342
-1.75	•9559	.9135	.8337	.6302	3874	.2316	.1342
-1.70	•9559	.9135	.8337	.6302	.3874	.2316	.1342
-1.65	9559	.9135	.8337	.6302	.3874	.2316	.1342
-1.60	9559	.9135	8337	.6302	.3874	.2316	.1342
-1.55	•9559	9135	.8337	.6302	.3874	.2316	.1342
-1.50	•9559	.9135	.8337	.6302	.3874	.2316	.1342
-1.45	•9559	.9135	.8337	.6302	.3874	.2316	.1342
-1.40	•9559	.9135	.8337	.6302	.3874	.2316	.1342
-1.35	•9559	.9135	.8337	.6302	.3874	.2316	.1342
-1.30	.9558	.9135	.8337	.6302	.3874	.2316	.1342
-1.25	•9558	.9134	.8337	.6302	. 3873	.2315	.1341
-1.20	•9557	•9134	.8336	.6301	.3873	.2315	.1341
-1.15	•9556	.9132	.8335	.6300	• 3871	.2314	.1340
-1.10	•9554	•9130	.8333	•6298	.3870	.2312	.1338
-1.05	•9551	.9127	.8329	.6294	• 3866	. 2309	.1335
-1.00	•9545	.9122	.8324	.6289	.3861	. 2304	.1331
-0.95	•9537	.9113	.8316	.6281	. 3854	.2297	.1325
-0.90	•9524	.9101	.8303	.6269	.3842	.2286	.1315
-0.85	•9505	.9081	.8284	.6250	.3825	.2271	.1302
-0.80	•9477	•9053	.8256	.6223	. 3800	.2248	.1282
-0.75	•9437	.9013	.8216	.6185	•3765	.2218	.1255
-0.70	.9381	. 8957	.8161	.6131	.3717	.2176	.1232
-0.65	.9303	.8881	.8085	.6059	. 3652	.2121	.1178
-0.60	.9200	.8778	.7984	•5963	.3568	.2051	.1123
-0.55	•9065	.8644	.7851	•5839	.7461	.1964	.1056
-0.50	.8893	.8472	.7683	•5682	•3329	.1859	.0979

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MEAN			FRAC	TION DEFE	CTIVE, p		
^z A	•005	.01	•02	•05	.10	•15	• 20
A							
-0.45	.8677	.8258	•7473	•5488	.3169	.1736	.0890
-0.40	.8413	•7997	.7218	•5256	.2982	•1596	.0793
-0.35	.8098	.7685	.6914	.4983	.2768	.1441	.0691
-0.30	•7729	.7321	.6561	.4670	.2530	.1275	.0586
-0.25	•7308	.6907	.6161	•4322	.2274	.1104	.0483
-0.20	.6839	.6445	.5718	• 3943	2005	.0932	.0386
-0.15	.6326	•5943	•5239	•3541	.1732	.0766	.0297
-0.10	•5779	•5408	•4733	•3127	.1463	.0612	.0220
-0.05	•5209	•4854	.4212	.2710	.1205	.0473	.0157
0.00	.4628	•4291	•3688	.2304	.0967	.0353	.0106
0.05	•4050	• 37 34	.3174	.1917	.0754	.0254	.0069
0.10	•3488	.3195	.2682	.1560	.0571	.0175	.0042
0.15	•2954	.2686	.2224	.1239	.0418	.0115	.0024
0.20	•2459	.2217	.1806	.0960	.0296	.0073	.0013
0.25	.2009	.1795	.1437	•0724	.0202	.0043	•0006
0.30	.1611	.1424	.1118	•0532	.0132	.0024	.0003
0.35	.1267	.1107	.0850	.0379	.0083	.0013	.0001
0.40	•0977	.0843	.0632	.0261	.0050	.0006	.0000
0.45	.0738	.0627	.0457	.0175	.0028	.0003	.0000
0.50	.0546	.0456	•0323	.0113	.0015	.0001	.0000
0.55	•0395	.0324	.0222	.0070	.0008	.00:00	.0000
0.60	.0279	.0225	.0148	.0042	.0004	.00.00	.0000
0.65	.0193	.0152	.0096	.0024	.0002	.0000	.0000
0.70	.0130	.0100	.0061	.0013	.0001	.0000	.0000
0.75	.0086	.0064	.0037	.0007	.0000	.0000	.0000
0.80	•0055	•0040	.0022	.0003	.0000	.0000	.0000
0.85	.0035	.0024	.0013	.0002	.0000	•0000	.0000
0.90	.0021	.0014	.0007	.0001	.0000	.0000	.0000
0.95	.0013	•0008	.0004	.0000	.0000	.0000	.0000
1.00	.0007	.0005	•0002	.0000	.0000	.0000	.0000
1.05	•0004	.0002	.0001	.0000	.0000	.0000	.0000
1.10	.0002	.0001	.0000	.0000	.0000	.0000	.0000
1.15	.0001	.0001	.0000	.0000	.0000	.0000	.0000
1.20	.0001	.0000	.0000	.0000	.0000	.0000	.0000
1.25	.0000	.0000	.0000	•0000	.0000	.0000	.0000
1.30	.0000	.0000	.0000	.0000	.0000	.0000	.0000
1.35	.0000	•0000	.0000	•0000	.0000	.0000	.0000
1.40	.0000	.0000	.0000	.0000	.0000	.0000	.0000
1.45	.0000	.0000	•0000	.0000	.0000	.0000	.0000
1.50	.0000	.0000	•0000	.0000	.0000	.0000	.0000
1.55	.0000	.0000	.0000	.0000	.0000	.0000	.0000
1.60	.0000	.0000	.0000	.0000	.0000	.0000	.0000
1.65	.0000	.0000	.0000	.0000	.0000	.0000	.0000
1.70	.0000	.0000	.0000	.0000	. 0000	.0000	.0000
1.75	.0000	.0000	.0000	.0000	.0000	.0000	.0000
1.80	.0000	.0000	.0000	.0000	.0000	.0000	.0000

JOINT PROBABILITY OF SAMPLE MEAN GREATER THAN z_{A} AND EXACTLY i DEFECTIVES, IN SAMPLES FROM A NORMAL DISTRIBUTION (μ =0, σ =1)

(z_A -DEVIATION OF ACCEPTANCE LIMIT, A, FROM PROCESS MEAN IN UNITS OF KNOWN STANDARD DEVIATION OF INDIVIDUALS)

n = 9i = 1

MEAN			FRAC	TION DEF	ECTIVE. p		
z A	•005	.01	.02	•05	.10	.15	.20
A							
-2.50	.043	.083	•153	•298	•387	•368	•302
-2.45	.043	.083	.153	•298	.387	.368	.302
-2.40	.043	.083	.153	.298	.387	.368	.302
-2.35	•043	.083	.153	.298	•387	•368	.302
-2.30	.043	.083	.153	.298	•387	.368	.302
-2.25	.043	.083	.153	•298	•387	.368	•302
-2.20	.043	.083	.153	.298	•387	•368	.302
-2.15	.043	.083	.153	.298	.387	•368	.302
-2.10	.043	.083	.153	.298	•387	.368	.302
-2.05	•043	.083	.153	.298	. 387	.368	.302
-2.00	.043	.083	.153	.298	.387	.368	.302
-1.95	.043	.083	.153	.298	.387	. 368	.302
-1.90	.043	.083	.153	.298	.387	.368	.302
-1.85	.043	.083	.153	.298	.387	.368	.302
-1.80	.043	.083	.153	.298	.387	.368	.302
-1.75	.043	.083	.153	.298	.387	.368	.302
-1.70	.043	.083	.153	.298	•387	.368	.302
-1.65	•043	.083	.153	•298	•387	•368	.302
-1.60	.043	.083	.153	.298	• 387	.368	•302
-1.55	.043	.083	•153	.298	• 387	.368	.302
-1.50	.043	.083	.153	.298	.387	• 368	.302
-1.45	.043	.083	•153	.298	•387	•368	•302
-1.40	•043	.083	.153	•298	•387	•368	•302
-1.35	•043	.083	.153	•298	•387	•368	• 302
-1.30	•043	.083	.153	•298	•387	•368	•302
-1.25	•043	.083	•153	.298	. 387	• 368	.302
-1.20	•043	•083	•153	•298	• 387	.368	.302
-1.15	•043	.083	•153	•298	.387	•368	.302
-1.10	•043	.083	•153	•298	•387	• 368	• 302
-1.05	•043	.083	.1 53	•298	• 387	.368	.3 02
-1.00	•043	.083	•153	•298	•387	.368	•302
-0.95	•043	•083	.153	•298	• 387	.368	• 302
-0.90	•043	.083	.153	•298	•387	• 367	.301
-0.85	•043	•083	.153	·298	. 387	•367	•301
-0.80	.043	•083	.153	.29 8	•387	.366	•300
-0.75	•043	.083	.153	•298	•386	•366	•299
-0.70	•043	.083	.153	•298	•385	•364	•297
-0.65	.043	.083	•153	•297	•384	•362	•294
-0.60	•043	.083	•153	•297	. 3 82	•359	•290
-0.55	•043	.083	•152	•295	•380	• 355	.284
-0.50	•043	•082	.152	•294	• 376	•349	•276

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MEAN			FRAC	CTION DEFI	ECTIVE, p		
z A	•005	•01	•02	.05	.10	.15	•20
A							
-0.45	.043	.082	•151	.291	•370	. 340	•266
-0.40	•043	.082	.150	.288	•363	.330	•254
-0.35	.042	.081	.149	.284	•354	.316	.238
-0.30	•042	.080	.147	278	.341	.300	.220
-0.25	•042	.079	.144	.271	326	.280	.199
-0.20	.041	.078	.141	.261	.308	•257	.176
-0.15	.040	.076	.137	.250	•287	232	.152
-0.10	.0 39	.074	.132	•237	.264	.205	.128
-0.05	•038	.071	.126	•221	•238	.176	.104
0.00	•036	.067	.119	.204	.210	.148	.082
		.064		•204 •185	.181	.121	.062
0.05	•034		.111 .102	•165	.153	•095	.045
0.10	•032	.059			.126	.073	.031
0.15	.030	.054	•092	.144			.021
0.20	.028	.049	.082	.124	.101	.053	
0.25	.025	.044	.072	.104	.078	• 03 8	.013
0.30	.022	.039	.062	.085	•058	•025	.008
0.35	.019	•033	.052	.068	.042	.016	•004
0.40	.017	.028	.043	•053	.029	.010	.002
0.45	.014	.023	•035	.040	•020	.006	.001
0.50	•012	.019	•028	.029	.013	.003	.000
0.55	•009	•015	•021	.021	•008	•002	.000
0.60	•007	•012	•01.6	.014	.005	.001	.000
0.65	•006	• OX. 9	•012	.009	•002	.000	.000
0.70	•004	.007	.008	•006	.001	.000	.000
0.75	•003	.005	.006	.004	.001	. 300	.000
0.80	•002	•003	•004	.002	.000	.000	.000
0.85	•002	•002	•003	.001	.000	.000	.000
0.90	•001	•002	•002	.001	•000	•000	.000
0.95	.001	.001	.001	.000	.000	•000	.000
1.00	•001	.001	.001	.000	.000	.000	•000
1.05	•000	.000	.000	.000	•000	•000	•000
1.10	•000	•000	.000	.000	•000	•000	•000
1.15	•000	.000	•000	•000	•000	.000	.00C
1.20	•000	•000	.000	.000	.000	.000	.000
1.25	•000	•000	.000	.000	•000	.000	.000
1.30	.000	.000	.000	.000	.000	.000	.000
1.35	•000	.000	.000	•000	.000	.000	.000
1.40	.000	.000	•000	.000	.000	.000	.000
1.45	•000	.000	.000	•000	.000	.000	.000
1.50	.000	.000	.000	.000	•000	.000	.(00
1.55	•000	•000	.000	.000	•000	.000	.000
1.60	•000	•000	.000	•000	.000	.000	.000
1.65	•000	.000	.000	.000	•000	.000	.000
1,70	•000	.000	.000	.000	.000	.000	.000
1.75	•000	.000	.000	.000	.000	.000	.000
1.80	.000	.000	.000	.000	.000	.000	.000
1,	- 350	•	•				

JCINT PROBABILITY OF SAMPLE MEAN GREATER THAN z_A AND EXACTLY i DEFECTIVES, IN SAMPLES FROM A NORMAL DISTRIBUTION (μ =0, σ =1)

(z_A -deviation of acceptance limit, a, from process mean in units of known standard deviation of individuals)

n = 9 i = 2

MEAN			FRAC	CTION DEFI	ECTIVE, p		
z A	•005	.01	.02	•05	.10	.15	• 20
A							
-2.50	.001	•003	.013	.063	.172	•260	•302
-2.45	.001	•003	.013	.063	.172	•260	.302
-2.40	.001	•003	•013	•063	.172	.260	.302
-2.35	.001	•003	.013	.063	.172	.260	• 302
-2.30	•001	•003	.013	.063	.172	•260	.302
-2.25	•001	•003	.013	.063	.172	•260	.302
-2.20	.001	•003	.013	•063	.172	•260	•302
-2.15	.001	.003	.013	.063	.172	.260	•302
-2.10	.001	•003	.013	.063	.172	.260	. 302
-2.05	.001	•003	.013	•063	.172	.260	.302
-2.00	•001	•003	.013	.063	.172	.260	• 302
- 1.95	.001	•003	.013	.063	.172	.260	•302
-1.9 0	.001	•003	.013	•063	.172	.260	. 302
-1.85	.001	•003	.013	•063	.172	•260	.302
-1.80	.001	•003	.013	.063	.172	.260	• 302
-1.75	.001	•003	.013	•063	.172	.260	• 302
-1.70	.001	•003	.013	.063	.172	•260	• 302
- 1.65	.001	•003	.013	.063	.172	•260	• 302
-1.60	.001	•003	.013	•063	.172	•260	•302
-1.55	.001	•003	.013	•063	.172	.260	• 302
- 1.50	.001	•003	.013	•063	.172	•260	• 302
-1.45	•001	•003	.013	•063	.172	•260	• 302
-1.40	.001	•003	.013	•063	.172	•260	. 3 02
-1.35	.001	•003	•013	•063	.172	•260	.302
-1.30	.001	•003	•013	•063	.172	•260	• 302
-1.25	•001	•003	.013	.063	.172	•260	• 302
-1.20	•001	.003	.013	.063	.172	•260	. 302
-1.15	.001	.003	.013	.063	.172	•260	.302
-1.10	•001	•003	.013	.063	•172	.260	. 302
-1.05	.001	.003	.013	.063	.172	.260	• 302
-1.00	.001	.003	.013	.063	.172	.260	• 302
-0.95	.001	.003	.013	.063	.172	.260	•302
-0.90	.001	•003	.013	.063	.172	.260	.302
-0.85	.001	.003	.013	.063	.172	.260	• 302
-0.80	.001	•003	.013	.063	.172	•260	.302
-0. 75	.001	•003	.013	.063	.172	•260	•302
-0.70	.001	.003	.013	.063	.172	•259	.301
-0,65	.001	.003	.013	.063	.172	•259	.301
-0.60	.001	.003	.013	•063	.172	•259	.300
-0.55	.001	.003	.012	.063	.172	•259	•299
- 0.50	.001	•003	.012	•063	.172	•258	• 297

MEAN			FRAC	TION DEF	CTIVE. p		
	.005	•01	.02	.05	.10	.15	.20
^Z A	••••	• • •		•			
-0.45	.001	.003	.012	.063	.171	.257	•295
-0.40	.001	.003	.012	.063	.171	•255	.291
-0.35	.001	.003	.012	.063	.170	•252	•285
-0.30	.001	.003	.012	.062	.169	•248	.278
-0.25	.001	•003	.012	.062	.167	•243	.268
-0.20	.001	.003	.012	.062	.164	•236	•255
-0.15	.001	.003	.012	.061	.160	.227	·2 3 9
-0.10	.001	.003	.012	.060	.156	.215	.220
-0.05	.001	•003	.012	.059	.149	.201	•198
0.00	.001	•003	.012	.057	.142	.185	.174
0.05	.001	•003	.012	•055	.133	.166	•149
0.10	.001	•003	.011	.053	.122	.146	.124
0.15	.001	•003	.011	.050	.111	.125	•099
0.20	.001	•003	.011	.047	•098	.104	.077
0.25	.001	•003	.010	.043	.085	.084	.057
0.30	.001	.003	.010	•039	.071	.066	.040
0.35	.001	•003	•009	.034	•059	.049	.027
0.40	•001	•002	.00 8	.029	•047	•035	.017
0.45	.001	.002	•007	.025	.036	.024	.010
0.50	.001	.002	•006	.021	.027	.016	.006
0.55	.001	•002	•005	.016	.019	.010	.003
0.60	.000	•002	•005	.013	.013	.006	.002
0.65	.000	.001	•004	.010	.009	.003	.001
0.70	.000	.001	.003	.007	•005	.002	.000
0.75	•000	.001	.002	.005	.003	.001	.000
0.80	.000	.001	•002	.003	.002	.000	.000
0.85	•000	.001	.001	.002	.001	.000	.000
0.90	•000	.000	.001	.001	•000	.000	.000
0.95	•000	.000	.001	.001	•000	.000	•000
1.00	.000	.000	•000	.000	.000	•000	.000
1.05	.000	.000	•000	.000	.000	.000	.000
1.10	•000	.000	•000	.000	.000	•000	.000
1.15	,000	.000	.000	.000	.000	•000	.000
1.20	.000	.000	.000	•000	.000	.000	.000
1.25	.000	.000	•000	•000	.000	.000	.000
1.30	.000	.000	.000	.000	.000	.000	.000
1.35	.000	•000	•000	.000	.000	.000	.000
1.40	.000	•000	.000	.000	.000	•000	•000
1.45	.000	.000	•000	.000	•000	.000	.000
1.50	.000	.000	.000	.000	.000	.000	.000
1.55	.000	.000	•000	.000	.000	.000	.000
1.60	.000	.000	.000	.000	.000	.000	.000
1.65	.000	.000	.000	.000	.000	.000	.000
1.70	.000	.000	.000	.000	.000	.000	.000
1.75	.000	.000	.000	.000	.000	.000	.000
1.80	.000	.000	•000	.000	.000	.000	.000

JOINT PROBABILITY OF SAMPLE MEAN GREATER THAN z_A AND EXACTLY 1 DEFECTIVES, IN SAMPLES FROM A NORMAL DISTRIBUTION (μ =0, σ =1)

(z_-DEVIATION OF ACCEPTANCE LIMIT, A, FROM PROCESS HEAN IN UNITS OF KNOWN STANDARD DEVIATION OF INDIVIDUALS)

n = 10 i = 0

MEAN			FRAC	TION DEFE	CTIVE. p		
z _A	•005	,01	•02	•05	.10	•15	.20
A				100		.,	
-2.50	.9511	•9044	.8171	•5987	.3487	.1969	.1074
-2.45	.9511	9044	.8171	5987	.3487	.1969	.1074
-2.40	.9511	9044	.8171	-5987	.3487	.1969	.1074
-2.35	.9511	9044	.8171	-5987	.3487	.1969	.1074
-2.30	.9511	9044	.8171	5987	.3487	.1969	.1074
-2.25	.9511	9044	.8171	-5987	.3487	.1969	.1074
-2.20	.9511	9044	.8171	-5987	.3487	.1969	.1074
-2.15	.9511	9044	.8171	5987	.3487	.1969	.1074
-2.10	.9511	9044	.8171	-5987	3487	.1969	.1074
-2.05	.9511	9044	.8171	5987	.3487	.1969	.1074
-2.00	.9511	9044	.8171	5987	3487	.1969	.1074
-1.95	.9511	9044	.8171	5987	.3487	.1969	.1074
-1.90	.9511	.9044	.8171	5987	.3487	.1969	.1074
-1.85	.9511	.9044	.8171	•5987	3487	.1969	.1074
-1.80	.9511	9044	.8171	5987	.3487	.1969	.1074
-1.75	.9511	9044	.8171	5987	3487	.1969	.1074
-1.70	.9511	9044	.8171	.5987	3487	.1969	.1074
-1.65	.9511	9044	.8171	5987	.3487	.1969	.1074
-1.60	.9511	9044	.8171	.5987	3487	.1969	.1074
-1.55	.9511	9044	.8171	.5987	3487	.1969	.1074
-1.50	.9511	9044	.8171	.5987	3487	.1969	.1074
-1.45	.9511	.9044	.8171	.5987	.3487	.1969	.1074
-1.40	.9511	9044	.8171	5987	. 3487	.1969	.1074
-1.35	.9511	9044		- 5987	3487	.1969	.1074
-1.30	.9511	9044	.8171	.5987	.3487	.1969	.1074
-1.25	.9511	9043	8170	5987	3486	.1968	.1073
-1,20	.9510	9045	.8170	.5987	.3486	.1968	.1073
-1.15	.9510	9042	.8169	.5986	.3485	.1967	.1073
-1.10	.9509	.9041	.8168	. 5985	3484	.1966	.1072
-1.05	.9507	9039	.8166	.5983	3483	.1965	.1070
-1.00	.9503	9036	.8163	.5980	3479	.1962	.1068
-0.95	.9498	.9031	.8157	-5974	.3474	.1957	.1063
-0.90	.9489	9022	.8149	.5966	3466	1950	.1057
-0.85	.9475	9008	.8135	.5953	.3454	.1939	.1048
-0.80	9454	8987	.8114	5932	3436	.1923	.1034
-0.75	.9423	8956	.8083	.5903	.3409	1900	1015
-0.70	.9377	.8910	.8038	5860	.3371	.1867	,0989
-0.65	.9312	.8846	.7975	5800	3318	.1824	.0955
-0.60	.9223	.8757	.7887	.5717	.3248	.1767	.0911
-0.55	.9102	8637	.7769	5608	3155	1694	.0857
-0.50	.8944	.8480	.7615	.5466	.3038	1604	.0793
		, - ,	-,,		.,.,.		

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MEAN			FRAC	TION DEFE	CTIVE. p		
z _A	•005	.01	.02	.05	.10	.15	•20
A	-						
-0.45	.8741	.8279	.7419	•5287	·2895	.1497	.0720
-0.40	.8487	.8028	.7174	•5067	2723	.1373	.0638
-0.35	.8178	.7722	.6878	4805	2524	.1235	•0552
-0.30	.7810	.7360	.6529	.4501	.2301	.1087	.0464
-0.25	.7384	.6941	.6127	.4157	.2059	.0933	.0377
-0.20	.6902	.6469	.5677	.3781	.1804	.0780	.0296
-0.15	.6371	.5951	.5186	•3379	.1545	.0632	.0223
-0.10	.5801	•5396	4665	.2964	.1290	.0496	.0161
-0.05	•5204	.4818	.4127	•2548	.1048	.0375	.0111
0.00	•4595	.4231	.3585	.2142	.0827	.0273	.0073
0.05	•3989	.3650	.3056	.1759	.0632	.0190	.0045
0.10	.3402	.3091	•2552	.1408	.0467	.0127	.0026
0.15	.2848	.2566	.2086	.1098	.0333	.0080	.0014
0.20	.2337	.2087	.1667	.0833	.0228	•0048	.0007
0.25	.1880	.1661	.1301	.0613	.0150	.0027	.0003
0.30	.1480	.1293	.0991	.0437	.0094	.0015	.0001
0.35	.1141	.0983	.0735	.0302	.0056	.0007	.0001
0.40	.0859	.0730	.0531	.0201	.0032	.0003	.0000
0.45	.0633	.0529	.0374	.0129	.0017	.0001	.0000
0.50	.0455	.0373	.0255	.0080	.0009	.0001	.0000
0.55	.0319	.0257	.0169	.0047	•0004	.0000	.0000
0.60	.0218	.0172	.0109	.0027	.0002	.0000	.0000
0.65	.0146	.0112	.0068	.0015	.0001	.0000	.0000
0.70	.0095	.0071	.0041	.0008	.0000	.0000	.0000
0.75	•0060	.0043	.0024	•0004	.0000	.0000	.0000
0.80	.0037	.0026	.0013	.0002	.0000	.0000	•0000
0.85	.0022	•0015	.0007	.0001	•0000	.0000	.0000
0.90	.0013	.0008	.0004	.0000	•0000	•0000	•0000
0.95	.0007	•0004	.0002	.0000	.0000	.0000	.0000
1.00	.0004	.0002	.0001	.0000	.0000	.0000	.0000
1.05	.0002	.0001	.0000	.0000	.0000	.0000	.0000
1.10	.0001	.0001	.0000	.0000	•0000	.0000	.0000
1.15	.0001	.0000	.0000	.0000	.0000	.0000	.0000
1.20	•0000	.0000	.0000	.0000	.0000	.0000	.0000
1.25	•0000	.0000	•0000	.0000	•0000	•0000	.0000
1.30	•0000	.0000	.0000	.0000	•0000	.0000	.0000
1.35	•0000	.0000	.0000	.0000	•0000	.0000	.0000
1.40	.0000	.0000	.0000	.0000	.0000	.0000	.0000
1.45	.0000	.0000	.0000	•0000	.0000	.0000	.0000
1.50	•0000	.0000	.0000	•0000	.0000	.0000	.0000
1.55	.0000	.0000	.0000	.0000	.0000	.0000	.0000
1.60	•0000	.0000	.0000	.0000	.0000	.0000	.0000
1.65	.0000	•0000	.0000	•0000	.0000	.0000	.0000
1.70	.0000	.0000	.0000	.0000	.0000	.0000	,0000
1.75	.0000	.0000	.0000	•0000	.0000	.0000	,0000
1.80	.0000	.0000	.0000	.0000	.0000	.0000	0000

SAMPLE MEAN GREATER THAN z_A AND EXACTLY 1 DEFECTIVES, IN SAMPLES FROM A NORMAL DISTRIBUTION (μ =0, σ =1)

(z_A -deviation of acceptance limit, a, from process mean in units of known standard deviation of individuals)

n = 10 i = 1

MEAN			FRAC	TION DEFE	CTIVE. p		
z _A	•005	.01	.02	•05	.10	.15	•20
A							
-2.50	.048	.091	.167	•315	•387	•347	•268
-2.45	•048	•091	.167	•315	•387	• 347	•268
-2.40	•048	.091	.167	.315	•387	•347	•268
-2.35	•048	.091	.167	•315	. 387	• 347	.268
-2.30	•048	.091	.167	.315	. 387	•347	.268
-2.25	.048	•091	.167	.315	•387	•347	•268
-2.20	.048	.091	.167	•315	•387	•347	•268
-2.15	•048	•091	.167	•315	. 387	•347	•268
-2.10	.048	•091	.167	•315	•387	• 347	•268
-2.05	.048	•091	.167	.315	.387	• 347	.268
-2.00	•048	•091	.167	•315	. 387	• 347	•268
-1.9 5	•048	•091	.167	•315	•387	•347	•268
-1.90	•048	•091	.167	•315	•387	•347	•268
-1.85	.04 8	•091	.167	•315	. 387	•347	•268
-1.80	.04 8	•091	.167	•315	. 387	•347	•268
-1.75	•048	•091	.167	•315	• 387	•347	•268
-1.70	.048	•091	.167	•315	• 387	•347	.268
-1.65	•048	.091	.167	•315	. 387	•347	.268
-1.60	•048	.091	.167	•315	. 387	•347	•268
-1.55	•048	•091	.167	•315	. 387	. 347	.268
-1.50	•048	•091	.167	•315	. 387	. 347	.268
-1.45	.04 8	.091	.167	•315	. 387	• 347	. 268
-1.40	.048	.091	.167	.315	•387	•347	•268
-1. 35	•048	.091	.167	•315	• 387	•347	.268
-1.30	.04 8	.091	.167	•315	• 387	. 347	•268
-1.25	.04 8	•091	.167	•315	- 3 87	• 347	.268
-1.20	•048	•091	.167	•315	. 387	• 347	.268
-1.15	•048	.091	.167	•315	• 387	•347	.268
-1.10	•048	.091	.167	•315	.387	•347	.268
-1.05	•048	.091	.167	•315	.387	•347	.268
-1.00	•048	.091	.167	•315	.387	•347	•268
-0.95	•048	.091	.167	•315	•387	•347	.268
-0.90	•048	.091	.167	•315	• 387	•347	.268
-0.85	.048	.091	.167	.315	• 387	•347	.268
-0.80	.048	.091	.167	•315	.387	•346	.267
-0. 75	.048	.091	.167	.315	• 3 86	•346	•266
-0.70	.048	.091	.166	-314	• 386	• 344	.264
-0.65	•048	•091	.166	.314	• 384	•342	.261
-0.60	.048	•091	.166	.313	•383 700	•339	•258
-0.55	.048	.091	.166	.312	.380	•335	•252
- 0.50	•047	.091	.165	.310	•376	•329	•245

MEAN			FRA	CTION DEF	ECTIVE. p		
z A	•005	•01	•02	•05	.10	•15	•20
A							
-0.45	.047	•090	.165	. 3 08	•370	.321	•236
-0.40	.047	.090	.163	• 304	• 363	.310	.223
-0.35	.047	.089	.162	• 300	•353	•297	.208
-0.30	.046	.088	.160	•293	•340	280	.191
-0.25	.(0	.087	.157	•285	•323	•259	.171
-0.20	.04,5	.085	•153	•274	.304	.236	.149
-0.15	.044	•083	•148	.261	.281	.210	.126
-0.10	.043	.080	.142	.246	• 255	.183	.104
-0.05	.041	.077	.134	.228	.227	.154	.082
0.00	.039	.073	.126	•208	•197	.127	.062
0.05	.037	.068	.117	.186	.168	.100	.045
0.10	.035	.063	.106	.164	.138	.077	.031
0.15	.032	.057	•095	.141	.111	.056	.021
0.20	.029	.051	.083	.118	.086	.040	.013
0.25	.026	.045	.072	.097	.064	.027	.008
0.30	.022	.039	.061	.077	.046	.017	.004
0.35	.019	.033	.050	.060	•032	.010	.002
0.40	.016	.027	.040	•045	.021	.006	.001
0.45	.013	.022	.032	.033	.014	.003	.000
0.50	.011	.017	.024	.023	.008	.002	.000
0.55	.008	.013	.018	.016	.005	.001	.000
0.60	.007	.010	.013	.010	•003	.000	.000
0.65	•005	.007	.009	•006	.001	.000	.000
0.70	•004	.005	.006	.004	.001	.000	.000
0.75	.003	.004	.004	.002	.000	.000	.000
0.80	.002	.002	.003	.001	.000	.000	.000
0.85	.001	.002	.002	.001	.000	.000	.000
0.90	.001	.001	.001	.000	.000	.000	.000
0.95	.001	.001	.001	.000	.000	.000	.000
1.00	.000	.000	.000	.000	.000	.000	.000
1.05	.000	.000	.000	.000	.000	.000	.000
1.10	.000	.000	.000	.000	.000	.000	.000
1.15	•000	•000	•000	.000	.000	.000	.000
1.20	.000	.000	.000	.000	.000	.000	.000
1.25	.000	•000	.000	.000	.000	.000	.000
1.30	.000	•000	•000	•000	•000	.000	.000
1.35	.000	•000	.000	.000	•000	.000	.000
1.40	.000	•000	•000	.000	.000	.000	.000
1.45	.000	•000	.000	•000	.000	.000	.000
1.50	.000	•000	.000	•000	.000	.000	.000
1.55	•000	.000	.000	.000	•000	.000	.000
1.60	.000	•000	.000	.000	•000	.000	.000
1.65	.000	•000	.000	.000	.000	.000	.000
1.70	.000	.000	.000	.000	.000	.000	.000
1.75	.000	.000	,000	•000	.000	.000	.000
1.80	.000	.000	•000	•000	•000	.000	.000

SAMPLE MEAN GREATER THAN z_A AND EXACTLY i DEFECTIVES, IN SAMPLES FROM A NORMAL DISTRIBUTION (μ =0, σ =1)

(z_A-DEVIATION OF ACCEPTANCE LIMIT, A, FROM PROCESS MEAN IN UNITS OF KNOWN STANDARD DEVIATION OF INDIVIDUALS)

n = 10 i = 2

			1 - 2				
MEAN			FRAC	TION DEFI	ECTIVE, p		
z _A	•005	.01	.02	.05	.10	•15	.20
A							
-2.50	•001	•004	•015	.075	.194	.276	.302
-2.45	.001	•004	.015	.075	.194	.276	.302
-2.40	.001	•004	.015	.075	.194	.276	.302
-2.35	.001	.004	.015	.075	.194	.276	.302
-2.30	.001	.004	.015	.075	.194	.276	.302
-2.25	.001	•004	.015	.075	.194	.276	.302
-2.20	.001	.004	.015	.075	.194	.276	.302
-2.15	.001	.004	.015	.075	.194	.276	.302
-2.10	.001	.004	.015	.075	.194	.276	.302
-2.05	.001	.004	.015	.075	.194	.276	.302
-2.00	.001	.004	.015	.075	.194	.276	.302
-1.95	.001	.004	.015	.075	.194	.276	.302
-1.90	.001	.004	.015	.075	-194	.276	•302
-1.85	.001	.004	.015	.075	.194	.276	.302
-1.80	.001	.004	.015	.075	.194	.276	.302
-1.75	.001	.004	.015	.075	.194	.276	.302
-1.70	.001	.004	.015	.075	.194	.276	.302
-1.65	.001	.004	.015	.075	.194	.276	.302
-1.60	.001	.004	.015	.075	•194	.276	. 302
-1.55	.001	.004	.015	•075	•194	.276	•302
-1.50	.001	.004	.015	.075	.194	.276	•302
-1.45	.001	.004	•015	.075	.194	.276	•302
-1.40	•001	.004	.015	.075	.194	.276	•302
-1.35	.001	•004	.015	•075	.194	.276	.302
-1.30	.001	.004	.015	•075	.194	•276	• 302
-1.25	.001	•004	.015	•075	•194	•276	.302
-1.20	.001	•004	•015	.075	.194	.276	.302
-1.15	.001	.004	.015	.075	.194	.276	•302
-1.10	.001	.004	.015	.075	.194	.276	•302
-1.05	.001	.004	.015	.075	-194	.276	.302
-1.00	.001	•004	•015	.015	.194	.276	.302
-0.95	.001	.004					.302
-0.90	.001	•004	.015	.075	•194	.276	.302
-0.85	.001	•004	.015	.075	.194	.276	.302
-0.80	.001	•004	.015	.075	.194	.276	.302
-0.75	.001	.004	.015	.075	.194	.276	.302
-0.70	.001	.004	.015	.075	.194	.276	.301
-0.65	4301 م	.004	.015	.075	.194	•275	.301
-0.60	.001	.004	.015	.075	.194	• 275 275	.300
-0.55	.001	.004	.015	.075	.193	•275	•299
-0.50	.001	.004	.015	.075	•193	.274	•297

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MEAN			FRAC	TION DEFE	CTIVE. D		
z A	•005	.01	•02	•05	.10	.15	•20
A							
-0.45	.001	•004	•015	.074	.193	.272	•294
-0.40	.001	.004	.015	.074	.192	.270	.289
-0.35	.001	•004	.015	.074	.191	.266	.282
-0.30	.001	.004	.015	.074	.189	.261	.273
-0.25	.001	.004	.015	.073	.186	•255	.261
-0. 20	.001	.004	.015	.073	.182	•245	.246
-0.15	.001	.004	.015	.072	.178	.234	.227
-0.10	.001	.004	.015	.071	.171	.219	205
-0.05	.001	.004	.015	.069	.163	.202	.181
0.00	.001	.004	.015	.067	.153	.182	.155
0.05	.001	.004	.014	.064	.141	.160	.128
0.10	.001	.004	.014	.060	.127	.137	.102
0.15	.001	.004	.013	.056	.113	.114	.078
	.001	.004	.012	.051	•097	.091	.057
0.20	.001	.003	.012	.046	.081	.070	.040
0.25			.012	.040	.066	.052	.027
0.30	.001	.003				.037	.017
0.35	.001	.003	.010	.035	.052	.025	.010
0.40	.001	.003	.009	.029	.040		
0.45	.001	.002	.008	.024	.029	.016	.005
0.50	.001	.002	.006	.019	.020	.010	.003
0.55	.001	.002	•005	.015	.014	.006	.001
0.60	.000	.002	.004	.011	•009	.003	.001
0.65	.000	.001	.003	.008	.005	.002	.000
0.70	.000	.001	.003	•005	.003	.001	.000
0.75	.000	.001	•002	.004	•002	.000	.000
0.80	.000	.001	.001	.002	.001	•000	.000
0.85	.000	.000	.001	.001	.000	.000	•000
0.90	.000	•000	.001	.001	•000	•000	.000
0.95	.000	•000	•000	.000	•000	.000	.000
1.00	•000	•000	.000	.000	•000	.000	.000
1.05	.000	•000	.000	.000	.000	•000	.000
1.10	•000	•000	.000	•000	•000	•000	.000
1.15	.000	•000	.000	.000	•00C	•000	.000
1.20	.000	•000	.000	•000	•000	.000	•000
1.25	•000	•000	•000	•000	•000	•000	.000
1.30	•000	.000	•000	.000	•000	.000	•000
1.35	.000	•000	.000	.000	•000	.000	.000
1.40	.000	•000	•000	.000	•000	•000	•000
1.45	.000	•000	.000	.000	.000	.000	•000
1.50	.000	•000	.000	•000	•000	•000	.000
1.55	.000	•000	.000	.000	.000	.000	•000
1.60	•000	•000	•000	•000	•000	.000	.000
1.65	.000	.000	•000	.000	•000	•000	•000
1.70	.000	•000	•000	.000	.000	•000	•000
1.75	.000	.000	•000	.000	•000	.000	.000
1.80	•000	.000	.000	•000	.000	.000	•000

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12. SPONSORING MILITARY ACTIVITY

Office of Naval Research Washington, D.C. 20360

Logistics and Mathematical Statistics Branch

13. ABSTRACT

11. SUPPLEMENTARY NOTES

This report provides tables for the evaluation of OC curves and associated measures of dependent mixed variables-attributes sampling plans for the case of single specification limit, known standard deviation, assuming a normal distribution. The tables give values of the joint probability of a sample mean greater than some limit A and exactly i defectives in a sample, for sample sizes 4 to 10, values of i=0,1,2 and fraction defective p=.005,.01,.02,.05,.10,.15,.20.

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Security Classification

Security Classification

14.		LINK A LINK B		LINK C			
	KEY WORDS	ROLE	WT	ROLE	WT	ROLE	WT
	Mixed Sampling Plans Variables-Attributes Sampling Plans Sampling Inspection Plans Acceptance Sampling	ROLE		HOCE			25

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