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BEST LINEAR UNBIASED ESTIMATION OF LOCATION AND SCALE PARAMETERS
OF WEIBULL DISTRIBUTION USING ORDERED OBSERVATIONS

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Best linear unbiased estimation of the location and scale parameters of the Weibull distribution is considered. Best linear unbiased coefficients for the ordered observations in censored and uncensored sample are presented in Table 1. The expected values and variances of the Weibull order statistics are presented in Table 2. The product moments and the covariances of the Weibull order statistics are given in Table 3. The sample sizes considered are up to and including 12. Throughout, values of practical interest for the shape parameter of the Weibull distribution are considered.

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BEST LINEAR UNBIASED ESTIMATION OF LOCATION AND SCALE PARAMETERS
OF WEIBULL DISTRIBUTION USING ORDERED OBSERVATIONS

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O. ABSTRACT

Best linear unbiased estimation of location and scale parameters of the Weibull distributions using ordered observations of a random sample is considered. It is assumed that the shape parameter of the Weibull distribution is known. For sample sizes up to and including five, all possible censoring is considered. For sample sizes greater than five, one-sided censoring (that is, large values of the sample are missing) is considered. The coefficients are presented in ^{tabular form.} Table 1. For each sample size and the value of the shape parameter, the first row of coefficients in ^{the Table} Table 1 correspond to the best linear unbiased of the location parameter and the second row of coefficients correspond to the best estimation of the scale parameter. The accuracy of these coefficients is to four or more decimal places for sample sizes less than or equal to 5, to three or more decimal places for sample sizes 6 to 9 and to two or more decimal places for sample sizes 10 to 12. Weibull [12] has also computed these coefficients for sample sizes up to and including 15, using approximations for the variances and covariances of the Weibull order statistics. However, for sample sizes greater than 2, our values for the coefficients do not agree with his values. This is not surprising since the approximations for the variances and the covariances used by Weibull [12] are not very accurate.

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The expected values and the variances of the Weibull order statistics are computed accurate to four or five decimal places. These are presented in Table 2. In Table 2, for each combination of N and i the first row gives the expected values and the second row gives the variances. The product moments and the covariances are presented in Table 3. The accuracy is four to five decimal places except for sample sizes 11 and 12 where the accuracy is three decimal places. Again, for each combination of N , i and j , the first row gives the product moments and the second row gives the covariances. Each column of values in Tables 2 and 3 corresponds to a certain value of the shape parameter. Throughout, the same values of practical interest are considered for the shape parameter of the Weibull distribution.

1. INTRODUCTION

Many contributions have been made to the problem of linear unbiased estimation of the parameters of a distribution using the ordered observations of the sample. Lloyd [8] tackled this problem in general and gave explicit formulae for estimating the location and scale parameters of a distribution using order statistics in a random sample. Gupta [3] considered the problem of best linear estimation of the mean and standard deviation of a normal population using a censored sample. Sarhan [10, 11, 12] considered the problem of best linear estimation of the mean and standard deviation of a population by order statistics. Sarhan and Greenberg [13, 14] tackled the problem of estimating the location and scale parameters by order statistics in singly and doubly censored samples from normal and exponential populations. Tate [16] considered the best linear unbiased estimation of functions of location and scale parameters of a distribution. Plackett [9] gave some approximate expressions for the variance-covariance matrix of the censored sample and thus gave some 'almost' best linear estimates

of the parameters of a population. Blom [1] gave some approximations for the expected values, variances and covariances of order statistics in samples drawn from a continuous population such that the inverse of its cumulative distribution function could be expanded in Taylor series. Gupta [4] gave the moments of the order statistics in a random sample drawn from a gamma population with integral values for the shape parameter. He also considered the best linear estimation of the location and scale parameters of the gamma population. Weibull [17] gave a distribution which has been widely used in life testing problems. Lieblein [7] gave exact closed form expressions for the k^{th} moments and the product moments of the Weibull order statistics. Weibull [18] by applying the approximate formulae of Blom [1] for the variances and covariances of Weibull order statistics, computed the coefficients for the best linear estimation of the location and scale parameter of the Weibull distribution using the complete sample. However, the coefficients are in great error. Leone et al [6] considered method of moments and method of maximum likelihood for estimating the parameters of the Weibull. Dubey [2] considered approximations to the maximum likelihood estimators of the parameters of the Weibull distribution. White [19] recently showed that by considering the logarithms of the Weibull order statistics one can obtain best linear unbiased estimates of the scale and shape parameters of the Weibull distribution assuming that the location parameter is zero or known. Numerical values of the moments of Weibull order statistics have not been tabulated so far. Hence, it is of interest to numerically compute the lower moments of Weibull order statistics for small sample sizes at least and obtain accurate and best linear coefficients for the estimation of the location and scale parameters of the Weibull distribution.

3. NOTATION AND KNOWN RESULTS

In this section we will give the least square estimates of the location and scale parameters of an arbitrary continuous distribution as given by Lloyd [8]. However, we will consider general formulae that take care of any kind of censoring. We also give the exact formulae of Leiblein [7] for the moments of the Weibull order statistics.

Let X be a random variable with the density function $f((x-\theta)/\sigma)$ so that the transformed variable $Y = (X-\theta)/\sigma$ has density $f(y)$. That is, Y has 0 and 1 for its location and scale parameters respectively. Let

$$X_{r_1,N} \leq X_{r_1+1,N} \leq \dots \leq X_{r_2,N}, \quad 1 \leq r_1 < r_2 \leq N, \quad (3.1)$$

be the available portion of the ordered sample of size N drawn from the population with density $f((x-\theta)/\sigma)$. That is, the first r_1-1 and the last $N-r_2$ observations are either missing or ignored. We wish to obtain the best linear unbiased estimates of θ and σ on the basis of this censored sample. Let

$$Y_{i,N} = (X_{i,N} - \theta)/\sigma, \quad i = r_1, r_1 + 1, \dots, r_2, \quad (3.2)$$

and

$$\mu_{i,N} = E(Y_{i,N}); \quad \sigma_{i,j,N} = \text{Cov}(Y_{i,N}, Y_{j,N}), \quad r_1 \leq i \leq j \leq r_2. \quad (3.3)$$

We assume that $\mu_{i,N}$ and $\sigma_{i,j,N}$ are known. Then

$$E(X_{i,N}) = \theta + \sigma \mu_{i,N} \quad \text{and} \quad \text{Cov}(X_{i,N}, X_{j,N}) = \sigma^2 \sigma_{i,j,N}.$$

Since $E(X_{i,N})$ is linear in θ and σ , by Gauss-Markov theorem, θ and σ are estimable unbiasedly by linear combination of $X_{i,N}$. Let

$$X' = (X_{r_1,N}, \dots, X_{r_2,N})', \quad I = (1, \dots, 1)'$$

$$\mu = (\mu_{r_1, N}, \dots, \mu_{r_2, N})' \quad \text{and} \quad \Omega^{-1} = ((\sigma_{1, j, N})) .$$

Then, in matrix form, we have

$$\begin{aligned} E(X) &= I\theta + \sigma \mu = ((I, \mu)) \begin{pmatrix} \theta \\ \sigma \end{pmatrix} \\ \text{and} \quad \text{Var}(X) &= \sigma^2 \omega, \end{aligned} \quad (3.4)$$

where $\omega = \Omega^{-1}$ is an $(r_2 - r_1 + 1) \times (r_2 - r_1 + 1)$ positive definite symmetric matrix. Denoting $((I, \mu))$ by P and (θ, σ) by α' , we have by Gauss-Markov theorem (See Lloyd [8]) the estimate of α ;

$$\hat{\alpha} = (P' \Omega P)^{-1} P' \Omega X = bX \quad (3.5)$$

where b is a $2 \times (r_2 - r_1 + 1)$ matrix which will be called the coefficient matrix.

Also, the variance-covariance matrix of the estimates is given by

$$(P' \Omega P)^{-1} \sigma^2 . \quad (3.6)$$

where

$$P' \Omega P = \begin{pmatrix} I' \Omega I & I' \Omega \mu \\ I' \Omega \mu & \mu' \Omega \mu \end{pmatrix}$$

the elements of the matrix being scalars. The inverse is given by

$$(P' \Omega P)^{-1} = \Delta^{-1} \begin{pmatrix} \mu' \Omega \mu & -I' \Omega \mu \\ -I' \Omega \mu & I' \Omega I \end{pmatrix}$$

where Δ is the determinant of the matrix $P' \Omega P$. Using this result in (3.5)

and (3.6) we obtain,

$$\hat{\theta} = -\mu' DX, \quad \hat{\sigma} = I' DX \quad (3.7)$$

where D is the skew symmetric matrix defined by

$$D = \Omega(I \mu' - \mu I') / \Delta \quad (3.8)$$

Also

$$\begin{aligned} \text{Var}(\hat{\theta}) &= \mu' \Omega \mu \sigma^2 / \Delta, & \text{var}(\hat{\sigma}) &= I' \Omega I \sigma^2 / \Delta \\ \text{and} \quad \text{Cov}(\hat{\theta}, \hat{\sigma}) &= -I' \Omega \mu \sigma^2 / \Delta \end{aligned} \quad (3.9)$$

All the preceding formulae are explicitly given by Lloyd [8].

Next we consider the general Weibull distribution and assume that its shape parameter denoted by m is known. Consider the following distribution function for X .

$$F(x) = 1 - \exp\{-[(x-\theta)/\sigma]^m\}, \quad m \geq 1, \quad x > \theta.$$

Weibull [18] remarks that for $m < 1$, the Weibull distribution has no practical value since the derivative of its density function is infinitely large at $x = \theta$. Thus, throughout, we consider only values greater than unity for m . If $Y = (X-\theta)/\sigma$, then the distribution function of Y denoted by $G(y)$ is

$$G(y) = 1 - \exp(-y^m) \quad y > 0.$$

Let $Y_{1,N} \leq Y_{2,N} \leq \dots \leq Y_{N,N}$ be the order statistics in a sample from $G(y)$. Lieblein [7] has given explicit formulae for the k^{th} moment of the $Y_{i,N}$ and the product moments of $Y_{i,N}$ and $Y_{j,N}$. Thus

$$E(Y_{i,N}^k) = N \binom{N-1}{i-1} \Gamma(1+km^{-1}) \sum_{\ell=0}^{i-1} (-1)^\ell \binom{i-1}{\ell} (N-i+\ell+1)^{-(1+km^{-1})},$$

$$1 \leq i \leq N, \quad k = 1, 2, \dots \text{ and } m > 0, \quad (3.10)$$

and

$$E(Y_{i,N} Y_{j,N}) = K \sum_{\ell=0}^{i-1} \sum_{s=0}^{j-i-1} (-1)^{\ell+s} \binom{i-1}{\ell} \binom{j-i-1}{s} \Psi(j-i+\ell-s, N-j+s+1),$$

$$1 \leq i < j \leq N, \quad m > 0 \quad (3.11)$$

where $K = N! \Gamma(2+2m^{-1}) / (i-1)! (j-i-1)! (N-j)!$,

$$\Psi(t, u) = (tu)^{1+m^{-1}} B_p(1+m^{-1}, 1+m^{-1}),$$

$$p = t/(t+u) \quad \text{and} \quad B_p(1+m^{-1}, 1+m^{-1}) = \int_0^p x^{\frac{1}{m}} (1-x)^{\frac{1}{m}} dx.$$

(3.10) is slightly different from the expression due to Lieblein [7]. However, this can be obtained by expanding $G^{1-l}(y)$ in powers of $1-G(y)$ and integrating termwise. The covariance between $Y_{i,N}$ and $Y_{j,N}$ can be obtained by subtracting $E(Y_{i,N})E(Y_{j,N})$ from $E(Y_{i,N} Y_{j,N})$. However, when $m = 1$, the Weibull distribution becomes the negative exponential distribution in which case, it is known (see Sarhan [10]) that

$$\left. \begin{aligned} E(Y_{i,N}) &= \sum_{l=1}^1 (N-l+1)^{-1} \\ \text{Var}(Y_{i,N}) &= \sum_{l=1}^1 (N-l+1)^{-2} \end{aligned} \right\} \quad (3.12)$$

and

$$\text{Cov}(Y_{i,N}, Y_{j,N}) = \text{Var}(Y_{i,N}) \quad i < j .$$

Equation (3.12) could be used for checking the accuracy of the moments of the Weibull order statistics. It is also well known that

$$\sum_{i=1}^N E(Y_{i,N}^k) = N E(Y^k) . \quad (3.13)$$

Consequently

$$\sum_{i=1}^N E(Y_{i,N}) = N \Gamma(1/m)$$

and,

$$\sum_{i=1}^N E(Y_{i,N}^2) = N \Gamma(2/m)$$

which could be used for checking the accuracy of the numerical values of the moments of Weibull order statistics when $m \neq 1$.

4. TABLES PREPARED AND EXPLANATIONS

Table 1: The best linear coefficients for the ordered observations $X_{i,N}$ from the Weibull distribution given by

$$F(x) = 1 - \exp(- \{(x-\theta)/\sigma\}^m)$$

are presented in Table 1 for $m = 1.5(0.5)3(1)8$ and for sample sizes $N = 2(1)12$. For each combination of N and m the first row of coefficients corresponds to the estimation of θ and the second row corresponds to the estimation of σ . An easy check of these coefficients is that the coefficients for estimating θ add up to 1 and the coefficients for estimating σ add up to 0. The accuracy of the coefficients presented in Table 1 is as follows: For $N = 2(1)5$, all possible values for r_1 and r_2 are considered and the accuracy is four or more decimal places. For $N = 6(1)9$, $r_1 = 1$ and only one-sided fixed percentage truncation is considered. Here, the accuracy is 3 or more decimal places. For $N = 10(1)12$, $r_1 = 1$, and the accuracy is 2 or more decimal places.

Table 2: The expected values and the variances of the Weibull order statistics in samples of sizes up to and including 12 are presented in Table 2 for $m = 1(0.5)3(1)8$. For each combination of N, i and m , the first entry gives the expected value and the second entry gives the variance. The accuracy is to 5 decimal places for $N = 2(1)9$ and to 4 decimal places for $N = 10(1)12$. $\Gamma(1+km^{-1})$ was computed following a procedure suggested by Haynam and Hansen [5].

Table 3. The values of $E(Y_{i,N} Y_{j,N})$ and $\text{Cov}(Y_{i,N}, Y_{j,N})$ for sample sizes up to and including 12 and for $m = 1(0.5)3(1)8$ are presented in Table 3. Again, for each combination of N, i, j and m , the first entry gives $E(Y_{i,N} Y_{j,N})$ and the second entry gives $\text{Cov}(Y_{i,N}, Y_{j,N})$. The

accuracy is to 5 decimal places for $N = 2(1)9$, to 4 decimal places for $N = 10$ and to 3 decimal places for $N = 11$ and 12. The following representation was used in order to compute $B_p(w,w)$ occurring in (3.11):

$$B_p(w,w) = \sum_{s=0}^{\infty} (-1)^s \binom{w-1}{s} p^{w+s}/(w+s) ; \quad (3.14)$$

the summation is finite if w is a positive integer. When w is not an integer terms which are of magnitude less or equal to 10^{-6} were neglected.

Throughout, the following rounding off procedure was adopted. If accuracy is desired to n decimal places, $5 \cdot 10^{-(n+1)}$ was added to the computed value and n decimal places of the resultant value were retained for final presentation in Tables 1, 2 and 3.

5. COMPARISON WITH WEIBULL'S TABLES

Weibull [18] computed the expected values of the Weibull order statistics accurate to four decimal places using Leiblein's [7] formula, for $m = 1(1)10$. However, there is a marked disagreement among his coefficients and our coefficients given in Table 1, especially when N is greater than 2. To get an idea of the disagreement, we will present the values for $N = 5$, $m = 5$ in Table 5.1.

TABLE 5.1

Weibull:	for $\hat{\theta}$:	1.79	0.67	0.31	-0.12	-1.65
Our	for $\hat{\theta}$:	1.56930	1.15448	0.33735	-0.62650	-1.43460
Weibull:	for $\hat{\beta}$:	-1.69	-0.54	-0.15	0.33	2.05
Our	for $\hat{\beta}$:	-1.69774	-0.96413	-0.08339	1.07556	1.50294

The discrepancy is not surprising at all, since Weibull [18] used crude approximations of Blom [1] for the variances and covariances of the Weibull order statistics.

6. CONCLUSION

The best linear coefficients and the moments of Weibull order statistics presented in Tables 1, 2 and 3 will be useful in life testing problems. All the computations were done on Burroughs 220 compiler using single precision arithmetic. The computation of these tables were completed in about nine hours of machine time.

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COEFFICIENTS OF BEST LINEAR ESTIMATES

COEFFICIENTS OF BEST LINEAR ESTIMATES

M	1	2	3	4	M	1	2	3	4
2 1.5	1.85119	-1.45118			3 5.0		6.44092	-5.44096	
	-1.49675	1.49676					-5.88952	5.88959	
2.0	2.20711	-1.20710				2.99766	.14573	-2.14339	
	-1.92625	1.92626				-2.95819	.32277	2.63542	
2.5	2.56489	-1.56488			6.0	5.76792	-4.76794		
	-2.32724	2.32724				-6.17208	6.17209		
3.0	2.92367	-1.92367					7.59846	-6.59847	
	-2.71412	2.71414					-7.06080	7.06085	
4.0	3.64264	-2.64263					-7.06080	7.06085	
	-3.46716	3.46717				3.56290	-7.06080	7.06085	
5.0	4.36240	-3.36239			7.0	-3.53455	-5.51712	3.01744	
	-4.20662	4.20663				-6.99095	-5.58977		
6.0	5.08289	-4.08289					6.99098		
	-4.93997	4.93999					8.75582	-7.75596	
7.0	5.80353	-4.80352				4.12390	-8.22806	8.22818	
	-5.66054	5.66056				-4.10327	-2.22151	-2.90238	
8.0	6.52445	-5.52444			8.0	7.41124	-6.41126	3.39889	
	-6.39714	6.39715				-7.81001	7.81004		
1 1.5	2.07397	-1.07396					9.91423	-8.91424	
	-2.47462	2.47464					-9.90388	9.90390	
		2.40134	-1.40134			4.68184	-9.9885	-3.28298	
		-1.67206	1.67207			-4.66690	-8.6631	3.78061	
		.89831	-7.9527		4 1.5	-1.8249	3.30076		
		-7.4285	1.17013			-3.30074	2.86909	-1.86909	
2.0	2.48315	-1.48314					-2.86909	2.86909	
	-2.89870	2.89871					-2.82676	2.82678	
		2.97505	-1.97504					2.80737	-1.80737
		-2.30557	2.30558					-1.78071	1.78072
		.75630	-9.9122			1.19408	.65240	-8.4647	
		-3.2736	1.42920			-1.17605	-2.27225	1.64832	
2.5	2.89207	-1.89207					1.14940	.93292	-1.08321
	-3.31101	3.31103					-8.6032	-3.7841	1.23876
		3.55106	-2.55105			.35865	.83490	.66847	-8.6201
		-2.91959	2.91961			-3.8518	-5.2928	-8.0235	.99684
		.64769	-1.10057		2.0	2.81600	-1.81600		
		-2.70451	1.64736			-3.64694	3.64696		
3.0	3.30341	-2.30340					.00000	1.00000	
	-3.72021	3.72022					1.30410	-1.30409	
		4.12812	-3.12812					3.53732	-2.53732
		-3.52282	3.52285					-2.54755	2.54757
		.53818	-1.38207			1.55536	.48828	-1.04363	
		-3.08746	1.84197			-1.77549	-2.06593	1.84165	
4.0	1.84390	-5.3818					1.57405	.84581	-1.41985
	-1.76449	2.12457					-1.28694	-3.4606	1.63392
	-4.53678	4.53679				.69255	.88998	.34753	-9.3005
		1.00822	-8.00821			-6.7443	-6.7164	.13295	1.15014
		-8.9910	.89911		2.5	3.04996	-2.04995		
		-3.3684	-1.76354			-4.02268	4.02268		
		.12085	2.26087				4.027986	-3.027988	
5.0	2.42671	-3.3684					-4.32594	4.32598	
	-2.37071	.12085							
	4.04606	-3.04607							
	-5.35386	5.35388							

COEFFICIENTS OF BEST LINEAR ESTIMATES						COEFFICIENTS OF BEST LINEAR ESTIMATES					
N	M	1	2	3	4	N	M	1	2	3	4
4	2.5					4	6.0				
3.0		1.89479	.34754	4.26951	-3.26955	7.0		4.14153	-5.0864	-2.63287	
		-2.14413	.12386	-1.30475	3.30478			-4.42999	1.07529	3.35471	-4.09504
			2.67220	2.02028					4.73610	.35893	4.40971
			-2.50192	.98537	-2.65755				-4.50248	.09280	-1.87908
4.0		.92775	1.20477	-2.5417	3.01422	8.0		2.61689	1.01457	-7.75247	2.15480
		-94531	.79972	.54993	-8.7833			-2.66239	-71657	1.22419	
		3.48405	-2.48405		1.19313			6.95869	-5.95870		
		-4.41577	4.41579					-7.76507	7.76511	-9.64339	
5.0				-3.98647		5	1.5				
				5.05257							
				-4.00288	-4.00291						
				-4.05595	4.05598						
4.0		2.22585	.21378	-1.43962		6.0		4.77075	-73833	-3.03240	
		-2.48954	.28556	2.20399	-2.08262			-5.06149	1.21643	3.74708	-4.76847
			2.39221	.69042	2.34550				-5.27897	.26060	5.09017
			-2.13083	-.21465	-1.18466			3.07380	1.02775	-98237	-2.11917
5.0		1.18802	.96341	.46133	1.42607	7.0		-3.12334	-7.2678	1.45270	2.39804
		-1.21373	-.67364					7.82773	-6.82780		
		4.35245	-3.35246					-8.62188	8.62194		
		-5.23068	5.23070						12.05800	-11.05810	
6.0				-5.40117		8.0					
				6.49100							
				6.47114	-5.47127						
				-5.54787	5.54798						
7.0		2.97210	-.03532	-1.83674		9.0		5.39967	-96927	-3.43039	
		-3.14030	.56609	2.58240	-2.75450			-5.69220	1.55315	4.13006	-5.46005
			3.17842	.57609	3.04288				6.27930	.16164	5.76756
			-2.93079	-1.1208	-1.40553				-6.05432	.28678	-2.35929
8.0		1.68031	.99113	-2.6590	1.67033	10.0		3.52623	1.04386	-1.21078	2.66025
		-1.70019	-.70635	.74523				-3.57869	-74106	1.67953	
		5.22128	4.22130					2.24684	-1.24683		
		-6.06545	6.06548					-4.03860	4.03860		
9.0				-6.81450		11.0					
				7.91760							
				7.94043	-6.94049						
				-7.03205	7.03210						
10.0		3.50034	-.27408	-2.23434		12.0		1.34225	.51203	-85427	
		-3.79382	.82769	2.96614	-3.46525			-1.90269	-.11442	2.01713	-1.20604
			4.00856	.45670	3.76648				1.61589	-.15103	1.76326
			-3.76678	.00032	-1.64046				-1.61221	1.37111	.92383
11.0		2.15227	1.00642	-.51821	1.91239	13.0					
		-2.19049	-.71522	.99335							
		6.09002	-5.09001								
		-4.91269	4.91269								
12.0				-8.22809		14.0					
				9.33960							
				-9.33949	-9.41079						
					9.51249						
13.0						15.0					
14.0						16.0					
15.0						17.0					
16.0						18.0					
17.0						19.0					
18.0						20.0					
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20.0						22.0					
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25.0						27.0					
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52.0						54.0					
53.0						55.0					
54.0						56.0					
55.0						57.0					
56.0						58.0					
57.0						59.0					
58.0						60.0					

COEFFICIENTS OF BEST LINEAR ESTIMATES						COEFFICIENTS OF BEST LINEAR ESTIMATES								
N	M	1	2	3	4	5	N	M	1	2	3	4	5	
5	2.0	2.69437	-1.69436				5	3.0		3.10025	.18611	-2.28637		
		-4.27616	4.27515							-3.17391	.28105	2.89288		
			3.80507	-2.89508							2.82325	.76842	-2.59167	
			-4.59360	4.43660	-3.43679	-2.98036					-2.39304	-2.7928	2.67235	
				4.43660	4.05299	-2.72260					-2.25843	-1.15489		
													.78581	1.61954
													1.19024	-0.8679
													-0.8615	1.73073
													.66194	-1.21861
													-0.4759	1.18541
													.59264	

COEFFICIENTS OF BEST LINEAR ESTIMATES						COEFFICIENTS OF BEST LINEAR ESTIMATES							
N	M	1	2	3	4	5	N	M	1	2	3	4	5
5	6.0	6.27825	-5.27824				5	8.0					
		-7.43990	7.43993										
			10.09110	-9.09189									
			-10.77339	10.77380									
				11.94400	-10.94429								
7.0				-11.68389	11.68300		7.0						
					10.83300								
					-9.61849								
8.0							8.0						

N M 1 2 3 4 5 6 7

6	1.5	.4471 -.5774 .0768 -1.1348 .5056 -.6167 .7176 -.9818 .6711 -.8111 1.5219 -1.8360 .7955 -.9334 2.4456 -2.7478 -.7371 -.8066 12.8582 -13.5586 -.6120 -.6221 -30.7872 32.6943 .2498 -.1828 -26.0295 27.9734 -.6205 -.8103 -28.2898 30.5540 -2.1701 2.5331 -26.7450 28.8865	.6357 -.5936 .3005 -.8940 .7641 -.7112 .6531 -.6976 .9179 -.8502 .8577 -.8755 1.0386 -.9610 .8911 -.8654 1.4525 -1.4063 -.3469 .4525 1.9198 -1.9047 8.0810 -8.4642 2.5146 -2.5415 9.1330 -9.6486 3.5144 -3.6257 11.7372 -12.4747 5.0585 -5.2980 13.0981 -.6586 -.6623 .1255 .6305 .9546 -.9553 -.8418 5.0303 1.1607 -1.1603 -.3650 2.4411 1.5259 -1.5352	1.3354 -1.0065 .2263 -.2392 1.7782 -1.6081 -.1385 .2045 1.8028 -1.6270 -.7793 .8961 2.0323 -1.9074 -2.1915 2.3366 3.1281 -3.1904 22.4750 -21.4042 4.5694 -4.8140 64.6581 -68.6567 7.0026 -7.5153 59.1464 -63.4467 10.5819 -11.4442 64.9639 -69.9383 15.8586 -17.1873 65.5735 .0097 .0795 .5353 -.4001 -1.2588 1.4112 1.2578 -2.8363 -3.4645 3.7687 1.6302 -3.2513 -11.5092 12.4055	-1.3185 1.8424 1.3583 1.6398 -1.9460 2.6324 .9975 .1940 -2.2510 2.9917 .6814 .6056 -2.7152 3.5157 1.3892 -2.418 -4.0502 5.0079 13.4379 -13.1168 5.8457 6.9762 -42.9066 46.4614 -8.8088 10.2210 -42.1348 46.0463 -12.7488 14.5044 -46.5141 50.8669 -18.2831 20.4895 45.8333 1.4244 -.7242 .2931 -5401 2.8102 -2.3153 1.3165 5.2743 4.5322 -4.1282 1.5584 -4.7048 11.6786 -11.8304	-.1004 .3354 -.1985 1.4209 -.1056 .3039 -1.1484 1.5217 -.1405 .2968 -2.0615 2.3608 -.1509 .2864 -3.2388 3.5342 -.2673 .3957 17.1446 18.1366 -2.552 3648 37.7266 -39.9342 .0420 -.0188 29.3703 -31.3994 -.2733 -.2446 28.2069 -30.2663 .5367 -.5375 23.9765 -25.6788 -1.7303 1.9144 1.1237 -2.5872 -3.8509 4.2233 4.2099 -15.4913 -6.4672 6.9922 3.2553 -9.1162 -15.0358 16.2075	-27.6152 29.6304 .1760 -.0085 -.3306 -.1659 1.2541 -1.1358 .3937 -4.0083 3.0109 -3.0221 -.0809 -1.4786 8.8004 -9.2490	-7258 2.2267 -3.6589 14.5119 -3.4202 10.2084
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(Page 17)

TABLE 1

N	M	1	2	3	4	5	6	7	8
		6.1607	2.6155	-1.8294	-4.6384	-6.4421	-2.7984	7.9325	
		-16.0363	-5.9631	6.7777	12.8787	18.5489	6.1746	-22.3803	
7	4.0	-7.1668	1.5113	20.5516	-16.4024	16.9660	-14.4589		
		7.7277	-1.5174	-22.1123	18.3169	-18.1892	15.7742		
		1.7949	1.1463	.6009	-1.1960	.9320	-1.6411	1.2273	
		-3.2441	-1.4436	.2788	2.7073	2.6782	2.3245	-3.3008	
5.0		-5.2804	2.1755	16.5393	-12.2071	10.7829	-11.0098		
		5.7456	-2.2212	-17.8402	13.7934	-11.5569	12.0792		
		1.7893	1.2229	.9091	-1.2345	.7310	-1.8179	.8623	
		-2.7022	-1.3171	-.2973	2.3095	1.8070	2.3131	-2.1126	
6.0		-6.2867	3.0159	19.5787	-14.1466	11.2911	-12.4518		
		6.8681	-3.1150	-21.1426	15.8721	-12.1209	13.6382		
		1.9946	1.3535	1.1146	-1.4685	-.7153	-2.0844	.8057	
		-2.7096	-1.3683	-.6082	2.3755	1.5394	2.5157	-1.7442	
7.0		-8.6601	4.6090	25.3991	-18.1258	12.7802	-15.0018		
		9.4588	-4.8291	-27.4224	20.1414	-13.7180	16.3693	.6930	
		2.1238	1.5386	1.3658	-1.6434	-.7414	-2.3362	-1.4661	
		-2.7173	-1.5273	-.9358	2.4617	1.4405	2.7447		
8.0		-10.6194	5.9772	29.9103	-20.5641	13.7256	-17.4288		
		11.5644	-6.2857	-32.2013	22.6858	-14.6936	18.9299	.8154	
		2.3300	1.7468	1.6877	-2.0193	-.8141	-2.7462	-1.5009	
		-2.8469	-1.7254	-1.3254	2.8080	1.4349	3.1561	.0278	
8 1.5		.2799	.4144	.7189	.0252	.7377	-1.2038	-0.703	
		-5.097	-.5479	-.5045	.2267	.1162	1.2900	-6.677	-1.0795
		-.1779	-.0920	-.1691	.8921	.1715	2.1232	.6997	1.9628
		.5689	.5210	.5771	-1.0314	-.2184	-3.0794	-.0893	
		.3107	.4912	.9569	-.1079	.8478	-1.4091	.0004	
2.0		-.5395	-.5812	-.7505	.4074	-.2023	1.6661	.0873	2.0244
		1.4422	1.3916	1.4590	-1.2133	-.2196	-3.9713	-3.972	-2.0955
2.5		-1.5061	-1.4402	-1.6955	1.7764	.1454	5.2132	-.2321	
		.4114	.6167	1.0323	-.0642	.5306	-1.2943	.0639	
		-.7127	-.6941	-.7786	.4654	.0777	1.5787	-.0878	1.1969
		1.2617	1.1076	.9887	-.7649	-.4411	-2.2606	-.0749	-.7947
3.0		-1.0847	-.9851	-1.0729	.9972	.3325	2.6830	-.3194	
		.5249	.7255	1.1283	-.1348	.4066	-1.3308	.1561	
		-.8309	-.7717	-.8704	.5572	.1277	1.6322	-.7097	1.1435
		1.4257	1.1154	.8597	-.7901	-.5831	-1.9611	.0978	-.5258
4.0		-1.1095	-.9416	-.9723	.8991	.3657	2.1869	-.3872	
		.6999	.9354	1.4391	-.3148	.2751	-1.6472	.2626	
		-.9583	-.9522	-1.2361	.7386	.1610	1.9846	-.3551	1.7649
2.0494		1.3726	.8170	-1.2029	-.1209	-.1291	-2.3164	.2471	-6.130
-1.3979		-1.1060	-1.0736	1.0599	.6127	.6127	2.2711	-.4152	
5.0		.9166	1.1402	1.6984	-.5519	.1786	-1.9663	.3099	3.3788
		-1.1573	-1.1389	-1.5197	.9825	.2071	2.3166	-.4736	-1.1146
		3.3957	1.7710	.4212	-2.1492	-2.2327	-3.1108	.3351	
-2.0007		-1.3428	-1.0482	-1.0482	1.4940	1.0309	2.6467	-.3790	
6.0		1.1668	1.3307	1.9315	-.8443	.1489	-2.3543	.2833	11.9788
		-1.3986	-1.3156	-1.7677	1.2824	.1965	2.7199	-.8669	-3.8362
9.5487		3.0833	-2.4080	-6.4245	-6.4245	-7.4757	-6.4353	.4621	
-4.1424		-1.8627	-.2544	3.0232	3.0232	2.7034	3.9075		

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TABLE 1

M	N	1	2	3	4	5	6	7	8	9
8	7.0	1.2991	1.5468	2.0957	-.8734	.1054	-2.5071	-.6663		
		-1.5108	-1.5900	-1.9423	1.2940	.2187	2.8736	.5970		
		-5.1293	.2912	5.0920	3.8381	5.6585	1.3291	-.2503	-9.8290	
8	8.0	.5264	-1.1036	-2.8134	-.2714	-1.5383	1.5297	.4684	3.2026	
		1.4425	1.7663	2.3813	-1.0463	.0805	-2.8474	-.7767		
		-1.6395	-1.7508	-2.2446	1.4680	.2287	3.2207	.7178		
9	1.5	-2.1187	1.0159	3.8463	1.7124	3.3186	-4.175	-4.460	-5.9107	
		.1091	-1.3286	-2.8227	-.0253	-1.3504	1.7938	.5595	3.0650	
		.4657	.5601	.3101	.4855	-.3416	.2922	-1.2457	.4738	
2.0		-.5878	-.6341	-.4501	.0075	.3591	.8641	.7358	-.2942	
		.0625	.1390	.3113	.1871	.5395	.0615	.6640	-.5453	
		.1229	.0885	-.1203	-.0489	-.5364	-.1035	-.8652	.5591	-.4194
2.5		1.0771	.9228	-.0117	.5724	-1.3687	.5095	-2.2519	1.5507	.9043
		-1.0259	-.8807	-.1978	-.1048	1.1126	.4655	1.6837	-1.0521	
		.1435	.2623	.4872	.1925	.6037	-.1185	.5131	-.6991	
3.0		.1232	.0002	-.3327	-.1054	-.7169	.0210	-.7877	.7847	-.3843
		2.3555	1.4494	-.7844	.1818	-2.7219	-.0429	-2.9130	3.4760	1.0141
		-1.9507	-1.2564	.3181	.2149	2.0919	.7881	2.0959	-2.3014	
4.0		.0906	.3822	.6138	.2259	.5166	-.1303	.2548	-.7454	-.3583
		27.1537	9.9659	-23.3918	-1.2191	-36.7092	6.6197	-28.6848	47.2659	1.0434
		-19.6026	-7.3181	16.3448	1.2468	26.2326	-3.9372	20.4253	-33.3911	
5.0		.3120	.4676	.7185	.2409	.5015	-.2014	.1492	-.7593	-.4287
		.1077	-.1877	-.6779	-.2858	-.7540	.0140	-.3924	.9556	1.2210
		-1.5016	.2175	3.2252	.1077	3.0955	-1.1025	1.7080	-4.7495	
6.0		.8516	-.3868	-2.7315	.2883	-2.1944	1.5127	-1.2407	3.9011	
		.3766	.6004	1.0063	.1952	.6438	-.3397	.1320	-1.1008	-.5134
		.1891	-.2950	-1.0594	-.3298	-1.0382	.0622	-.4200	1.3883	1.5032
7.0		-.6238	.7198	2.8022	-.0691	2.0749	-1.2184	.9328	3.6180	
		.1957	-.7953	-2.4982	.4479	-1.4831	1.6127	-.6784	3.1991	
		.3828	.7260	1.2640	.2043	.8014	-.4133	.1517	-1.3724	-.7442
8.0		.4013	-.3835	-1.4273	-.4746	-1.3820	.0076	-.5164	1.7558	2.0196
		-.2648	.9748	2.9154	-.2381	1.7784	-1.4946	.8799	3.5506	
		-.1009	-1.0148	-2.6645	.6215	-1.2908	1.8674	-.6805	3.2631	
9		.3442	.8260	1.5384	.2548	.9627	-.4547	.2679	-1.6567	-1.0823
		.6840	-.4571	-1.8329	-.6771	-1.7362	-.0550	-.7345	2.1499	2.6597
		.1776	1.3110	3.0552	-.2544	1.0751	-1.9390	.2217	-2.6469	
8.0		-.4884	-1.3373	-2.8633	.6560	-.6784	2.3155	-.0434	2.4399	
		.2811	.9253	1.7217	.5582	.8897	-.3430	.1308	-1.4757	-1.6878
		1.1571	-.4702	-2.1660	-1.2866	-1.9752	-.3938	-.7910	2.0384	3.8879
7.0		.3598	1.6870	3.1329	-.3194	.8608	-1.9895	-.2965	-2.4348	
		-.6425	-1.7095	-2.9687	.7174	-.4865	2.3653	.4611	2.2638	
		-1.2360	.7763	2.5249	1.5872	2.2044	.5790	.6013	-2.1645	-3.8723
6.0		3.4151	-.1813	-3.2524	-2.8362	-3.7816	-1.9824	-1.3838	2.9286	7.0745

N	M	1	2	3	4	5	6	7	8	9	10
10	1.5	.215 -1.474 -.283 .456 -.416 -1.401 .717 -.629 -.703 -2.386 .683 -.539 -.935 -1.652 .778 -.591 .557 -1.382 .948 -.694 -.968 -1.602 1.170 -1.166 -1.731 1.357 -.943 1.054 -1.579 1.498 -.998 1.031 -1.563 1.893 -1.396 .430 -.678 -.063 .041 .629 -.568 1.136 .009 .856 -.663 .247 -.063 1.135 -1.857	.317 -1.534 -.307 .531 -.173 -1.328 .822 -.723 -1.134 -1.672 .745 -.617 -.125 -1.139 -.770 -.625 -.758 -1.049 .895 -.733 -.998 -1.173 1.020 1.221 -1.343 1.209 -1.025 1.226 -1.323 1.329 -1.128 1.609 -1.698 1.695 -1.526 -.539 -.584 1.120 -.021 -.678 -1.614 -.209 -.044 -.797 -.655 -.346 -.172 -.935 -.775	.476 -.586 -.463 .710 .653 -.442 1.040 -1.001 1.007 -1.150 .840 -.793 1.336 -.361 .850 -.821 1.255 -.817 .993 -1.384 -1.996 1.038 1.099 -1.114 1.450 -1.139 1.187 -1.259 1.773 -1.505 1.509 1.645 1.273 -1.009 -.908 -.961 -.532 -.639 -.069 -.605 -.808 -.429 -.299 -.575 -.600 -.479 -.364 -.593 -.762	.203 -.358 .378 -.260 .294 .011 .121 .005 .414 .479 .018 .099 .575 .401 -.005 .097 -.180 -.609 -.233 .317 -.487 .911 -.789 -.542 -.551 -.466 -.889 -.588 -.561 -.271 -.185 -.067 -.283 -.071 -.218 -.019 -.218 -.003 -.190 -.076 -.176 -.053 -.240 -.150 -.010 -.238	.503 1.894 -.137 .273 1.517 1.382 .434 2.010 2.256 1.870 .354 -.389 2.148 1.041 .213 -.268 -.960 -.065 .431 -.586 -.982 -.227 .531 1.015 1.354 1.918 -.165 1.177 -1.504 2.020 1.321 1.276 -.835 -.224 -.388 -.712 -.754 1.001 -.899 -.087 -.221 -.189 -.266 1.151 -.255 -.090 -.115 -.326 -.266 -.146 -.100 -.537 -.562 -.195 -.296	.377 3.893 .134 -.156 1.838 2.456 -.073 -.027 1.473 2.617 -.251 .212 1.452 1.283 -.266 .197 .088 -.688 -.256 1.29 -.032 .539 -.232 1.694 1.884 -2.588 2.475 -.181 -.009 -.107 -.469 -.324 1.158 -.915 1.225 -1.238 1.038 1.674 1.435 -.430 -.528 1.58 1.038 -.289 -.257 1.112 -.049 -.418 -.698 1.170 -.160 -.473 -.752 -.136 1.160 -.776 1.031	-.971 -1.046 2.723 -3.088 -1.527 -.104 -2.190 2.479 -1.956 -.425 -1.349 1.529 -1.897 -.466 -1.135 1.284 -1.848 1.363 -1.391 1.558 2.265 1.987 1.694 -1.894 -2.588 2.475 -2.053 2.247 -2.408 2.432 -2.212 2.331 1.307 1.384 -1.086 1.138 1.674 -.046 -.030 1.540 -.281 -.261 -.669 -.959 -.308 -.293 -.649 1.384	.101 -1.797 -1.244 1.369 -1.258 -1.885 .365 -.422 -1.433 -2.584 -.286 -.302 -2.069 -1.336 .028 .028 -.295 -1.026 -.497 -.810 -1.310 -.724 -.714 -.841 -.757 -.705 -.101 -.403 1.194 .010 -.575 -.325 .592 -.124 -.528 -.462 -.518 -.296 1.061 -.210 -.280 -.146 -.115 -.090 -.811 -.263 -.006 -.381	-1.385 1.893 1.038 -.784 .467 -.092 .091 .486 -.061 -.752 -.071 -.859 2.41 .598 3.29 .524 -.438 -1.168 -.952 -.598 1.704 -.470 -.457 -.563 1.466 -.090 -.811 1.017 .837 -.013	

TABLE 1

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

11	4.0	1.327 -1.07 1.790 -1.364 4.75 -2.19 2.786 -2.075 5.92 -2.95 7.820 -5.750 8.51 -4.86 11.344 -8.352 9.23 -5.63 5.878 -3.723 6.70 -3.02 1.27 -2.21 3.90 3.73 -1.14 4.22 0.15 5.05 -4.01 7.00 -3.58 5.75 -4.47 2.130 -2.619 6.18 -4.45 1.975 -2.030 7.19 1.447 -1.005 1.047 -0.872	4.25 -2.45 1.245 -1.018 6.03 -4.28 1.618 -1.307 7.15 -5.38 2.820 -2.313 1.004 -8.29 3.830 3.056 1.079 -9.15 2.609 -1.933 9.47 -7.78 1.65 2.82 -2.26 3.94 -6.16 4.74 5.44 -4.33 6.79 -4.47 6.34 -5.23 1.250 -1.305 6.91 -5.66 1.400 -1.382 7.85 -6.23 9.44 -7.00 7.70 -6.42	6.18 -5.38 5.03 -6.06 8.35 -7.96 2.64 -4.97 1.073 -1.077 -1.16 -1.55 7.42 -7.00 -2.322 1.319 1.105 -1.104 0.74 -3.83 9.16 -8.82 3.61 -1.70 -6.04 7.61 4.56 -4.12 6.87 -6.05 6.89 -7.92 7.28 -6.67 5.93 -5.94 7.05 -6.49 1.133 2.85 6.79 -6.14 8.72 -5.90 9.71 -9.36 5.74 -6.87 9.38 -9.26	1.18 -0.31 -0.40 2.08 -0.28 1.16 -1.93 2.96 -0.59 1.28 -3.935 2.743 5.28 -6.02 -1.603 1.249 0.09 -2.579 3.80 2.062 -2.289 2.17 0.27 -0.11 1.39 1.62 1.21 1.36 2.83 2.98 -2.64 7.29 -2.12 1.25 -0.00 0.74 0.62 -0.02 1.49 1.35 -1.282 -4.16 3.60 -2.08 2.93 1.552 -1.776 2.315 -2.502	6.43 -7.20 -1.112 3.80 1.249 -1.468 2.236 1.128 1.571 -1.857 -8.161 5.401 9.79 -1.244 -14.861 10.183 1.522 -4.415 2.715 4.75 -6.15 4.11 -5.93 3.27 4.53 3.17 -5.70 8.21 -8.05 4.26 -8.30 3.92 -3.67 4.31 -9.02 8.55 -9.34 -2.471 4.373 1.135 3.383 4.44 1.559 -1.837 -1.847 1.794 -2.137 2.426	-1.29 0.119 -4.75 8.42 -9.24 1.017 -4.13 8.94 1.571 1.522 6.61 3.77 1.393 1.460 2.218 2.289 -1.132 1.139 2.688 -8.83 0.50 -0.55 8.96 -1.327 1.29 -2.34 -0.583 -2.59 -5.83 8.55 8.37 -5.85 -8.92 -8.78 1.052 1.177 -3.207 -1.984 2.284 -3.294 2.178 3.198 3.667 -4.82 4.90 6.23	1.72 -0.267 -1.643 1.058 6.56 -8.59 -2.687 1.801 1.008 -7.670 5.325 4.53 -6.99 -6.131 4.504 -2.50 0.93 -1.981 1.648 -3.98 3.93 5.06 -1.324 -1.157 2.22 -3.00 1.66 -6.86 7.85 7.87 -1.996 7.24 8.37 -1.43 -3.89 2.39 -3.12 2.651 5.088 1.694 -2.007 1.625 3.347 2.739 -3.281 8.51 -1.562 2.308 -2.615	-5.34 -5.37 -6.59 1.018 -1.088 1.161 -6.05 1.029 1.537 1.349 -3.326 -1.088 1.161 -1.089 1.320 -7.59 7.99 -1.655 4.10 6.14 -8.18 -3.75 4.66 2.093 -2.156 -2.88 2.01 7.10 -9.88 1.451 -1.114 1.254 -4.61 4.97 -5.50 6.04 -2.92 -8.52 1.646 1.857 -3.050 2.312 -2.456 2.796 1.773 1.932 -2.463 2.671	2.66 -3.44 -1.08 -4.01 8.76 1.040 -2.30 -4.68 1.368 -3.624 2.280 3.82 -5.45 2.967 4.969 4.52 -6.23 1.23 9.72 -1.387 1.549 3.96 -1.410 0.80 -2.851 -1.09 -3.17 1.81 -2.27 0.38 -5.22 -0.35 0.08 0.42 -5.44 4.17 -5.40 -1.933 3.537 1.003 -1.218 2.51 1.755 -2.165 2.796 1.47 -0.96 -0.92 -0.89	-6.92 0.916 1.506 -4.11 2.565 2.741 -7.96 3.420 11.839 -7.577 1.534 1.984 18.705 -12.421 -2.040 2.527 6.262 -2.770 -1.857 2.257 -9.16 1.892 2.737 -2.851 -3.31 5.91 -1.056 1.159 7.65 -1.355 2.889 -1.354 1.549 -8.66 0.89 1.798 -1.671 1.961 5.327 -9.696 2.766 3.210 -1.946 -1.172 -4.400 5.124 -2.16 3.68 -5.34 -5.98	-2.10 0.687 4.51 -0.42 6.58 -2.46 0.79 5.06 0.94 4.78 -1.53 6.79 0.61 6.78 -1.599 1.689 1.09 7.54 -6.44 7.65 7.94 -8.66 9.63 -1.028 0.47 3.03 4.49 -0.154 -0.81 4.403 2.568 -2.841 2.780 -1.019 4.147 -4.745 2.633 -1.625 2.493 1.249 -2.095 2.492 3.89 1.265 -3.932 4.644 -4.890 3.471 -4.067 6.309 2.526 -9.463 8.520 7.277 -7.772 3.186
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TABLE 1

EXPECTED VALUES AND VARIANCES OF ORDER STATISTICS FROM WEIBULL DISTRIBUTION

		VALUES OF M									
N	I	1.0	1.5	2.0	2.5	3.0	4.0	5.0	6.0	7.0	8.0
2	1	.50000	.56869	.62666	.67242	.70876	.74219	.79931	.82650	.84725	.86358
2	2	.25000	.14909	.07940	.04279	.02636	.01572	.00352	.002565	.02027	.01642
3	1	1.25000	1.23680	1.14580	1.02111	0.87644	0.70621	0.53703	0.38499	0.23363	0.10190
3	2	.43333	.37911	.31166	.25175	.19116	.13872	.08705	.02241	.01805	.01041
3	3	.11111	.08683	.07153	.05986	.04064	.02333	.00850	.00241	.001805	.001483
4	1	1.83333	1.8309	1.5664	1.2777	0.98796	0.70111	0.42383	0.2452	0.14894	.08865
4	2	.36111	.26476	.19949	.14678	.10782	.07135	.03962	.016614	.00993	.00539
4	3	1.43615	1.29037	1.0627	.82675	.56298	.32394	.02027	.01374	.00993	.00751
4	4	.13611	.07606	.04311	.02560	.01572	.00923	.00584	.00363	.00237	.00162
5	1	2.50000	2.5825	2.4411	2.0960	1.6254	1.0492	.69584	.40923	.23633	.1380
5	2	.62500	.45917	.3365	.24755	.18180	.12333	.07540	.02036	.01662	.01380
5	3	.58333	.46121	.33731	.24755	.18180	.12333	.07540	.02036	.01662	.01380
5	4	.17361	.10098	.06880	.05042	.03869	.02493	.01742	.01286	.00988	.00783
5	5	1.08333	1.01497	.99598	.98934	.98692	.98618	.98698	.98805	.98907	.98999
5	6	.42361	.31696	.22937	.16586	.12333	.08793	.05152	.03068	.00792	.00610
5	7	1.48333	1.47654	1.38851	1.29193	1.23346	1.16631	1.0916	1.0551	1.08916	1.07719
5	8	.142361	.08525	.05139	.03259	.02799	.02169	.01690	.01131	.00810	.00608
6	1	3.00000	3.0873	2.99633	2.6608	2.2222	1.6015	.96547	.70945	.43330	.27012
6	2	.40000	.24394	.16292	.10378	.06302	.03927	.02123	.01890	.01560	.01306
6	3	1.02500	.87103	.75280	.64078	.53239	.42180	.31563	.21174	.00914	.00731
6	4	.78333	.61853	.48793	.38699	.28675	.19021	.092572	.03669	.00485	.00316
6	5	.21361	.10465	.06435	.04006	.03221	.01945	.00936	.00705	.00550	.00350
6	6	1.28333	1.14593	1.09467	1.06890	1.05369	1.04682	1.02782	1.02228	1.01855	1.01587
6	7	.46361	.31636	.20524	.13566	.08197	.04967	.02482	.01248	.00632	.00483
6	8	1.48333	1.48420	1.46196	1.47468	1.49881	1.54450	1.61480	1.7633	1.9681	2.2522
6	9	.16667	.07340	.03180	.01433	.00714	.00364	.00164	.00082	.00041	.00022
6	10	.2778	.2446	.21577	.18438	.15190	.11963	.08276	.04778	.01481	.01247
6	11	.3667	.34541	.32999	.31909	.3119	.30611	.30173	.30034	.30034	.30034
6	12	.6778	.65390	.6291	.60453	.5819	.56093	.54137	.52304	.50651	.49197
6	13	.13028	.07511	.05007	.03598	.02716	.01708	.01173	.00855	.00651	.00513
6	14	.95000	.93888	.9313	.92899	.92716	.92671	.92667	.92667	.92667	.92667
6	15	.24139	.10523	.06050	.03965	.02811	.01631	.01067	.00753	.00560	.00433
6	16	1.45000	1.24945	1.17045	1.12885	1.10337	1.07388	1.05740	1.04690	1.03964	1.03432
6	17	.49139	.31618	.20806	.14800	.093203	.051723	.03135	.01766	.00935	.00406
6	18	1.49139	1.49139	1.49139	1.49139	1.49139	1.49139	1.49139	1.49139	1.49139	1.49139
7	1	1.4286	1.4286	1.4286	1.4286	1.4286	1.4286	1.4286	1.4286	1.4286	1.4286
7	2	.2041	.02806	.01066	.00339	.00111	.00033	.00011	.00003	.00001	.00001
7	3	.04819	.04293	.03617	.03011	.02515	.02044	.01689	.01389	.01147	.00918
7	4	.08819	.07884	.06440	.05305	.04486	.03898	.03498	.03166	.02889	.02664
7	5	.15068	.107656	.07479	.05257	.03739	.02542	.01681	.01095	.00686	.00401
7	6	.26180	1.03613	1.01761	1.00955	1.00542	1.00168	1.00019	.99918	.99918	.99918
7	7	.10466	.05732	.03641	.02527	.01425	.00916	.00639	.00472	.00362	.00362

CONTINUED

VALUES OF M

N	I	1.0	1.5	2.0	2.5	3.0	4.0	5.0	6.0	7.0	8.0
7	6	1.59286	1.33478	1.23158	1.17658	1.14255	1.10276	1.08029	1.06586	1.05583	1.04844
		.51180	.15830	.07607	.04466	.02937	.01550	.00956	.00650	.00468	.00354
7	7	2.59286	1.84387	1.56838	1.42726	1.34188	1.24397	1.18953	1.15492	1.13098	1.11344
		1.51180	.32924	.13304	.07040	.04323	.02093	.01227	.00805	.00568	.00422
8	1	1.25000	.22569	.11333	.06220	.04649	.03895	.03057	.02500	.02053	.01616
		.01563	.02348	.02683	.02731	.02633	.02286	.01925	.01616	.01364	.01161
8	2	.26786	.39378	.48640	.55572	.60907	.68531	.73653	.77410	.80211	.82397
		.03603	.03536	.03127	.02680	.02282	.01674	.01255	.00984	.00785	.00639
8	3	.43452	.55307	.63213	.68792	.72922	.78608	.82329	.84951	.86897	.88398
		.06381	.06659	.07494	.07694	.07131	.06121	.05111	.04755	.04584	.04466
8	4	.63452	.71800	.77152	.80825	.83492	.87094	.89409	.91022	.92209	.93120
		.10381	.05959	.03928	.02794	.02092	.01298	.00885	.00642	.00487	.00381
8	5	.88453	.90041	.91612	.92826	.93756	.95058	.95920	.96528	.96979	.97327
		.16631	.07690	.04525	.03000	.02139	.01252	.00821	.00579	.00430	.00333
8	6	1.21785	1.11757	1.07851	1.05832	1.04613	1.03234	1.02479	1.02007	1.01680	1.01449
		.27744	.10364	.05468	.03392	.02317	.01279	.00812	.00559	.00419	.00315
8	7	1.71786	1.40718	1.28260	1.21599	1.17468	1.12623	1.09878	1.08113	1.06882	1.05975
		.52742	.15555	.07280	.04205	.02731	.01420	.00867	.00584	.00419	.00316
8	8	2.71786	1.90626	1.60921	1.45744	1.36577	1.26078	1.20250	1.16546	1.13986	1.12111
		1.52743	.32292	.12831	.06717	.04094	.01963	.01144	.00747	.00526	.00390
9	1	1.11111	.20864	.29541	.36843	.42930	.52331	.59166	.64324	.68343	.71557
		.01235	.02007	.02384	.02485	.02434	.02155	.01837	.01554	.01319	.01127
9	2	.23611	.36203	.45668	.52839	.58401	.64406	.71859	.75801	.78780	.81109
		.02797	.02987	.02755	.02421	.02097	.01571	.01282	.00943	.00756	.00619
9	3	.37897	.50491	.59040	.65135	.69678	.75971	.80113	.83041	.85220	.86903
		.04838	.03872	.03040	.02409	.01941	.01324	.00955	.00720	.00561	.00449
9	4	.54564	.64939	.71558	.76105	.79410	.83882	.86763	.88773	.90252	.91387
		.07616	.04841	.03358	.02462	.01879	.01197	.00827	.00605	.00461	.00366
9	5	.74563	.80377	.84144	.86726	.88592	.91109	.92717	.93834	.94656	.95286
		.11616	.06033	.03761	.02583	.01891	.01135	.00761	.00545	.00411	.00316
9	6	.99565	.97773	.97587	.97707	.97887	.98219	.98481	.98686	.98838	.98959
		.17863	.07671	.04333	.02797	.01955	.01118	.00722	.00498	.00367	.00290
9	7	1.32895	1.18750	1.12982	1.08895	1.07976	1.05744	1.04477	1.03666	1.03099	1.02692
		.28980	.10239	.05247	.03192	.02162	.01164	.00740	.00510	.00385	.00287
9	8	1.82898	1.46995	1.32624	1.24944	1.20180	1.14590	1.11422	1.09383	1.07962	1.06913
		.53974	.15301	.07005	.03988	.02562	.01315	.00795	.00533	.00377	.00286
9	9	2.82897	1.96079	1.64458	1.48344	1.38626	1.27515	1.21353	1.17440	1.14737	1.12760
		1.53978	.31739	.12434	.06449	.03908	.01858	.01079	.00704	.00495	.00366

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TABLE 2

EXPECTED VALUES AND VARIANCES OF ORDER STATISTICS FROM WEIBULL DISTRIBUTION

N	I	VALUES OF M									
		1.0	1.5	2.0	2.5	3.0	4.0	5.0	6.0	7.0	8.0
10	1	.1000	.1945	.2802	.3532	.4145	.5097	.5793	.6320	.6732	.7062
10	2	.0100	.0174	.0215	.0228	.0227	.0204	.0176	.0150	.0128	.0110
10	3	.0211	.0360	.0438	.0503	.05626	.0657	.0707	.0740	.0753	.0798
10	4	.0223	.0257	.0246	.0221	.0195	.0149	.0115	.0091	.0073	.0060
10	5	.0361	.0661	.0560	.0209	.0695	.07373	.0822	.0810	.0837	.0861
10	6	.0380	.0329	.0269	.0219	.0179	.0124	.0091	.0069	.0054	.0044
10	7	.0790	.0594	.0705	.0725	.0604	.0120	.0854	.0887	.0859	.0892
10	8	.0584	.0405	.0293	.0221	.0172	.0112	.0078	.0058	.0044	.0035
10	9	.0656	.0703	.0781	.0819	.0846	.0790	.0910	.0916	.0924	.0939
10	10	.0862	.0494	.0323	.0228	.0170	.0104	.0071	.0051	.0038	.0031
10	11	.0856	.0772	.0897	.09156	.09272	.0931	.0933	.0904	.0957	.0968
10	12	.1262	.0605	.0361	.0242	.0174	.0102	.0068	.0050	.0036	.0026
10	13	.10957	.0647	.0267	.0180	.0133	.0081	.0059	.0045	.0034	.0028
10	14	.1886	.0763	.0417	.0263	.0179	.0103	.0063	.0043	.0032	.0024
10	15	.2999	.1012	.0506	.0304	.0205	.0108	.0069	.0055	.00428	.00372
10	16	.19290	.15253	.13643	.12784	.12252	.11627	.11274	.11047	.10888	.10771
10	17	.5497	.1506	.0677	.0381	.0242	.0124	.0074	.0049	.0034	.0026
10	18	.29290	.20092	.15757	.12062	.0942	.0676	.0421	.0231	.01332	.00734
10	19	.15498	.1125	.0829	.0622	.0475	.0377	.0266	.0173	.0067	.0034
10	20	.0909	.0625	.0477	.0340	.0215	.0135	.0087	.0062	.0047	.0034
10	21	.0083	.0154	.0195	.0212	.0213	.0195	.0169	.0145	.0125	.0107
10	22	.0183	.0142	.0107	.0084	.0061	.0041	.0028	.0018	.0011	.0008
10	23	.0200	.0341	.0271	.0200	.0166	.0118	.0087	.0066	.0052	.0042
10	24	.0462	.0516	.0432	.0332	.0232	.0159	.0087	.0056	.0043	.0035
10	25	.0699	.0722	.0621	.0501	.0379	.0261	.0155	.0087	.0067	.0052
10	26	.0666	.0415	.0283	.0205	.0155	.0099	.0067	.0048	.0036	.0028
10	27	.0944	.0499	.0313	.0215	.0156	.0092	.0063	.0046	.0034	.0029
10	28	.0966	.0414	.0247	.0163	.0118	.0068	.0050	.0035	.0029	.0025
10	29	.1344	.0604	.0347	.0227	.0163	.0092	.0059	.0044	.0033	.0018
10	30	.1866	.1038	.0706	.0531	.0427	.0303	.0234	.0194	.0160	.0138
10	31	.1968	.0759	.0404	.0251	.0165	.0091	.0057	.0035	.0029	.0025
10	32	.15198	.13029	.12128	.11638	.11328	.10966	.10757	.10621	.10528	.10460
10	33	.3083	.1000	.0488	.0290	.0197	.0103	.0066	.0048	.0037	.0025
10	34	.20199	.15747	.13980	.13038	.12458	.11774	.11390	.11141	.10968	.10841
10	35	.5579	.1485	.0656	.0367	.0226	.0116	.0066	.0047	.0029	.0022
10	36	.30199	.20526	.17035	.15265	.14200	.12987	.12315	.11890	.11596	.11381
10	37	.15581	.3082	.1180	.0603	.0362	.0170	.0098	.0063	.0045	.0033
10	38	.0833	.1722	.2558	.3284	.3900	.4870	.5586	.6131	.6559	.6903
10	39	.0069	.0137	.0179	.0197	.0201	.0187	.0164	.0141	.0121	.0105
10	40	.1742	.2957	.3923	.4679	.5278	.6155	.6762	.7206	.7544	.7809
10	41	.0152	.0199	.0203	.0190	.0171	.0145	.0106	.0085	.0069	.0057
10	42	.2742	.4070	.5023	.5724	.6256	.7008	.7510	.7869	.8138	.8346
10	43	.0251	.0219	.0219	.0185	.0156	.0112	.0094	.0085	.0051	.0041
10	44	.3854	.5152	.6016	.6624	.7074	.7691	.8379	.8589	.8751	.8859
10	45	.0376	.0301	.0235	.0185	.0148	.0100	.0071	.0053	.0041	.0033

CONTINUED

N	I	VALUES OF M								VALUES OF M				VALUES OF M			
		1.0	1.5	2.0	2.5	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0
12	5	.5103	.6244	.6964	.7455	.7810	.8290	.8596	.8809	.8967	.9088	.9161	.9207	.9238	.9258	.9270	.9276
12	6	.0532	.0358	.0254	.0188	.0144	.0091	.0066	.0050	.0038	.0030	.0024	.0019	.0015	.0012	.0010	.0008
12	7	.6533	.7390	.7913	.8264	.8514	.8844	.9060	.9207	.9313	.9395	.9458	.9505	.9540	.9566	.9586	.9600
12	8	.0735	.0418	.0272	.0189	.0141	.0091	.0056	.0038	.0027	.0018	.0012	.0008	.0005	.0003	.0002	.0001
12	9	.8197	.8613	.8883	.9066	.9201	.9384	.9490	.9566	.9621	.9668	.9705	.9733	.9753	.9768	.9778	.9784
12	10	.1015	.0505	.0307	.0209	.0146	.0076	.0059	.0050	.0048	.0038	.0030	.0024	.0019	.0015	.0012	.0010
12	11	1.0200	.9986	.9938	.9923	.9916	.9920	.9932	.9941	.9953	.9960	.9966	.9970	.9973	.9975	.9976	.9977
12	12	.1411	.0596	.0324	.0209	.0153	.0098	.0058	.0034	.0021	.0010	.0005	.0003	.0002	.0001	.0000	.0000
12	13	1.2698	1.1565	1.1092	1.0836	1.0683	1.0494	1.0383	1.0320	1.0267	1.0226	1.0190	1.0158	1.0128	1.0099	1.0071	1.0044
12	14	.2041	.0754	.0394	.0245	.0153	.0081	.0057	.0032	.0023	.0017	.0012	.0008	.0005	.0003	.0002	.0001
12	15	1.6032	1.3517	1.2474	1.1905	1.1543	1.125	1.0878	1.0723	1.0617	1.0542	1.0478	1.0415	1.0352	1.0289	1.0226	1.0163
12	16	.3151	.0987	.0473	.0276	.0193	.0096	.0073	.0045	.0037	.0030	.0024	.0019	.0015	.0012	.0010	.0008
12	17	2.1033	1.6193	1.4281	1.3265	1.2639	1.1903	1.1490	1.1225	1.1037	1.0899	1.0784	1.0680	1.0586	1.0492	1.0400	1.0308
12	18	.5647	.1464	.0639	.0353	.0217	.0111	.0063	.0040	.0026	.0024	.0020	.0017	.0014	.0012	.0010	.0008
12	19	3.1032	2.0920	1.7285	1.5446	1.4342	1.3085	1.2390	1.1950	1.1647	1.1425	1.1250	1.1110	1.0990	1.0870	1.0750	1.0630
12	20	1.5651	.3042	.1154	.0586	.0351	.0164	.0094	.0062	.0044	.0032	.0024	.0018	.0014	.0011	.0009	.0007

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TABLE 2

EXPECTED CROSS-PRODUCTS AND COVARIANCES OF ORDER STATISTICS FROM WEIBULL

		VALUES OF W											
W	I	J	1.0	1.5	2.0	2.5	3.0	4.0	5.0	6.0	7.0	8.0	
2	1	2	1.00000	.73516	.74588	.76077	.77902	.81129	.83451	.85603	.87162	.88425	
			.25000	.43180	.42786	.41969	.41554	.41052	.40750	.40561	.40436	.40368	
3	1	2	.38889	.40678	.47158	.52511	.57027	.64014	.69105	.72959	.75968	.78381	
			.11111	.04306	.03327	.02554	.02048	.01600	.01240	.00967	.00660	.00482	
3	1	3	.72222	.53266	.61766	.66295	.70212	.75939	.79764	.82539	.84640	.86303	
			.11111	-.09081	-.04256	-.03245	-.02342	-.01290	-.00841	-.00591	-.00435	-.00333	
3	2	3	1.88889	1.26424	1.16840	1.08425	1.02466	1.03633	1.02052	1.01311	1.00840	1.00500	
			.36111	.06261	.04301	.02613	.01643	.01020	.00743	.00563	.00440	.00340	
4	1	2	.20833	.27230	.36702	.41009	.46349	.54728	.60927	.65668	.69400	.72409	
			.06250	.03341	.02017	.01272	.00964	.00707	.00513	.00378	.00282	.00212	
4	1	3	.33333	.33065	.42478	.49066	.54526	.62444	.68309	.72493	.75707	.78251	
			.06250	-.03296	-.01654	-.01350	-.00991	-.00562	-.00368	-.00259	-.00190	-.00146	
4	2	3	.80556	.75189	.76749	.78860	.80893	.83957	.86259	.88005	.89367	.90456	
			.17361	.08078	.05307	.03920	.03015	.01807	.01311	.00950	.00731	.00576	
4	1	4	.58333	.43827	.55059	.60708	.65518	.72532	.77068	.80312	.82764	.84673	
			.06250	-.12652	-.06467	-.05128	-.03868	-.02225	-.01504	-.00884	-.00814	-.00629	
4	2	4	1.38889	.92264	.94667	.94697	.94284	.96047	.96610	.97037	.97350	.97617	
			.17361	-.11979	-.05129	-.03254	-.02035	-.01002	-.00574	-.00356	-.00240	-.00179	
4	3	4	2.60000	1.60521	1.46071	1.32021	1.26840	1.16864	1.12670	1.01000	1.08375	1.07163	
			.42361	.08907	.05779	.04206	.03117	.01836	.01224	.00871	.00650	.00504	
5	1	2	1.30000	.27040	.27691	.34000	.39618	.48419	.55495	.60659	.64829	.68214	
			.06000	.02844	.02513	.02136	.01818	.01338	.01014	.00791	.00633	.00517	
5	1	3	1.0667	.23671	.32708	.30863	.45807	.54902	.61424	.66330	.70162	.73184	
			.06000	-.01590	-.00885	-.00500	-.00279	-.00178	-.00122	-.00088	-.00066	-.00066	
5	2	3	.45500	.52357	.58237	.63182	.67084	.72891	.76996	.80034	.82368	.84218	
			.10250	.06819	.04708	.03705	.02898	.01893	.01335	.00900	.00764	.00606	
5	1	4	.20667	.28003	.39686	.46679	.52573	.61349	.67360	.71765	.75131	.77782	
			.06000	-.06474	-.03699	-.02140	-.02452	-.01496	-.01038	-.00760	-.00576	-.00451	
5	2	4	.68000	.60177	.67624	.72247	.75873	.80734	.83976	.86276	.87990	.89322	
			.10250	-.03574	-.01566	-.00829	-.00497	-.00140	-.00030	.00010	.00021	.00023	
5	3	4	1.21889	1.05528	.90924	.98004	.97186	.96634	.96662	.96841	.97054	.97262	
			.21361	.11730	.07104	.05100	.03750	.02262	.01515	.00885	.00816	.00636	
5	1	5	.40667	.38206	.50635	.56898	.62196	.70004	.75000	.78561	.81255	.83350	
			.06000	-.13790	-.07306	-.05915	-.04563	-.02661	-.01828	-.01345	-.01013	-.00786	
5	2	5	1.30000	.75615	.83702	.86167	.88428	.91301	.92980	.94119	.94926	.95531	
			.10250	-.18081	-.08435	-.05967	-.04107	-.02208	-.01380	-.00925	-.00666	-.00505	
5	3	5	2.00222	1.24055	1.18759	1.14453	1.11847	1.08449	1.06558	1.05336	1.04477	1.03849	
			.21361	-.12901	-.05204	-.02794	-.01515	-.00666	-.00315	-.00164	-.00099	-.00065	
5	4	5	3.30380	2.05707	1.67223	1.49187	1.38404	1.26613	1.20064	1.16108	1.13438	1.11535	
			.46361	.12711	.07186	.05133	.03700	.02118	.01351	.00967	.00715	.00550	
6	1	2	.08889	.15630	.22773	.29225	.34908	.41972	.51325	.56006	.61372	.65017	
			.02778	.02359	.02187	.01927	.01679	.01272	.00981	.00774	.00624	.00513	
6	1	3	1.30566	.18106	.26802	.33890	.39900	.49536	.56560	.61911	.66108	.69483	
			.02778	-.00891	-.00431	-.00374	-.00264	-.00136	-.00080	-.00051	-.00034	-.00023	
6	2	3	.29380	.39526	.47052	.53291	.58087	.65391	.70569	.74415	.77373	.79731	
			.06778	.05636	.04223	.03369	.02697	.01819	.01206	.00981	.00763	.00611	
6	1	4	1.86111	.21542	.31582	.38859	.45091	.54606	.61343	.66366	.70248	.73331	
			.02778	-.04126	-.02540	-.01807	-.01147	-.00810	-.00459	-.00248	-.00136	-.00062	
6	2	4	.61611	.46352	.55221	.64687	.71534	.76179	.79517	.82030	.83993	.85993	
			.06778	-.01222	-.00441	-.00022	.00156	.00179	.00176	.00153	.00128	.00106	

VALUES OF M

N	I	J	1.0	1.5	2.0	2.5	3.0	4.0	5.0	6.0	7.0	8.0
5	3	4	.71611	.75606	.77523	.79864	.81778	.84821	.87046	.88722	.90023	.91059
6	1	5	.13028	.16054	.16532	.16799	.16802	.16249	.15136	.11115	.08847	.06666
6	1	5	.26944	.26177	.27648	.24864	.26990	.60200	.66441	.71003	.74691	.77233
6	2	5	.02778	.07982	.04698	.04047	.03232	.01992	.01405	.01045	.00798	.00627
6	2	5	.50945	.51804	.62006	.67756	.72286	.78285	.82150	.84848	.86820	.88334
6	3	5	.06778	.08844	.04590	.03360	.02320	.01309	.00814	.00388	.00295	.00205
6	3	5	.22444	.84376	.87044	.89223	.90645	.92382	.93600	.94663	.95122	.95440
6	4	5	.13028	.02858	.01058	.00067	.00262	.00276	.00257	.00207	.00167	.00136
6	4	5	.16189	.13257	.119152	.113204	.103438	.105927	.104094	.103047	.102385	.101937
6	4	5	.24120	.15219	.09764	.06076	.04340	.02543	.01667	.01179	.00878	.00680
6	1	6	.42611	.24377	.47379	.54024	.59638	.67089	.73320	.77117	.79997	.82240
6	2	6	.02778	.14045	.07624	.04265	.04905	.02885	.02003	.01490	.01128	.00877
6	2	6	.96611	.65551	.76649	.80415	.83633	.87869	.90277	.91894	.93040	.93907
6	3	6	.06778	.20621	.09852	.07244	.05175	.02836	.01820	.01264	.00921	.00706
6	3	6	.164111	.102617	.105128	.104001	.103691	.102056	.102449	.102900	.101794	.101566
6	4	6	.13028	.21041	.09305	.06061	.03897	.02008	.01179	.00745	.00522	.00385
6	4	6	.256888	.153374	.128618	.120839	.124350	.117466	.113617	.111126	.109385	.108108
6	5	6	.12915	.04962	.04962	.02217	.00992	.00349	.00097	.00016	.00008	.00015
6	5	6	.237084	.237084	.184642	.163022	.149100	.133771	.125638	.120620	.117230	.114792
7	1	7	.49139	.15700	.08503	.05948	.04192	.02351	.01507	.01043	.00765	.00587
7	1	7	.06463	.12680	.19442	.25739	.31292	.40802	.48139	.53943	.58620	.62457
7	1	7	.02041	.01983	.01929	.01753	.01558	.01210	.00947	.00755	.00613	.00507
7	1	7	.09320	.14630	.22688	.29657	.35757	.45522	.52851	.58500	.62969	.66583
7	2	7	.02041	.00539	.00236	.00206	.00134	.00054	.00022	.00007	.00000	.00002
7	2	7	.20590	.21381	.20515	.46225	.51642	.59847	.55729	.70129	.73530	.76255
7	1	4	.04819	.04718	.03733	.03065	.02504	.01735	.01266	.00962	.00754	.00606
7	1	4	.12801	.17030	.26358	.33611	.39935	.49812	.54970	.62397	.66623	.70004
7	2	4	.28328	.34773	.44146	.51461	.57035	.65037	.70561	.74581	.77635	.80037
7	2	4	.04819	.00314	.00029	.00321	.00305	.00327	.00273	.00221	.00170	.00147
7	3	4	.47518	.58193	.63578	.68035	.71503	.76654	.80253	.82902	.84930	.86531
7	3	4	.08819	.08433	.06827	.04389	.03364	.02163	.01502	.01104	.00846	.00669
7	1	5	.17653	.20051	.30602	.37994	.44370	.54175	.61047	.66156	.70102	.73229
7	2	5	.20041	.05509	.03483	.03133	.02564	.01642	.01180	.00886	.00680	.00538
7	2	5	.38645	.39522	.50194	.57200	.62723	.70283	.75323	.78902	.81556	.83418
7	3	5	.04819	.05405	.03090	.02238	.01533	.00884	.00543	.00354	.00259	.00197
7	3	5	.64502	.63550	.60860	.74808	.78127	.82531	.85462	.87534	.89005	.90304
7	4	5	.08819	.00163	.00215	.00803	.00825	.00604	.00461	.00351	.00278	.00223
7	4	5	.98074	.97037	.94023	.93379	.93271	.93350	.94368	.94936	.95425	.95830
7	1	6	.15069	.13192	.08155	.05724	.04167	.02521	.01686	.01207	.00908	.00708
7	1	6	.24706	.24203	.36030	.43389	.49457	.59175	.65500	.70274	.73858	.76679
7	2	6	.02041	.08724	.05222	.04543	.03677	.02275	.01620	.01219	.00937	.00737
7	2	6	.54121	.65325	.69214	.64518	.69550	.76347	.80631	.83614	.85707	.87454
7	3	6	.04818	.11551	.06175	.04754	.03461	.02003	.01311	.00902	.00656	.00505
7	3	6	.89979	.72305	.70507	.83169	.85941	.89194	.91254	.92645	.93620	.94366
7	4	6	.08819	.09772	.04781	.03078	.01904	.01000	.00552	.00326	.00230	.00169
7	4	6	.13609	.106506	.103523	.102873	.101075	.100586	.100293	.100141	.100044	.100008
7	5	6	.15068	.01704	.00399	.00713	.00870	.00640	.00482	.00342	.00266	.00208
7	5	6	.200256	.156827	.135624	.125699	.119699	.113229	.109834	.107700	.106327	.105460
7	5	6	.26180	.18526	.10297	.06918	.04826	.02768	.01784	.01257	.00930	.00718

VALUES OF M

M	I	J	1.0	1.5	2.0	2.5	3.0	4.0	5.0	6.0	7.0	8.0
7	1	7	.19082	.31547	.44822	.51730	.57563	.66309	.71902	.75887	.78921	.81283
			.02041	-.13940	-.07712	-.06414	-.05076	-.03009	-.02105	-.01579	-.01198	-.00933
7	2	7	.85074	.58697	.71512	.76142	.79995	.85198	.88138	.90107	.91520	.92584
			.04819	-.21253	-.10486	-.07890	-.05764	-.03186	-.02090	-.01472	-.01087	-.00829
7	3	7	1.40931	.88873	.96140	.96910	.97946	.98973	.99379	.99610	.99733	.99781
			.08819	-.24510	-.11198	-.07714	-.05224	-.02770	-.01712	-.01130	-.00798	-.00616
7	4	7	2.12003	1.26465	1.22657	1.18036	1.13354	1.11526	1.09249	1.07719	1.06578	1.05750
			.15069	-.22742	-.09685	-.05886	-.03568	-.01769	-.00977	-.00583	-.00405	-.00274
7	5	7	3.09541	1.78595	1.55023	1.42467	1.34405	1.24535	1.19058	1.15534	1.13098	1.11304
			.26179	-.12454	-.04576	-.01620	-.00509	-.00070	.00082	.00098	.00093	.00068
7	6	7	4.64186	2.64835	2.02890	1.74597	1.57931	1.39727	1.30115	1.24203	1.20217	1.17355
			.51181	.18719	.09731	.06669	.04616	.02547	.01611	.01105	.00806	.00618
8	1	2	.04911	1.0584	.16963	.23069	.28647	.38088	.45555	.51516	.56350	.60334
			.01562	.01697	.01722	.01607	.01453	.01153	.00915	.00736	.00601	.00499
8	1	3	.06994	.12139	.19681	.26461	.32503	.42362	.49886	.55747	.60416	.64213
			.01563	-.00343	-.00124	-.00105	-.00055	-.00003	.00014	.00019	.00020	.00020
8	2	3	.15242	.25795	.34078	.41034	.46747	.55526	.61895	.66699	.70442	.73436
			.03603	.04016	.03331	.02805	.02333	.01655	.01224	.00938	.00740	.00599
8	1	4	.09494	.13994	.22661	.29773	.36087	.46139	.53580	.59272	.63748	.67350
			.01562	-.02209	-.01512	-.01441	-.01191	-.00799	-.00580	-.00437	-.00339	-.00271
8	2	4	.20600	.28362	.37777	.45404	.51364	.60091	.66217	.70723	.74174	.76901
			.03603	.00088	.00251	.00488	.00512	.00404	.00328	.00264	.00212	.00174
8	3	4	.33953	.46856	.53979	.59612	.64018	.70529	.75069	.78408	.80964	.82981
			.06381	.07146	.05209	.04011	.03134	.02066	.01459	.01084	.00837	.00665
8	1	5	.12619	.16188	.25940	.33277	.39711	.49812	.57072	.62540	.66796	.70193
			.01563	-.04133	-.02764	-.02572	-.02150	-.01419	-.01032	-.00781	-.00606	-.00483
8	2	5	.27296	.31775	.42397	.49961	.56005	.64502	.70298	.74471	.77607	.80057
			.03603	-.03681	-.02162	-.01623	-.01097	-.00642	-.00387	-.00251	-.00180	-.00135
8	3	5	.44816	.50593	.58633	.64995	.69407	.75462	.79512	.82404	.84585	.86286
			.06381	.00793	.00722	.01138	.01038	.00739	.00542	.00402	.00313	.00251
8	4	5	.65506	.75842	.78025	.80278	.82181	.85218	.87412	.89059	.90333	.91345
			.10381	.11192	.07345	.05251	.03902	.02428	.01651	.01197	.00909	.00715
8	1	6	.16786	.18916	.29754	.37221	.43686	.53703	.60674	.65849	.69849	.73019
			.01562	-.06305	-.04038	-.03651	-.03021	-.01934	-.01404	-.01066	-.00820	-.00650
8	2	6	.36225	.36182	.47978	.55239	.61079	.69155	.74668	.78234	.81032	.83179
			.03604	-.07825	-.04479	-.03572	-.02636	-.01591	-.01051	-.00729	-.00526	-.00410
8	3	6	.59300	.56152	.65212	.70999	.75265	.80647	.84145	.86549	.88266	.89616
			.06381	-.05656	-.02962	-.01803	-.01020	-.00502	-.00224	-.00106	-.00089	-.00062
8	4	6	.87656	.81439	.84187	.87159	.88757	.90857	.92290	.93326	.94156	.94782
			.10381	.01198	.00978	.01620	.01413	.00947	.00664	.00478	.00398	.00313
8	5	6	1.24354	1.16832	1.08480	1.04759	1.02718	1.00872	1.00105	.99747	.99562	.99473
			.16631	.16205	.09676	.06520	.04636	.02740	.01807	.01281	.00953	.00736
8	1	7	.23036	.22678	.34684	.42129	.48499	.58240	.64798	.69583	.73256	.76146
			.01563	-.09079	-.05503	-.04832	-.03949	-.02458	-.01761	-.01338	-.01029	-.00810
8	2	7	.49617	.42406	.55312	.62028	.67334	.74796	.79387	.82576	.84888	.86663
			.03602	-.13006	-.07073	-.05545	-.04151	-.02385	-.01585	-.01113	-.00843	-.00655
8	3	7	.81026	.64307	.74255	.78777	.82367	.86642	.89282	.91078	.92385	.93311
			.06381	-.13519	-.06821	-.04873	-.03292	-.01887	-.01179	-.00764	-.00492	-.00368
8	4	7	1.19384	.91073	.94288	.95674	.96632	.97444	.97969	.98285	.98423	.98592
			.10383	-.09962	-.04666	-.02608	-.01443	-.00643	-.00271	-.00120	-.00131	-.00091

VALUES OF M

N	I	J	1.0	1.5	2.0	2.5	3.0	4.0	5.0	6.0	7.0	8.0
8	5	7	1.68578	1.26357	1.17808	1.14323	1.11559	1.07998	1.06045	1.04781	1.03990	1.03400
			.16629	-.00347	.00306	.01447	.01425	.00940	.00650	.00422	.00336	.00258
8	6	7	2.36953	1.78920	1.50045	1.36351	1.28120	1.19217	1.14483	1.11609	1.09660	1.08266
			.27743	.21658	.11716	.07661	.05233	.02952	.01881	.01326	.00982	.00756
8	1	8	3.55346	.29340	.42728	.49826	.55822	.64876	.70680	.74820	.77979	.80443
			.01562	-.13680	-.07692	-.06460	-.05157	-.03073	-.02162	-.01633	-.01244	-.00969
8	2	8	.76404	.53660	.67521	.72756	.77077	.82982	.86340	.88593	.90238	.91462
			.03604	-.21404	-.10750	-.08236	-.06106	-.03420	-.02275	-.01624	-.01190	-.00912
8	3	8	1.24477	.79435	.89592	.91663	.93591	.95947	.97007	.97655	.98037	.98345
			.06379	-.25993	-.12129	-.08596	-.06002	-.03169	-.01993	-.01351	-.01012	-.00758
8	4	8	1.82837	1.09644	1.12166	1.09949	1.08946	1.07140	1.05908	1.04441	1.03454	1.02854
			.10383	-.27225	-.11987	-.07848	-.05083	-.02676	-.01607	-.01023	-.00663	-.00343
8	5	8	2.57031	1.47928	1.37620	1.29691	1.24840	1.18342	1.14576	1.12071	1.10218	1.08961
			.16629	-.23713	-.09803	-.05597	-.03208	-.01505	-.00766	-.00428	-.00324	-.00152
8	6	8	3.58737	2.01309	1.69429	1.53206	1.42800	1.30319	1.23456	1.19070	1.16069	1.13827
			.27743	-.11727	-.04124	-.01036	-.00076	.00163	.00225	.00185	.00169	.00091
8	7	8	5.19633	2.89742	2.17274	1.84537	1.65422	1.44713	1.33830	1.27158	1.22668	1.19450
			.52743	.21497	.10877	.07314	.04988	.02719	.01702	.01157	.00838	.00650
9	1	2	.03858	.09028	.15045	.20952	.26435	.35854	.43401	.49476	.54430	.58530
			.01235	.01474	.01554	.01484	.01363	.01103	.00885	.00717	.00580	.00491
9	1	3	.05445	.10309	.17383	.23954	.29907	.39787	.47438	.53454	.58277	.62217
			.01235	-.00225	-.00043	-.00004	.00030	.00030	.00038	.00035	.00035	.00032
9	2	3	.11745	.21751	.29964	.37002	.42877	.52031	.58753	.63862	.67863	.71076
			.02797	.03472	.03002	.02585	.02184	.01582	.01185	.00916	.00727	.00590
9	1	4	.07207	.11803	.19895	.26821	.33068	.43194	.50820	.56712	.61376	.65149
			.01235	-.01745	-.01243	-.01218	-.01022	-.00701	-.00513	-.00390	-.00304	-.00243
9	2	4	.15680	.23787	.33042	.40785	.46947	.56150	.62708	.67579	.71334	.74316
			.02797	.00277	.00362	.00572	.00571	.00448	.00361	.00288	.00234	.00193
9	3	4	.25516	.38930	.46936	.53254	.58259	.65700	.70916	.74771	.77731	.80073
			.04838	.06141	.04688	.03682	.02928	.01974	.01408	.01054	.00819	.00655
9	1	5	.09519	.13504	.22564	.29762	.36176	.46423	.53931	.59653	.64141	.67745
			.01235	-.03265	-.02292	-.02190	-.01856	-.01255	-.00925	-.00704	-.00549	-.00437
9	2	5	.20402	.26421	.36782	.44571	.50912	.60015	.66325	.70932	.74426	.77168
			.02797	-.02677	-.01645	-.01253	-.00826	-.00486	-.00299	-.00194	-.00143	-.00116
9	3	5	.33096	.41739	.50613	.57782	.62860	.70019	.74880	.78377	.81022	.83099
			.04838	.01156	.00934	.01293	.01131	.00803	.00602	.00457	.00356	.00293
9	4	5	.48300	.61773	.66839	.70820	.74001	.78748	.82052	.84480	.86333	.87788
			.07615	.09578	.06628	.04817	.03650	.02324	.01608	.01182	.00904	.00709
9	1	6	.12797	.15514	.25532	.32915	.39420	.49682	.57006	.62510	.66796	.70201
			.01234	-.04885	-.03295	-.03082	-.02602	-.01716	-.01261	-.00968	-.00752	-.00610
9	2	6	.26306	.29615	.41076	.48782	.55016	.63885	.69901	.74203	.77421	.79950
			.02798	-.05781	-.03489	-.02844	-.02150	-.01337	-.00865	-.00601	-.00443	-.00314
9	3	6	.42568	.45725	.55610	.62507	.67677	.74604	.78840	.81949	.84245	.85998
			.04836	-.03641	-.02004	-.01134	-.00527	-.00213	-.00055	.00000	.00015	.00000
9	4	6	.61941	.65643	.71342	.76271	.79288	.83424	.86136	.88077	.89564	.90728
			.07614	.02150	.01511	.01912	.01556	.01037	.00691	.00471	.00360	.00293
9	5	6	.85854	.92461	.90883	.90738	.91083	.92136	.93091	.93882	.94527	.95057
			.11615	.13874	.08770	.06001	.04363	.02650	.01782	.01282	.00971	.00763
9	1	7	.16001	.17998	.29004	.36505	.43027	.53199	.60256	.65487	.69541	.72767
			.01235	-.06777	-.04371	-.03983	-.03326	-.02137	-.01559	-.01194	-.00910	-.00715

VALUES OF M

N	I	J	1.0	1.5	2.0	2.5	3.0	4.0	5.0	6.0	7.0	8.0
0	2	7	.34174	.33706	.46173	.53714	.59782	.68285	.73766	.77675	.80554	.82732
0	3	7	.02796	-.09285	-.05423	-.04353	-.03276	-.01934	-.01309	-.00904	-.00666	-.00559
0	4	7	.55203	.50986	.61945	.67976	.72764	.78798	.82719	.85393	.87390	.88913
0	5	7	.04840	-.08971	-.04758	-.04603	-.02470	-.01536	-.00979	-.00691	-.00461	-.00329
0	6	7	.71746	.71746	.78087	.82514	.85119	.88735	.90876	.92292	.93158	.93916
0	7	7	.07615	-.05368	-.02760	-.01120	-.00394	.00035	.00229	.00266	.00119	.00069
0	8	7	.110707	.08135	.06870	.07646	.07562	.07449	.07621	.07774	.08096	.08248
0	9	7	.11616	.02688	.01803	.02339	.01904	.01149	.00753	.00501	.00507	.00397
0	10	7	.150183	.135195	.121361	.114595	.110732	.106790	.104811	.103660	.102876	.102368
0	11	7	.17866	.19089	.11105	.07220	.05037	.02929	.01921	.01357	.00974	.00745
0	12	7	.21557	.21448	.33520	.41039	.47482	.57604	.64080	.68952	.72698	.75638
0	13	7	.01235	-.09220	-.05658	-.04993	-.04111	-.02561	-.01844	-.01407	-.01085	-.00864
0	14	7	.45982	.39418	.53029	.59917	.65543	.73336	.78195	.81552	.84028	.85949
0	15	7	.02798	-.13798	-.07538	-.06102	-.04642	-.02758	-.01871	-.01361	-.01024	-.00766
0	16	7	.74144	.58577	.70157	.75624	.79635	.84967	.88003	.90039	.91362	.92394
0	17	7	.04832	-.15641	-.08143	-.05758	-.04102	-.02087	-.01259	-.00792	-.00643	-.00517
0	18	7	.07619	-.14626	-.06977	-.04905	-.03027	-.01984	-.01288	-.00884	-.00365	-.00246
0	19	7	.14789	.108415	.107165	.106370	.105446	.104292	.103466	.102794	.102063	.101782
0	20	7	.11614	-.09734	-.04429	-.01987	-.01024	-.00109	.00158	.00156	.00128	.00090
0	21	7	.19961	.144822	.13042	.124172	.119600	.113684	.10452	.108374	.107107	.106103
0	22	7	.17859	.01101	.01017	.02093	.01960	.01135	.00722	.00428	.00399	.00302
0	23	7	.272061	.199178	.162873	.145632	.135336	.124282	.118377	.114797	.112346	.110590
0	24	7	.28978	.24622	.13032	.08324	.05570	.03110	.01967	.01404	.01038	.00799
0	25	7	.01235	-.13357	-.07613	-.06453	-.05189	-.03112	-.02201	-.01671	-.01276	-.00993
0	26	7	.69592	.49746	.64255	.69997	.74659	.81160	.84853	.87330	.89130	.90491
0	27	7	.21240	-.10849	-.08385	-.06299	-.03516	-.02349	-.01690	-.01250	-.00966	-.00691
0	28	7	.72523	.84563	.84563	.87452	.90099	.93267	.94872	.95901	.96635	.97130
0	29	7	-.26479	-.26479	-.12531	-.09172	-.06491	-.03606	-.02346	-.01622	-.01144	-.00862
0	30	7	.04842	.97908	.104453	.104029	.104061	.104051	.103569	.103116	.102590	.102358
0	31	7	.07605	-.29423	-.13228	-.08867	-.06022	-.02910	-.01719	-.01138	-.00962	-.007489
0	32	7	.272564	.128581	.125937	.120808	.117962	.113453	.108864	.109201	.108125	.106957
0	33	7	.11626	-.29020	-.12443	-.07843	-.04849	-.02774	.01650	.00997	.00481	.00486
0	34	7	.299520	.167437	.150713	.139687	.124085	.109022	.10222	.105647	.103114	.101609
0	35	7	.17853	-.24274	-.09776	-.05259	-.02842	-.01157	-.00486	-.00248	-.00290	.00023
0	36	7	.404939	.220014	.182166	.162553	.149083	.135176	.127097	.121090	.118553	.115850
0	37	7	.28939	-.10829	-.03639	-.00469	.00300	.00337	.00311	.00245	.00259	.00055
0	38	7	.312356	.312356	.230060	.193234	.171926	.148905	.137000	.129661	.124731	.121241
0	39	7	.53976	.24129	.11949	.07887	.05325	.02875	.01786	.01201	.00858	.00685

TABLE 3

EXPECTED CROSS-PRODUCTS AND COVARIANCES OF ORDER STATISTICS FROM WEIBULL

VALUES OF M

N	I	J	1.0	1.5	2.0	2.5	3.0	4.0	5.0	6.0	7.0	8.0
10	1	2	.0311	.0783	.1352	.1923	.2461	.3397	.4157	.4773	.5277	.5697
			.0100	.0130	.0142	.0138	.0129	.0106	.0086	.0070	.0058	.0048
10	1	3	.0436	.0891	.1557	.2193	.2778	.3763	.4537	.5150	.5644	.6050
			.0100	.0014	.0001	.0000	.0003	.0005	.0006	.0005	.0005	.0004
10	2	3	.0933	.1870	.2674	.3377	.3972	.4913	.5611	.6146	.6566	.6906
			.0223	.0304	.0273	.0240	.0206	.0152	.0115	.0089	.0071	.0058
10	1	4	.0579	.1015	.1774	.2447	.3062	.4076	.4851	.5455	.5937	.6328
			.0100	.0142	.0104	.0104	.0088	.0061	.0045	.0034	.0027	.0021
10	2	4	.1235	.2038	.2937	.3711	.4338	.5291	.5978	.6493	.6893	.7212
			.0223	.0337	.0441	.0461	.0400	.0347	.0307	.0274	.0244	.0220
10	3	4	.1990	.3311	.4154	.4826	.5366	.6176	.6749	.7174	.7502	.7763
			.0380	.0535	.0425	.0341	.0275	.0189	.0137	.0103	.0081	.0065
10	1	5	.0746	.1154	.2000	.2701	.3335	.4366	.5134	.5725	.6192	.6568
			.0100	.0266	.0194	.0191	.0164	.0114	.0085	.0065	.0051	.0041
10	2	5	.1586	.2249	.3253	.4039	.4687	.5638	.6309	.6803	.7180	.7478
			.0223	.0204	.0128	.0098	.0084	.0038	.0021	.0013	.0009	.0006
10	3	5	.2550	.3531	.4456	.5220	.5772	.6566	.7111	.7507	.7808	.8044
			.0380	.0127	.0101	.0136	.0117	.0085	.0064	.0048	.0039	.0032
10	4	5	.3676	.5178	.5852	.6359	.6764	.7360	.7771	.8072	.8303	.8485
			.0584	.0830	.0601	.0442	.0341	.0222	.0154	.0113	.0087	.0069
10	1	6	.0946	.1309	.2243	.2967	.3615	.4653	.5409	.5983	.6433	.6794
			.0100	.0396	.0278	.0266	.0227	.0153	.0113	.0086	.0067	.0054
10	2	6	.2009	.2497	.3595	.4389	.5038	.5978	.6624	.7095	.7449	.7729
			.0223	.0449	.0290	.0237	.0178	.0111	.0074	.0050	.0038	.0026
10	3	6	.3222	.3842	.4866	.5605	.6181	.7453	.7816	.8294	.8089	.8294
			.0380	.0246	.0136	.0079	.0026	.0008	.0003	.0000	.0000	.0008
10	4	6	.4634	.5467	.6200	.6824	.7213	.7767	.8140	.8403	.8601	.8764
			.0584	.0244	.0167	.0209	.0162	.0108	.0081	.0060	.0046	.0043
10	5	6	.6321	.7604	.7845	.8051	.8242	.8546	.8765	.8929	.9054	.9150
			.0862	.1197	.0799	.0553	.0410	.0255	.0175	.0129	.0098	.0074
10	1	7	.1196	.1496	.2511	.3253	.3907	.4946	.5683	.6237	.6669	.7013
			.0100	.0535	.0365	.0342	.0292	.0192	.0143	.0111	.0086	.0068
10	2	7	.2536	.2798	.4007	.4782	.5426	.6340	.6955	.7390	.7719	.7960
			.0223	.0712	.0426	.0361	.0274	.0169	.0112	.0083	.0060	.0060
10	3	7	.4063	.4218	.5335	.6049	.6579	.7305	.7793	.8131	.8375	.8594
			.0380	.0651	.0372	.0270	.0204	.0127	.0074	.0045	.0030	.0009
10	4	7	.5831	.5901	.6713	.7312	.7760	.8236	.8549	.8762	.8920	.9013
			.0583	.0318	.0170	.0042	.0034	.0049	.0046	.0036	.0030	.0003
10	5	7	.7935	.7994	.8279	.8588	.8738	.8971	.9120	.9235	.9329	.9411
			.0861	.0363	.0238	.0252	.0179	.0109	.0057	.0031	.0024	.0025
10	6	7	1.0527	1.0810	1.0245	.9990	.9875	.9797	.9783	.9786	.9796	.9809
			.1262	.1646	.1008	.0668	.0479	.0289	.0194	.0139	.0105	.0083
10	1	8	.1529	.1723	.2834	.3585	.4243	.5272	.5986	.6512	.6923	.7247
			.0100	.0705	.0455	.0418	.0349	.0224	.0163	.0127	.0097	.0077
10	2	8	.3240	.3174	.4466	.5233	.5846	.6728	.7293	.7704	.8000	.8247
			.0223	.1021	.0603	.0494	.0388	.0235	.0165	.0111	.0084	.0048
10	3	8	.5182	.4722	.5911	.6600	.7136	.7811	.8219	.8495	.8706	.8809
			.0380	.1097	.0617	.0437	.0283	.0140	.0082	.0055	.0029	.0001
10	4	8	.7429	.6481	.7432	.7810	.8160	.8546	.8821	.9014	.9158	.9303
			.0584	.0952	.0440	.0379	.0267	.0211	.0151	.0111	.0080	.0023

TABLE 3

CONTINUED

VALUES OF M

N	I	J	1.0	1.5	2.0	2.5	3.0	4.0	5.0	6.0	7.0	8.0
10	5	8	1.0087	.8649	.8913	.9289	.9412	.9595	.9697	.9751	.9740	.9746
			.0861	-.0469	-.0281	.0006	.0052	.0115	.0133	.0126	.0069	.0038
10	6	8	1.3345	1.1371	1.0843	1.0661	1.0506	1.0278	1.0172	1.0114	1.0129	1.0104
			.1262	.0417	.0281	.0080	.0230	.0107	.0053	.0026	.0058	.0044
10	7	8	1.7543	1.5232	1.3297	1.2328	1.1766	1.1187	1.0882	1.0697	1.0559	1.0473
			.1887	.2187	.1244	.0787	.0536	.0314	.0205	.0145	.0095	.0071
10	1	9	.2029	.2042	.3250	.4007	.4655	.5662	.6340	.6837	.7217	.7518
			.0100	-.0923	-.0573	-.0508	-.0422	-.0263	-.0191	-.0144	-.0112	-.0088
10	2	9	.4296	.3707	.5104	.5822	.6408	.7225	.7732	.8071	.8336	.8521
			.0224	-.1417	-.0786	-.0636	-.0484	-.0283	-.0189	-.0147	-.0105	-.0093
10	3	9	.6863	.5414	.6735	.7258	.7701	.8265	.8609	.8856	.9005	.9163
			.0380	-.1694	-.0850	-.0678	-.0501	-.0306	-.0208	-.0135	-.0115	-.0057
10	4	9	.9821	.7353	.8221	.8711	.8950	.9340	.9506	.9599	.9641	.9653
			.0582	-.1728	-.0927	-.0524	-.0366	-.0100	-.0024	.0003	-.0004	-.0031
10	5	9	1.3318	.9614	1.0045	.9929	1.0071	.9917	.9931	.9960	1.0046	1.0056
			.0864	-.1525	-.0639	-.0539	-.0277	-.0303	-.0226	-.0161	-.0051	-.0024
10	6	9	1.7573	1.2456	1.1838	1.1599	1.1282	1.1068	1.0857	1.0687	1.0494	1.0427
			.1261	-.0923	-.0436	-.0105	-.0078	.0102	.0109	.0078	-.0019	-.0018
10	7	9	2.3021	1.6195	1.4180	1.3276	1.2671	1.1833	1.1399	1.1128	1.0977	1.0839
			.1885	.0260	.0174	.0261	.0256	.0111	.0059	.0032	.0052	.0038
10	8	9	3.0562	2.1788	1.7443	1.5386	1.4162	1.2868	1.2173	1.1753	1.1463	1.1258
			.2998	.2743	.1426	.0894	.0584	.0328	.0207	.0149	.0109	.0086
10	1	10	.3029	.2606	.3945	.4679	.5301	.6250	.6864	.7302	.7639	.7901
			.0100	-.1300	-.0750	-.0641	-.0518	-.0312	-.0221	-.0169	-.0129	-.0100
10	2	10	.6407	.4659	.6156	.6763	.7257	.7952	.8349	.8620	.8813	.8964
			.0223	-.2091	-.1080	-.0847	-.0642	-.0362	-.0244	-.0175	-.0137	-.0099
10	3	10	1.0224	.6714	.8030	.8417	.8727	.9137	.9338	.9459	.9556	.9610
			.0380	-.2650	-.1287	-.0933	-.0673	-.0355	-.0227	-.0162	-.0110	-.0091
10	4	10	1.4614	.8942	.9882	.9895	1.0013	1.0059	1.0079	1.0096	1.0098	1.0102
			.0585	-.3020	-.1353	-.0986	-.0664	-.0395	-.0260	-.0173	-.0124	-.0086
10	5	10	1.9769	1.1461	1.1708	1.1460	1.1260	1.1102	1.0918	1.0759	1.0610	1.0545
			.0858	-.3212	-.1415	-.0873	-.0598	-.0216	-.0101	-.0072	-.0091	-.0060
10	6	10	2.6035	1.4625	1.3813	1.3008	1.2567	1.1822	1.1451	1.1236	1.1122	1.0939
			.1267	.2999	.1262	.0782	-.0452	-.0321	-.0208	-.0116	-.0020	-.0050
10	7	10	3.3974	1.8518	1.6239	1.4844	1.3978	1.2921	1.2299	1.1873	1.1539	1.1393
			.1882	-.2472	-.0964	-.0489	-.0250	-.0059	-.0002	-.0001	-.0039	-.0028
10	8	10	4.4853	2.4112	1.9359	1.7083	1.5621	1.3927	1.3014	1.2446	1.2072	1.1747
			.3000	-.0975	-.0314	.0009	.0060	.0040	.0031	.0027	.0039	-.0006
10	9	10	6.1997	3.3307	2.4158	2.0006	1.7768	1.5275	1.3977	1.3183	1.2649	1.2279
			.5497	.2661	.1296	.0840	.0564	.0303	.0187	.0124	.0086	.0073

TABLE 3

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EXPECTED CROSS-PRODUCTS AND COVARIANCES OF ORDER STATISTICS FROM WEIBULL

VALUES OF M

	M	1	J	1.0	1.5	2.0	2.5	3.0	4.0	5.0	6.0	7.0	8.0
11	1	2	.026	.069	.123	.178	.231	.284	.324	.400	.462	.513	.556
11	1	3	.008	.012	.013	.013	.012	.010	.008	.008	.007	.006	.005
11	1	4	.036	.078	.141	.203	.260	.318	.358	.436	.498	.548	.590
11	2	3	.008	.000	.000	.000	.001	.001	.001	.001	.001	.001	.000
11	2	4	.076	.163	.241	.311	.371	.467	.538	.618	.694	.763	.824
11	1	4	.018	.027	.025	.022	.019	.015	.011	.009	.009	.007	.006
11	1	5	.047	.089	.160	.225	.286	.387	.465	.527	.576	.616	.650
11	2	4	.008	.011	.008	.008	.007	.005	.003	.002	.002	.002	.001
11	2	5	.100	.177	.264	.341	.404	.502	.573	.627	.669	.702	.732
11	3	4	.018	.004	.004	.006	.006	.005	.004	.003	.003	.003	.002
11	3	5	.160	.287	.373	.442	.499	.585	.646	.692	.727	.755	.782
11	1	5	.047	.047	.039	.032	.026	.018	.013	.008	.008	.006	.006
11	1	6	.060	.100	.180	.248	.311	.414	.492	.552	.600	.630	.650
11	2	5	.008	.021	.016	.016	.014	.009	.007	.005	.005	.004	.003
11	2	6	.127	.195	.292	.370	.436	.534	.604	.656	.695	.727	.750
11	3	5	.018	.015	.010	.007	.004	.002	.001	.000	.000	.000	.000
11	3	6	.203	.305	.398	.477	.535	.620	.679	.722	.755	.782	.803
11	4	5	.031	.013	.010	.013	.012	.009	.006	.005	.005	.004	.003
11	4	6	.290	.444	.521	.579	.625	.694	.741	.776	.803	.824	.846
11	1	6	.046	.073	.055	.041	.032	.021	.015	.009	.011	.009	.007
11	1	7	.075	.113	.200	.271	.335	.430	.516	.576	.622	.660	.680
11	2	6	.008	.032	.023	.020	.015	.010	.006	.004	.004	.002	.002
11	2	7	.150	.215	.321	.400	.466	.564	.632	.682	.720	.750	.775
11	3	6	.018	.035	.023	.020	.015	.010	.006	.004	.004	.002	.002
11	3	7	.253	.329	.433	.511	.571	.654	.711	.751	.782	.806	.831
11	4	6	.031	.017	.009	.004	.000	.000	.001	.001	.001	.001	.001
11	4	7	.361	.466	.549	.619	.665	.731	.775	.807	.831	.849	.868
11	5	6	.046	.024	.017	.021	.017	.012	.009	.007	.007	.005	.004
11	5	7	.486	.642	.691	.726	.756	.801	.831	.854	.872	.885	.907
11	1	7	.067	.104	.073	.050	.038	.024	.016	.012	.009	.009	.007
11	1	8	.093	.127	.223	.295	.360	.465	.541	.599	.644	.680	.703
11	2	7	.008	.044	.030	.029	.025	.016	.012	.009	.009	.006	.005
11	2	8	.197	.238	.354	.434	.500	.596	.662	.709	.744	.773	.793
11	3	7	.018	.057	.035	.029	.022	.014	.009	.006	.005	.003	.003
11	3	8	.313	.359	.467	.546	.606	.687	.740	.779	.806	.830	.858
11	4	7	.031	.049	.032	.022	.015	.008	.006	.003	.003	.002	.000
11	4	8	.446	.501	.595	.658	.708	.769	.807	.835	.856	.868	.885
11	5	7	.046	.018	.005	.001	.004	.004	.002	.001	.001	.001	.000
11	5	8	.600	.671	.722	.773	.818	.848	.866	.885	.899	.915	.938
11	6	7	.067	.038	.023	.029	.019	.011	.009	.007	.005	.005	.004
11	6	8	.784	.896	.890	.891	.898	.912	.924	.932	.941	.945	.967
11	1	8	.004	.143	.093	.062	.046	.028	.010	.015	.011	.007	.007
11	1	9	.116	.145	.247	.321	.387	.492	.566	.622	.655	.685	.700
11	2	8	.008	.056	.038	.036	.031	.020	.015	.009	.007	.007	.007
11	2	9	.245	.267	.388	.469	.533	.628	.690	.736	.769	.794	.816
11	3	8	.018	.079	.050	.042	.033	.020	.014	.009	.009	.006	.006
11	3	9	.390	.395	.525	.591	.651	.724	.777	.807	.833	.846	.869
11	4	8	.031	.083	.038	.035	.022	.013	.005	.005	.007	.004	.004
11	4	9	.552	.542	.634	.703	.737	.794	.835	.867	.884	.914	.915
11	5	8	.046	.066	.043	.023	.025	.018	.010	.001	.001	.000	.000

VALUES OF M												
N	I	J	1.0	1.5	2.0	2.5	3.0	4.0	5.0	6.0	7.0	8.0
11	5	8	.743	.716	.776	.826	.867	.900	.918	.925	.933	.925
11	5	8	.066	-.025	-.011	.006	.023	.022	.019	.010	.008	-.008
11	6	8	.068	.036	.034	.040	.037	.043	.047	.054	.060	.069
11	7	8	.094	.052	.034	.028	.013	.004	-.001	-.002	-.001	.002
11	7	8	1.244	1.228	1.120	1.081	1.054	1.031	1.020	1.014	1.009	1.007
11	1	9	.134	.189	.112	.074	.053	.032	.022	.016	.012	.010
11	1	9	.146	.166	.277	.353	.419	.523	.595	.648	.689	.722
11	2	9	.008	-.071	-.046	-.042	-.035	-.022	-.016	-.012	-.009	-.007
11	2	9	.308	.301	.437	.512	.576	.666	.724	.763	.794	.820
11	3	9	.018	-.108	-.060	-.052	-.039	-.024	-.015	-.013	-.009	-.005
11	3	9	.490	.443	.562	.640	.688	.762	.804	.848	.884	.885
11	4	9	.031	-.121	-.076	-.051	-.043	-.025	-.019	-.004	-.001	.001
11	4	9	.695	.598	.706	.762	.820	.870	.895	.897	.919	.907
11	5	9	.046	-.120	-.061	-.040	-.009	.005	.007	-.007	.001	-.020
11	5	9	.933	.779	.863	.859	.871	.884	.901	.934	.938	.967
11	6	9	.067	-.096	-.029	-.047	-.046	-.050	-.044	-.018	-.020	.003
11	6	9	1.214	1.006	.977	1.033	1.027	1.041	1.041	1.032	1.019	1.008
11	7	9	.094	-.035	-.040	.025	.023	.042	.043	.035	.023	.011
11	7	9	1.558	1.281	1.195	1.140	1.115	1.065	1.045	1.034	1.038	1.032
11	8	9	.135	.055	.043	.027	.026	.002	-.003	-.004	.005	.003
11	8	9	2.000	1.684	1.435	1.311	1.237	1.164	1.124	1.099	1.079	1.067
11	1	10	.197	.246	.136	.086	.056	.034	.023	.016	.009	.006
11	1	10	.192	.195	.316	.392	.457	.550	.628	.678	.716	.747
11	2	10	.008	-.091	-.056	-.050	-.042	-.026	-.019	-.014	-.011	-.008
11	2	10	.404	.352	.492	.567	.626	.711	.764	.802	.828	.846
11	3	10	.018	-.142	-.081	-.064	-.051	-.029	-.020	-.012	-.010	-.009
11	3	10	.641	.507	.648	.704	.756	.819	.857	.869	.894	.906
11	4	10	.031	-.174	-.087	-.070	-.047	-.026	-.014	-.021	-.010	-.009
11	4	10	.909	.677	.798	.825	.852	.885	.908	.945	.936	.959
11	5	10	.046	-.191	-.086	-.074	-.059	-.043	-.032	-.004	-.019	-.001
11	5	10	1.217	.878	.910	.983	.987	1.027	1.029	1.009	1.020	1.002
11	6	10	.066	-.180	-.118	-.032	-.022	.024	.028	.009	.021	.003
11	6	10	1.583	1.101	1.137	1.058	1.077	1.007	.999	1.010	1.018	1.022
11	7	10	.095	-.158	-.036	-.071	-.026	-.065	-.056	-.035	-.020	-.010
11	7	10	2.024	1.397	1.274	1.255	1.187	1.178	1.144	1.110	1.074	1.063
11	8	10	.134	-.084	-.050	.007	-.010	.036	.034	.020	-.001	-.002
11	8	10	2.594	1.770	1.555	1.402	1.333	1.218	1.145	1.125	1.121	1.103
11	9	10	.197	.041	.025	.029	.034	.005	-.000	-.000	.006	.004
11	9	10	3.378	2.352	1.849	1.612	1.471	1.326	1.247	1.199	1.166	1.143
11	1	11	.308	.301	.154	.095	.060	.035	.022	.016	.012	.009
11	1	11	.283	.248	.381	.455	.518	.615	.678	.723	.757	.784
11	2	11	.008	-.126	-.073	-.063	-.051	-.030	-.021	-.016	-.012	-.009
11	2	11	.595	.440	.593	.656	.708	.781	.823	.851	.872	.889
11	3	11	.018	-.204	-.106	-.084	-.064	-.036	-.024	-.018	-.013	-.009
11	3	11	.943	.628	.769	.813	.847	.894	.917	.937	.943	.952
11	4	11	.031	-.262	-.128	-.095	-.070	-.038	-.025	-.013	-.013	-.009
11	4	11	1.336	.828	.933	.956	.972	.992	.999	.993	1.005	1.001
11	5	11	.046	-.303	-.144	-.097	-.067	-.031	-.018	-.019	-.005	-.007
11	5	11	1.789	1.049	1.118	1.081	1.083	1.054	1.047	1.050	1.036	1.037
			.067	-.331	-.134	-.107	-.066	-.050	-.034	-.017	-.020	-.011

CONTINUED

VALUES OF M

N	I	J	1.0	1.5	2.0	2.5	3.0	4.0	5.0	6.0	7.0	8.0
11	6	11	2.317	1.298	1.275	1.243	1.197	1.181	1.148	1.116	1.093	1.083
			.093	-.343	-.154	-.079	-.060	-.001	.006	.000	-.004	-.001
11	7	11	2.064	1.632	1.493	1.379	1.326	1.212	1.167	1.149	1.139	1.114
			.136	-.300	-.124	-.080	-.038	-.047	-.033	-.013	.001	-.005
11	8	11	3.779	2.011	1.730	1.563	1.459	1.344	1.269	1.214	1.171	1.160
			.196	-.253	-.093	-.053	-.021	.006	.009	.002	-.006	.006
11	9	11	4.898	2.590	2.039	1.783	1.617	1.427	1.326	1.265	1.227	1.187
			.309	-.083	-.026	.007	.008	.003	.001	.002	.006	-.002
11	10	11	6.658	3.522	2.521	2.007	1.829	1.561	1.422	1.337	1.280	1.242
			.558	.289	.139	.089	.059	.032	.020	.013	.008	.008
12	1	2	.021	.061	.112	.166	.217	.310	.386	.449	.500	.544
			.007	.010	.012	.012	.012	.010	.008	.007	.006	.005
12	1	3	.030	.069	.129	.188	.245	.342	.420	.483	.534	.577
			.007	-.000	.000	.000	.001	.001	.001	.001	.001	.001
12	2	3	.063	.144	.220	.289	.349	.445	.519	.576	.621	.657
			.015	.024	.023	.021	.018	.014	.011	.009	.007	.006
12	1	4	.039	.079	.146	.209	.269	.369	.448	.511	.561	.602
			.007	-.009	-.007	-.007	-.006	-.004	-.003	-.002	-.001	-.001
12	2	4	.082	.157	.241	.316	.379	.478	.551	.607	.650	.685
			.015	.004	.005	.006	.006	.005	.004	.003	.003	.002
12	3	4	.131	.252	.338	.409	.467	.556	.621	.669	.707	.737
			.025	.042	.036	.030	.025	.017	.013	.010	.008	.006
12	1	5	.049	.088	.163	.229	.291	.394	.473	.534	.584	.624
			.007	-.018	-.014	-.014	-.012	-.009	-.006	-.005	-.004	-.003
12	2	5	.104	.171	.264	.342	.408	.508	.580	.634	.676	.709
			.015	-.012	-.008	-.005	-.003	-.001	-.000	.000	.000	.000
12	3	5	.165	.267	.360	.440	.500	.580	.652	.698	.734	.762
			.025	.013	.011	.013	.011	.008	.006	.005	.004	.003
12	4	5	.234	.386	.460	.532	.583	.658	.711	.749	.779	.802
			.038	.065	.050	.038	.030	.020	.015	.011	.009	.007
12	1	6	.061	.099	.181	.250	.313	.417	.496	.557	.605	.644
			.007	-.027	-.021	-.020	-.018	-.012	-.009	-.007	-.005	-.004
12	2	6	.129	.188	.291	.368	.436	.535	.605	.658	.700	.731
			.015	-.030	-.019	-.018	-.013	-.008	-.006	-.004	-.002	-.001
12	3	6	.204	.288	.388	.471	.533	.621	.683	.726	.757	.784
			.025	-.012	-.008	-.001	.000	.002	.002	.002	.000	.000
12	4	6	.289	.404	.493	.568	.619	.692	.741	.777	.804	.825
			.038	.024	.017	.020	.016	.012	.008	.005	.005	.003
12	5	6	.387	.554	.618	.663	.701	.756	.795	.823	.844	.861
			.053	.092	.067	.047	.036	.023	.016	.012	.009	.007
12	1	7	.075	.111	.200	.270	.335	.441	.517	.576	.623	.661
			.007	-.037	-.026	-.020	-.023	-.015	-.012	-.010	-.007	-.006
12	2	7	.158	.209	.314	.399	.464	.564	.635	.685	.720	.751
			.015	-.044	-.034	-.024	-.020	-.013	-.005	-.003	-.005	-.003
12	3	7	.250	.309	.426	.497	.562	.649	.705	.748	.783	.804
			.025	-.041	-.019	-.020	-.013	-.008	-.007	-.004	.000	-.001
12	4	7	.354	.433	.530	.604	.657	.726	.773	.805	.828	.849
			.038	-.009	-.004	.006	.006	.004	.005	.004	.002	.003
12	5	7	.472	.574	.641	.705	.739	.792	.827	.852	.871	.885
			.053	.036	.023	.029	.020	.014	.011	.009	.008	.006

TABLE 3

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VALUES OF M

N	I	J	1.0	1.5	2.0	2.5	3.0	4.0	5.0	6.0	7.0	8.0
12	6	7	.609	.762	.789	.805	.825	.856	.876	.892	.905	.915
12	1	8	.074	.126	.086	.056	.042	.026	.016	.011	.009	.007
12	1	8	.092	.125	.210	.295	.359	.464	.543	.600	.646	.682
12	2	8	.193	.224	.355	.424	.494	.593	.655	.704	.746	.772
12	3	8	.015	.070	.034	.039	.028	.016	.015	.011	.004	.005
12	3	8	.305	.366	.451	.545	.603	.683	.742	.780	.803	.829
12	4	8	.026	.060	.047	.022	.017	.011	.003	.001	.006	.001
12	4	8	.430	.458	.558	.629	.683	.754	.794	.828	.850	.870
12	5	8	.037	.055	.039	.027	.018	.008	.009	.004	.004	.001
12	5	8	.574	.617	.705	.745	.799	.834	.858	.876	.894	.889
12	6	8	.053	.006	.013	.005	.016	.012	.004	.000	.001	.015
12	6	8	.740	.790	.808	.854	.861	.885	.909	.922	.931	.956
12	7	8	.074	.052	.022	.034	.016	.008	.009	.006	.004	.021
12	7	8	.937	1.026	.989	.969	.964	.963	.966	.969	.972	.967
12	1	9	.101	.166	.106	.069	.051	.032	.023	.019	.015	.005
12	1	9	.113	.140	.245	.316	.383	.489	.562	.617	.662	.677
12	2	9	.007	.059	.038	.038	.033	.021	.017	.014	.011	.008
12	2	9	.237	.262	.372	.464	.527	.622	.689	.734	.764	.794
12	3	9	.015	.079	.063	.042	.036	.023	.012	.009	.010	.003
12	3	9	.373	.366	.506	.570	.630	.714	.761	.800	.832	.837
12	4	9	.025	.103	.050	.049	.037	.020	.018	.011	.003	.016
12	4	9	.528	.509	.655	.686	.754	.802	.848	.844	.875	.880
12	5	9	.039	.086	.012	.031	.001	.004	.008	.020	.006	.014
12	5	9	.701	.657	.792	.792	.777	.823	.859	.925	.925	.992
12	6	9	.053	.064	.081	.015	.056	.046	.033	.011	.004	.063
12	6	9	.903	.832	.883	.910	.984	.994	1.004	.965	.967	.921
12	7	9	.073	.022	.006	.015	.075	.068	.063	.015	.011	.039
12	7	9	1.142	1.068	1.034	1.007	.971	.964	.955	.974	.975	.994
12	8	9	.102	.072	.048	.025	.011	.020	.020	.013	.011	.005
12	8	9	1.437	1.367	1.223	1.155	1.121	1.080	1.060	1.044	1.035	1.032
12	1	10	.141	.212	.121	.080	.061	.030	.029	.018	.013	.013
12	1	10	.141	.161	.270	.348	.413	.518	.591	.644	.687	.720
12	2	10	.007	.071	.049	.042	.036	.023	.015	.011	.009	.007
12	2	10	.294	.283	.431	.500	.566	.661	.718	.758	.794	.807
12	3	10	.015	.115	.057	.056	.042	.023	.017	.014	.006	.013
12	3	10	.466	.420	.556	.623	.682	.751	.799	.828	.853	.901
12	4	10	.026	.129	.069	.057	.039	.028	.017	.015	.009	.021
12	4	10	.654	.568	.629	.743	.755	.827	.857	.935	.925	.905
12	5	10	.036	.128	.070	.044	.061	.027	.022	.037	.013	.016
12	5	10	.873	.703	.840	.841	.941	.976	.995	.881	.944	.922
12	6	10	.055	.140	.027	.046	.039	.054	.060	.063	.007	.035
12	6	10	1.121	.913	.987	.862	.852	.860	.871	.925	.089	.089
12	7	10	.073	.085	.000	.070	.219	.131	.124	.016	.063	.000
12	7	10	1.416	1.314	1.010	1.152	1.128	1.154	1.148	1.000	1.001	1.060
12	8	10	.102	.023	.088	.073	.066	.110	.116	.064	.069	.041
12	8	10	1.777	1.413	1.314	1.191	1.174	1.083	1.054	1.044	1.048	1.038
12	9	10	.142	.063	.074	.010	.020	.020	.026	.021	.008	.011
12	9	10	2.240	1.837	1.530	1.384	1.289	1.205	1.155	1.127	1.009	1.084
			.204	.274	.146	.004	.056	.038	.026	.020	.009	.006

VALUES OF W

	W	1	J	1.0	1.5	2.0	2.5	3.0	4.0	5.0	6.0	7.0	8.0
12	1	11	.187	.309	.384	.449	.552	.622	.672	.712	.742		
12	2	11	-.090	-.056	-.051	-.043	-.026	-.019	-.015	-.011	-.009		
12	3	11	.327	.475	.554	.613	.700	.754	.794	.820	.847		
12	4	11	-.141	-.084	-.066	-.053	-.032	-.022	-.014	-.011	-.003		
12	5	11	.481	.610	.688	.738	.808	.847	.880	.897	.877		
12	6	11	-.177	-.098	-.071	-.052	-.025	-.015	-.002	-.006	-.031		
12	7	11	.625	.781	.798	.849	.889	.923	.871	.929	.976		
12	8	11	-.209	-.077	-.079	-.044	-.026	-.006	-.068	-.018	.022		
12	9	11	.812	.900	.913	.907	.916	.920	1.053	.948	.960		
12	10	11	-.198	-.084	-.074	-.080	-.070	-.066	.064	-.040	-.029		
12	11	11	1.014	.940	1.114	1.082	1.157	1.159	1.019	1.126	1.084		
12	12	11	-.181	-.180	.014	.004	.104	.118	-.012	.098	.060		
12	13	11	1.222	1.218	1.060	1.145	.058	.044	1.014	.077	.006		
12	14	11	-.172	.040	-.123	-.017	-.158	-.145	-.059	-.083	-.056		
12	15	11	1.546	1.231	1.364	1.223	1.278	1.234	1.153	1.015	1.086		
12	16	11	-.070	-.087	.048	-.030	.097	.093	.037	.017	.001		
12	17	11	1.030	1.021	1.465	1.401	1.224	1.170	1.156	1.164	1.125		
12	18	11	.058	.037	.027	.051	-.014	-.002	-.002	.010	.011		
12	19	11	2.516	1.046	1.680	1.520	1.363	1.275	1.220	1.184	1.159		
12	20	11	.315	.164	.100	.061	.038	.026	.017	.012	.010		
12	21	11	.264	.369	.444	.508	.604	.670	.716	.751	.778		
12	22	11	-.122	-.072	-.062	-.050	-.020	-.021	-.016	-.012	-.009		
12	23	11	.556	.573	.638	.693	.760	.813	.842	.864	.880		
12	24	11	.015	-.104	-.084	-.063	-.035	-.024	-.018	-.013	-.011		
12	25	11	.876	.741	.787	.824	.874	.904	.918	.935	.950		
12	26	11	-.259	-.127	-.096	-.072	-.040	-.026	-.021	-.012	-.002		
12	27	11	.774	.896	.922	.944	.960	.978	1.005	.980	.983		
12	28	11	-.303	-.143	-.100	-.070	-.036	-.024	.003	-.019	-.015		
12	29	11	.074	1.037	1.054	1.053	1.050	1.058	.999	1.059	1.041		
12	30	11	-.331	-.166	-.096	-.067	-.025	-.006	-.053	.014	.002		
12	31	11	1.184	1.256	1.148	1.159	1.092	1.058	1.106	1.023	1.041		
12	32	11	-.361	-.111	-.127	-.061	-.075	-.064	.006	-.061	-.041		
12	33	11	1.440	1.348	1.263	1.268	1.270	1.216	1.135	1.138	1.111		
12	34	11	-.361	-.186	-.054	-.071	.042	.040	-.007	.018	.006		
12	35	11	1.790	1.601	1.642	1.306	1.214	1.154	1.075	1.053	1.034		
12	36	11	-.280	-.116	-.089	-.025	-.082	-.055	-.012	-.003	-.003		
12	37	11	.310	1.958	1.031	1.511	1.402	1.312	1.236	1.184	1.177		
12	38	11	2.769	-.088	-.042	-.020	.003	.025	.003	-.011	.009		
12	39	11	5.201	2.122	1.853	1.664	1.454	1.365	1.284	1.246	1.126		
12	40	11	.317	-.023	.014	.009	-.001	-.001	.003	.009	-.008		
12	41	11	3.698	2.617	2.141	1.874	1.592	1.445	1.354	1.293	1.255		
12	42	11	.565	.148	.092	.063	.034	.021	.013	.006	.009		

TABLE 3