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AN ABSTRACT OF THE THESIS OF Russell James Wayland for the Master of Science in Nathematics presented May 20, 1970.

Title: Distribution of the Sum of Independent Unity-Truncated Logarithmic Series Variables.

APPROVED BY MEMBERS OF THE THESIS COMMITTEE:

Dr. Jagdish C. Ahuja, Chairman	
Dr. Robert W. Rempfer	
Dr. Eugene A. Enneking	

Let X_1, X_2, \ldots, X_n be n independent and identically distributed random variables having the unity-truncated logarithmic series distribution with probability function given by

$$f(x; \Theta) = \frac{\alpha \Theta^{X}}{x}$$
 $x \in T$

where $\alpha = [-\log(1-\theta) - \theta]^{-1}$, $0 < \theta < 1$, and $T = \{2, 3, ..., \infty\}$. Define their sum as $Z = X_1 + X_2 + ... + X_n$.

We derive here the distribution of Z, denoted by p(z;n,0), using the inversion formula for characteristic

functions, in an explicit form in terms of a linear combination of Stirling numbers of the first kind. A recurrence relation for the probability function $p(z;n,\theta)$ is obtained and is utilized to provide a short table of $p(z;n,\theta)$ for certain values of n and 0. Furthermore, some properties of $p(z;n,\theta)$ are investigated following Patil and Wani [Sankhyā, Series A, 27, (1965), 271-280].

DISTRIBUTION OF THE SUM OF INDEPENDENT UNITY-TRUNCATED LOGARITHMIC SERIES VARIABLES

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RUSSELL JAMES WAYLAND

A thesis submitted in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE in MATHEMATICS

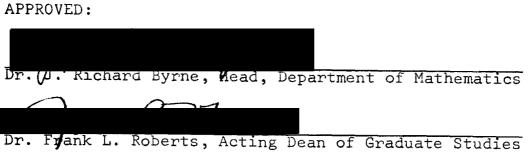
Portland State University 1970

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TO THE OFFICE OF GRADUATE STUDIES:

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May 21, 1970

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CHAPTER I

INTRODUCTION

Let X be a random variable having the logarithmic series distribution

$$g(x;\theta) = \frac{\left[-\log(1-\theta)\right]^{-1} \theta^{x}}{x} \qquad x \in I$$

where $0 < \theta < 1$, and I is the set of positive integers. Then, the probability function of the unity-truncated logarithmic series distribution is given by

$$f(x;\theta) = \frac{\alpha \theta^{x}}{x}$$
 $x \in T$

where $\alpha = [-\log(1-\theta) - \theta]^{-1}$, $0 < \theta < 1$, and $T = \{2, 3, ..., \infty\}$.

The distribution for the sum of n independent random variables having the logarithmic series distribution $g(x;\theta)$ has been obtained by Patil and Wani [4, p. 278] which they call the first type Stirling distribution. The purpose of this thesis is to derive the distribution for their sum when the random variables have the unitytruncated logarithmic series distribution defined by $f(x;\theta)$ above.

To describe briefly the organization of the paper

we first introduce in Chapter II a few definitions and preliminaries which appear in the paper at one place or another. Chapter III contains the derivation of the distribution for the sum, denoted by $p(z;n,\theta)$, using the inversion formula for characteristic functions. Here, $p(z;n,\theta)$ is obtained in an explicit form in terms of a linear combination of Stirling numbers of the first kind. In Chapter IV, certain properties of the probability function $p(z;n,\theta)$ are investigated. In particular, we obtain two recurrence relations for $p(z;n,\theta)$, one of which is used to generate a short table for the values of $p(z;n,\theta)$ in Chapter V.

CHAPTER II

DEFINITIONS AND NOTATION

In order to allow derivations and proofs to evolve with as little interruption as possible, we state the following definitions:

<u>Definition 1</u>: The Stirling numbers of the first kind S_z^n are defined by Jordan [3, p. 143] as

(1)
$$\mathbf{x}^{(z)} = \Sigma_{n=1}^{z} S_{z}^{n} \mathbf{x}^{n}$$

where $x^{(z)} = x(x-1)(x-2)...(x-z+1)$ is the factorial power function, and $S_z^0 = 0$, $S_1^1 = 1$, and $S_z^n = 0$ for n > z. Since the numbers S_z^n have the same sign as $(-1)^{z-n}$, we may write $|S_z^n| = (-1)^{z-n} S_z^n$.

The Stirling numbers of the first kind have been used by Jordan [3, p. 184] to define the numbers C(m,s) as follows:

<u>Definition 2</u>: The numbers C(m,s) are given by (2) $C(m,s) = \sum_{k=m+1}^{2m-s} (-1)^{k+s} {\binom{2m-s}{k}} s_k^{k-m}$ where C(m,s) = 0 for m < s+1, C(1,0) = -1, $C(m,0) = (-1)^m \cdot 1 \cdot 3 \cdot 5 \dots (2m-1)$, and $C(m,m-1) = (-1)^m m!$. These numbers satisfy the recurrence relation

(3)
$$C(m+1,s) = -(2m-s+1)[C(m,s) + C(m,s-1)].$$

It can be readily seen with the help of (3) and (2) that the sign of C(m,s) is identical with that of $(-1)^m$. Therefore, $|C(m,s)| = (-1)^m C(m,s)$. Subsequently, a corresponding definition for the absolute value of the numbers C(m,s) would be

(4)
$$|C(m,s)| = \sum_{k=m+1}^{2m-s} (-1)^{k+s} {\binom{2m-s}{k}} |S_k^{k-m}|$$

and the recurrence relation (3) becomes

(5)
$$|C(m+1,s)| = (2m-s+1)[|C(m,s)| + |C(m,s-1)|].$$

A probability distribution which arises from the sum of n independent random variables, each having the logarithmic series distribution with the same parameter 0, has been defined by Patil [5, p. 37] in terms of the numbers $|S_{\tau}^{n}|$.

<u>Definition 3</u>: The random variable Z is said to have the first type Stirling distribution with parameters n and θ if its probability function is given by

(6)
$$f(z;n,\theta) = \frac{\beta^n n! |S_z^n| \theta^z}{z!}$$

for z = n, n+1, n+2,..., n = 1, 2, 3, ..., where

 $\beta = [-\log(1-0)]^{-1}$ and 0 < 0 < 1.

The characteristic function of the probability function $f(z;n,\theta)$ is easily found to be

(7)
$$\psi_{\tau}(t) = \beta^{n} [-\log(1 - \Theta e^{it})]^{n}$$

Some of the properties, which we will examine, deal with a large class of probability distributions which is defined by G.P. Patil [5, p. 2] in the following manner.

Definition 4: A discrete random variable X is said to have a generalized power series distribution with the parameter 0 and range T if its probability function is given by

(8)
$$p(x;\theta) = \frac{a(x)\theta^{x}}{g(\theta)}$$
 $x \in T$

where a(x) is independent of θ and is positive for $x \in T$. T is a countable subset of the set of non-negative integers (reals). The series function $g(\theta) = \Sigma a(x) \theta^{X}$, which will be summed over the entire range T, will be positive, finite, and differentiable for $\{\theta \mid 0 < \theta < R\}$ where R is the radius of convergence for the series function.

CHAPTER III

DISTRIBUTION OF THE SUM

Let X_1, X_2, \ldots, X_n be n independent and identically distributed random variables having the unity-truncated logarithmic series distribution with probability function given by

(9)
$$f(x;\theta) = \frac{\alpha \theta^{X}}{x}$$
 $x = 2,3,...$

where $\alpha = [-\log(1-0) - 0]^{-1}$ and 0 < 0 < 1.

1

The characteristic function of the random variable X_i is obtained as

(10)

$$\psi_{\mathbf{x}_{j}}(t) = \sum_{\mathbf{x}_{j}=2}^{\infty} e^{it\mathbf{x}_{j}} f(\mathbf{x}_{j}; \theta)$$

$$= \sum_{\mathbf{x}_{j}=2}^{\infty} \frac{\alpha(\theta e^{it})^{\mathbf{x}_{j}}}{\mathbf{x}_{j}}$$

$$= \alpha[-\log(1-\theta e^{it}) - \theta e^{it}]$$

If we now let $Z = X_1 + X_2 + \ldots + X_n$, then, since the X_j 's are independent, the characteristic function of Z is given by the product of characteristic functions of

the X.'s. Hence,

(11)
$$\psi_{z}(t) = \prod_{j=1}^{n} \psi_{x_{j}}(t)$$
$$= \alpha^{n} [-\log(1 - \Theta e^{it}) - \Theta e^{it}]^{n}.$$

We may now find the probability function of Z by using the inversion formula for characteristic functions given by Fisz [2, p. 119]. Since it will depend on two parameters, n and 0, we shall denote it by p(z;n,0). Thus we have

(12)
$$p(z;n,\theta) = \frac{1}{2\pi} \int_{-\pi}^{\pi} e^{-itz} \psi_{z}(t) dt$$

$$= \frac{\alpha^{n}}{2\pi} \int_{-\pi}^{\pi} e^{-itz} \left[-\log(1-\theta e^{it}) - \theta e^{it}\right]^{n} dt$$

which, after taking the binomial expansion of the second factor under the integral sign, becomes

(13)
$$p(z;n,\theta) = \frac{\alpha^{n}}{2\pi} \int_{-\pi}^{\pi} e^{-itz}$$
$$\cdot \sum_{k=0}^{n} {n \choose k} (-\theta e^{it})^{k} [-\log(1-\theta e^{it})]^{n-k} dt$$
$$= \frac{\alpha^{n}}{2\pi} \sum_{k=0}^{n} {n \choose k} (-\theta)^{k}$$
$$\cdot \int_{-\pi}^{\pi} e^{-it(z-k)} [-\log(1-\theta e^{it})]^{n-k} dt .$$

To evaluate the integral in (13), we observe from (7) that the quantity $\beta^{n-k}[-\log(1-\Theta e^{it})]^{n-k}$ is the characteristic function of the first type Stirling distribution with parameters n-k and 0. So the inversion formula for characteristic functions gives us

(14)
$$\frac{1}{2\pi} \int_{\pi}^{\pi} e^{-it(z-k)} \left[-\log(1-\Theta e^{it})\right]^{n-k} dt =$$

$$\frac{(n-k)! |S_{z-k}^{n-k}| \theta^{z-k}}{(z-k)!}$$

Substituting for the integral from (14) into (13), we obtain the probability function of Z in the form

(15)
$$p(z;n,\Theta) = \frac{\alpha^{n} \Sigma_{k=0}^{n} {\binom{n}{k}} (-\Theta)^{k} (n-k)! |S_{z-k}^{n-k}| \Theta^{z-k}}{(z-k)!}$$

$$= \frac{\alpha^{n} n! \Theta^{z}}{z!} \Sigma_{k=0}^{n} (-1)^{k} {\binom{z}{k}} |S_{z-k}^{n-k}|$$

But, using (4), we find that

$$|C(z-n, z-2n)| = \sum_{j=z-n+1}^{z} (-1)^{j+z-2n} {\binom{z}{j}} |s_{j}^{j-z+n}|$$

which, by letting k = z-j, becomes

(16) $|C(z-n, z-2n)| = \Sigma_{k=0}^{n-1} (-1)^{k} {\binom{z}{k}} |S_{z-k}^{n-k}|$ = $\Sigma_{k=0}^{n} (-1)^{k} {\binom{z}{k}} |S_{z-k}^{n-k}|$ since $|S_{z-n}^0| = 0$.

Hence, replacing the summation in (15) by (16), we have the following:

<u>Theorem 1</u>: Let X_1, X_2, \ldots, X_n be n independent and identically distributed random variables having the unity-truncated logarithmic series distribution defined by (9), and let $Z = X_1 + X_2 + \ldots + X_n$. Then the distribution of Z is given by

(17)
$$p(z;n,\theta) = \frac{\alpha^n n!}{z!} |C(z-n, z-2n)| \theta^z$$

for z = 2n, 2n+1, ..., ∞ , where $\alpha = [-\log(1-\theta) - \theta]^{-1}$ and $0 < \theta < 1$.

CHAPTER IV

SOME PROPERTIES OF p(z;n,0)

Some of the more important aspects of $p(z;n,\theta)$ are examined here as properties and theorems.

<u>Property 1</u>: The first three moments about the mean for the probability function $p(z;n,\theta)$ with parameters n and θ are

$$\mu_{1} = \frac{n\alpha\theta^{2}}{1-\theta}$$

$$\mu_{2} = \frac{n\alpha\theta^{2}}{(1-\theta)^{2}} \begin{bmatrix} 2 - \theta - \alpha\theta^{2} \end{bmatrix}$$

$$\mu_{3} = \frac{n\alpha\theta^{2}}{(1-\theta)^{3}} \begin{bmatrix} 4 - 3\theta + \theta^{2} - 6\alpha\theta^{2} + 3\alpha\theta^{3} + 2\alpha^{2}\theta^{4} \end{bmatrix}.$$

Proof: Using the characteristic function for the unity-truncated logarithmic series distribution given by (10), we immediately have

$$\mu_{1}^{2} = \mu = (-i) \frac{d\psi_{x}(t)}{dt} \bigg|_{t=0}^{2} = \frac{\alpha \Theta^{2}}{1-\Theta}$$
$$\mu_{2}^{2} = (-i)^{2} \frac{d^{2}\psi_{x}(t)}{dt^{2}} \bigg|_{t=0}^{2} = \frac{\alpha \Theta^{2}}{(1-\Theta)^{2}} [2 - \Theta]$$

$$\mu_{3} = (-i)^{3} \frac{d^{3}\psi_{x}(t)}{dt^{3}} \bigg|_{t=0} = \frac{\alpha \Theta^{2}}{(1-\Theta)^{3}} [4 - 3\Theta + \Theta^{2}].$$

These give

$$\mu_{2} = \mu_{2}^{2} - \mu^{2}$$

$$= \frac{\alpha \Theta}{(1 - \Theta)^{2}} [2 - \Theta - \alpha \Theta^{2}]$$

$$\mu_{3} = \mu_{3}^{2} - 3\mu_{2}^{2}\mu + 2\mu^{3}$$

$$= \frac{\alpha \Theta^{2}}{(1 - \Theta)^{3}} [4 - 3\Theta + \Theta^{2} - 6\alpha \Theta^{2} + 3\alpha \Theta^{3} + 2\alpha^{2}\Theta^{4}].$$

Since Z is the sum of n independent random variables, its first three moments about the mean may be obtained, following Burington and May [1, p. 37], as the sum of the moments about the mean of the X_j's and this completes the proof.

<u>Property 2</u>: The probability function p(z;n,0)with parameters n and 0 satisfies the recurrence relation

(18)
$$p(z+1;n,0) = \frac{\Theta |C(z-n+1,z-2n+1)|}{(z+1) |C(z-n,z-2n)|} p(z;n,0)$$

Proof: Follows easily by considering the ratio of $p(z+1;n,\theta)$ and $p(z;n,\theta)$.

Since the numbers C(m,s) grow too big too soon

with increase in their arguments, the recurrence relation (18) is not of much use. The next property provides a recurrence relation independent of numbers C(m,s) and useful for tabulation purposes.

Property 3: The probability function p(z;n,0) with parameters n and 0 enjoys the recurrence relation

(19)
$$p(z+1;n,\theta) = \frac{\theta}{z+1} [\alpha n \theta p(z-1;n-1,\theta) + z p(z;n,\theta)]$$

where $p(z;n,\theta) = \frac{\alpha \theta^2}{z}$ for n = 1 and $p(z;n,\theta) = \frac{\alpha^n \theta^{2n}}{2^n}$

for z = 2n.

Proof: From (17), we have

$$p(z+1;n,\theta) = \frac{\alpha^{n}n!}{(z+1)!} |C(z-n+1, z-2n+1)| \theta^{z+1}$$

which, using (5), may be written as

(20)
$$p(z+1;n,\Theta) = \frac{\alpha^n n!}{(z+1)!} [z|C(z-n,z-2n+1)]$$

+ $z|C(z-n, z-2n)|]\Theta^{z+1}$

But
$$p(z-1;n-1,\Theta) = \frac{\alpha^{n-1} (n-1)!}{(z-1)!} |C(z-n,z-2n+1)|\Theta^{z-1}$$

and $p(z;n,\theta) = \frac{\alpha^n n!}{z!} |C(z-n,z-2n)|\theta^2$. Hence, we obtain (20) as

$$p(z+1;n,\theta) = \frac{\theta}{z+1} [\alpha n \theta p(z-1;n-1,\theta) + z p(z;n,\theta)].$$

Also, for n = 1, we get

$$p(z;1,\theta) = \frac{\alpha}{z!} |C(z-1,z-2)|\theta^{z}$$
$$= \frac{\alpha \theta^{z}}{z},$$

and for z = 2n, we have

$$p(2n;n,\theta) = \frac{\alpha^{n} n!}{(2n)!} |C(n,0)| \theta^{2n}$$
$$= \frac{\alpha^{n} n!}{(2n)!} \cdot 1 \cdot 3 \cdot 5 \dots (2n-1) \theta^{2n}$$
$$= \frac{\alpha^{n} \theta^{2n}}{2^{n}},$$

which completes the proof.

<u>Theorem 2</u>: Let Z_1, Z_2, \ldots, Z_k be k independent random variables having the probability function

$$\mathbf{p}(\mathbf{z}_{j};n_{j},\Theta) = \frac{\alpha^{n_{j}} n_{j}!}{z_{j}!} |C(z_{j}-n_{j},z_{j}-2n_{j})|\Theta^{z_{j}}$$

where, for $j = 1, 2, ..., k, z_j = 2n_j, 2n_j+1, ..., \infty$, = $[-\log(1-0) - 0]^{-1}$, and 0 < 0 < 1. Let $Y = Z_1 + Z_2 + C_2$... + Z_k , then the distribution of Y is given by p(y; $\Sigma_{j=1}^k, \Theta$).

Proof: The characteristic function of Z_j , using (11), is

$$\psi_{z_i}(t) = \alpha^{n_i}[-\log(1-\Theta e^{it}) - \Theta e^{it}]^{n_i}.$$

Since the Z_j's are assumed to be independent, the characteristic function of Y is obtained as

$$\psi_{y}(t) = \prod_{j=1}^{k} \psi_{z_{j}}(t)$$

$$\sum_{j=1}^{k} \sum_{j=1}^{k} \sum_$$

which, by the uniqueness theorem for characteristic functions, establishes the proof.

<u>Theorem 3</u>: Let X and Y be two independent random variables having the distribution $p(x;n,\theta)$ and $p(y;m,\lambda)$ respectively. Let Z = X + Y and $\beta = \theta/\lambda$. Then the conditional distribution of X given Z = z is a generalized power series distribution with the series function

(21)
$$g(\beta) = \sum_{x=2n}^{z-2m} h(x,z) \beta^{x}$$

where

$$h(x,z) = \frac{|C(x-n,x-2n)| \cdot |C(z-x-m,z-x-2m)|}{x!} \cdot \frac{|C(z-x-m,z-x-2m)|}{(z-x)!}$$

Proof: Using the definition of conditional distribution, we have

(22)
$$P(X=x | X+Y=z) =$$

$$\frac{\alpha^{n}n! |C(x-n,x-2n)|\Theta^{x}}{x!} \cdot \frac{\alpha^{m}m! |C(z-x-m,z-x-2m)|\lambda^{z-x}}{(z-x)!}$$

$$\sum_{x=2n}^{z-2m} \frac{\alpha^{n}n! |C(x-n,x-2n)|\Theta^{x}}{x!} \cdot \frac{\alpha^{m}m! |C(z-x-m,z-x-2m)|\lambda^{z-x}}{(z-x)!}$$

Since $\Theta = \beta \lambda$, we may express (22) as

$$P(X=x|X+Y=z) = \frac{\frac{|C(x-n,x-2n)|}{x!} \cdot \frac{|C(z-x-m,z-x-2m)|}{(z-x)!}}{\sum_{x=2n}^{z-2m} \frac{|C(x-n,x-2n)|}{x!} \cdot \frac{|C(z-x-m,z-x-2m)|}{(z-x)!}}{x!} \beta^{x}$$

which can be easily recognized as the generalized power series distribution with the series function given by (21).

<u>Theorem 4</u>: Let X and Y be two independent discrete random variables with their ranges containing 2n and 2m respectively. Let X + Y = Z. If the conditional distribution of X given Z = z is given to be a generalized power series distribution with the series function (21) for $0 < \beta < \infty$ for every z > 2n + 2m, then each X and Y has the distribution $p(x;n,\theta)$ and $p(y;m,\lambda)$ respectively so that $\theta = \beta\lambda$.

Proof: Let f(x) and g(y) be the probability functions of X and Y respectively. We then have

(23)
$$\frac{f(x) g(z-x)}{\sum_{x=2n}^{z-2m} f(x) g(z-x)}$$

$$\frac{\frac{\left|C(x-n,x-2n)\right|}{x!} \cdot \frac{\left|C(z-x-m,z-x-2m)\right|}{(z-x)!}}{\sum_{x=2n}^{z-2m} \frac{\left|C(x-n,x-2n)\right|}{x!} \cdot \frac{\left|C(z-x-m,z-x-2m)\right|}{(z-x)!} \beta^{x}}{(z-x)!}$$

Also,

(24)
$$\frac{f(x-1) g(z-x+1)}{\sum_{x=2n}^{z-2m} f(x) g(z-x)} =$$

$$\frac{\frac{|C(x-n-1,x-2n-1)|}{(x-1)!} \cdot \frac{|C(z-x-m+1,z-x-2m+1)|}{(z-x+1)!} \beta^{x}}{\sum_{x=2n}^{z-2m} \frac{|C(x-n,x-2n)|}{x!} \cdot \frac{|C(z-x-m,z-x-2m)|}{(z-x)!} \beta^{x}}{(z-x)!}$$

Dividing (23) by (24) gives

(25)
$$\frac{f(x) g(z-x)}{f(x-1) g(z-x+1)}$$

$$\frac{(z-x+1)}{x} \cdot \frac{|C(x-n,x-2n)||C(z-x-m,z-x-2m)|}{|C(x-n-1,x-2n-1)||C(z-x-m+1,z-x-2m+1)|} \beta$$

Taking z - x = 2m in (25), we get

$$\frac{f(x) g(2m)}{f(x-1) g(2m+1)} = \frac{(2m+1)|C(x-n,x-2n)||C(m,0)|}{x|C(x-n-1,x-2n-1)||C(m+1,1)|} \beta$$

which may be written as

$$\frac{f(x)}{f(x-1)} = \frac{(x-1)! |C(x-n, x-2n)|}{x! |C(x-n-1, x-2n-1)|} \Theta$$

where
$$\Theta = \frac{(2m+1) g(2m+1) |C(m,0)|}{g(2m) |C(m+1,1)|} \beta$$

This gives

$$f(x) = k \frac{|C(x-n, x-2n)|}{x!} \Theta^{x}$$

where k is a constant. Since f(x) > 0 and $\sum_{x=2n}^{\infty} f(x) = 1$, we obtain k = $\alpha^n n!$. Hence, $f(x) = p(x;n,\theta)$. A similar approach would show that $g(y) = p(y;m,\lambda)$.

CHAPTER V

TABULATION OF $p(z;n,\Theta)$

In this concluding chapter, a short table for the values of $p(z;n,\theta)$ is presented. The computations were obtained using the Oregon State University terminal and are accurate to four decimal places. In order to construct this table, the recurrence relation (19) was used along with the corresponding initial values given in Property 3. Although the program was originally completed for n = 1(1)25, the table here is furnished only for n = 1(1)15 and $\theta = 0.1(0.1)0.9$. This is primarily due to the fact that, for n = 16(1)25 and θ large, the values of $p(z;n,\theta)$ do not approach zero quickly for large z, and hence the table would be quite extensive.

TABLE

VALUES OF p(z;n, 0)

TH	ETA	(0)

		r			THET	<u>A (0)</u>				
	z	.1	. 2	.3	.4	.5	.6	.7	. 8	.9
l l l l l l l l l l l l l l l l l l l	2345678901234567890123456789012345678901234567890123	.1 .9327 .0622 .0047 .0004 .0000 .000	.2 .8642 .1152 .0173 .0028 .0005 .0000 .000	.3 .7940 .1588 .0357 .0086 .0021 .0000 .000	.4 .7219 .1925 .0577 .0185 .0062 .0021 .0007 .0003 .0001 .00000 .0000 .0000 .00000 .00000 .000000	.5 .6472 .2157 .0809 .0324 .0135 .0058 .0025 .0011 .0005 .0002 .0000 .000	.6 .5691 .2276 .1024 .0492 .0246 .0126 .0066 .0035 .0019 .0010 .0006 .0003 .0002 .0001 .0000	.7 .4861 .2269 .1191 .0667 .0389 .0233 .0143 .0089 .0056 .0036 .0023 .0015 .0010 .0006 .0004 .0001 .0001 .0001 .0001 .0001 .0000 .000	.8 .3953 .2108 .1265 .0810 .0540 .0540 .0540 .0540 .0540 .0540 .0052 .0039 .0029 .0022 .0016 .0071 .0052 .0039 .0029 .0022 .0016 .0012 .0009 .0007 .0005 .0004 .0003 .0002 .0001 .0001 .0001 .0001 .0001 .0001 .00000 .0000 .0000 .0000 .0000 .00000 .00000 .000000	.9 .2888 .1733 .1169 .0842 .0632 .0487 .0384 .0307 .0249 .0203 .0168 .0139 .0117 .0098 .0083 .0070 .0059 .0051 .0043 .0037 .0024 .0027 .0024 .0027 .0024 .0027 .0024 .0027 .0024 .0015 .0013 .0012 .0010 .0015 .0013 .0012 .0010 .0005 .0015 .0013 .0012 .0010 .0005 .0001 .0005 .0005 .0001 .0005 .0001 .0005 .00

THETA (θ)

				THETA	A (0)				
n z	.1	. 2	.3	.4	.5	.6	.7	. 8	.9
1 47 48	.0000 .0000	.0000	.0000 .0000	.0000	.0000 .0000	.0000	.0000	.0000	.0001 .0001
2 4 5 6 7 8 9 10 112 13 14 15 6 7 8 9 10 112 13 14 15 6 7 8 9 20 12 23 24 25 6 7 8 9 20 12 23 24 25 6 7 8 9 20 21 22 34 25 6 7 8 9 30 31 23 34 35 6 7 8 9 40 11 22 23 24 5 6 7 8 9 20 21 22 34 25 6 7 8 9 20 21 22 34 25 6 7 8 9 30 31 23 34 35 6 7 8 9 40 14 24 24 24 25 6 7 8 9 30 31 23 34 35 6 7 8 9 7 8 9 9 7 20 21 22 34 25 6 7 8 9 30 31 23 34 5 6 7 8 9 40 14 24 24 24 25 6 7 8 9 30 31 23 34 5 6 7 8 9 40 14 24 24 24 25 26 7 8 9 30 21 24 25 26 7 8 9 30 21 24 25 26 7 8 9 30 20 20 20 20 20 20 20 20 20 20 20 20 20	.8700 .1160 .0126 .0013 .0001 .0000	.7468 .1991 .0431 .0088 .0017 .0003 .0000		.5211 .2779 .1204 .0489 .0193 .0076 .0029 .0011 .0004 .0002 .0001 .00000 .0000 .0000 .0000 .0000 .00000 .00000 .000000	.4188 .2792 .1512 .0768 .0380 .0185 .0090 .0044 .0021 .0010 .0002 .0001 .0000	.3239 .2591 .1684 .1026 .0609 .0357 .0208 .0121 .0070 .0041 .0024 .0014 .0024 .0001 .0001 .0000 .	2363 2206 1673 1189 0823 0562 0382 0259 0175 0179 0080 0054 0037 0025 0017 0025 0017 0025 0017 0002 0001	.1563 .1667 .1445 .1174 .0928 .0725 .0563 .0436 .0337 .0261 .0202 .0156 .0121 .0094 .0073 .0056 .0121 .0094 .0073 .0056 .0044 .0034 .0027 .0021 .0016 .0013 .0010 .0003 .0005 .0004 .0005 .0004 .0005 .0001 .0001 .0001 .0001 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000	.0834 .1001 .0976 .0891 .0793 .0697 .0609 .0530 .0462 .0402 .0349 .0304 .0265 .0231 .0202 .0176 .0154 .0135 .0118 .0104 .0091 .0080 .0070 .0054 .0054 .0054 .0054 .0054 .0055 .0022 .0025 .0022 .0025 .0022 .0025 .0022 .0011 .0010 .0080 .0007 .0007 .0005

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THETA (θ)

				THET	4 (0)				
n z	.1	. 2	. 3	. 4	. 5	.6	.7	• 8	.9
2 48 49 50 51 52 53 54 55 56 57 58 59 60 61	.0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000	.0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000	.0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000	.0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000		.0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000	.0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000	.0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000	.0005 .0004 .0003 .0003 .0002 .0002 .0002 .0002 .0002 .0002 .0001 .0001 .0001
3 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 4 35 36 37	.8115 .1623 .0230 .0028 .0003 .0000	.6454 .2581 .0731 .0041 .0009 .0002 .0000 .	.5006 .3003 .1276 .0473 .0163 .0054 .0017 .0005 .0002 .0001 .0000	.3761 .3009 .1705 .1185 .0387 .0170 .0073 .0031 .0013 .0005 .0002 .0001 .00000 .00000 .00000 .000000	.2711 .2711 .1920 .1302 .0680 .0375 .0201 .0106 .0055 .0028 .0014 .0007 .0004 .0007 .0004 .0007 .0004 .0007 .0004 .00000 .00000 .00000 .000000	.1843 .2212 .1880 .1392 .0959 .0634 .0408 .0258 .0161 .0099 .0061 .0037 .0023 .0014 .0008 .0005 .0003 .0001 .0001 .0001 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000	<pre>.1149 .1608 .1505 .1378 .1108 .0854 .0641 .0472 .0343 .0247 .0177 .0126 .0089 .0063 .0044 .0031 .0022 .0015 .0011 .0007 .0005 .0004 .0003 .0001 .0001 .0001 .0000 .0000 .0000</pre>	.0618 .0989 .1120 .1106 .1017 .0896 .0768 .0647 .0538 .0443 .0362 .0294 .0238 .0192 .0155 .0124 .0238 .0192 .0155 .0124 .0100 .0080 .0064 .0051 .0026 .0021 .0016 .0013 .0010 .0008 .0007 .0005 .0004 .0005	.0241 .0433 .0553 .0614 .0634 .0629 .0607 .0575 .0537 .0498 .0458 .0498 .0458 .0419 .0382 .0314 .0283 .0256 .0230 .0207 .0186 .0167 .0150 .0167 .0150 .0134 .0121 .0108 .0097 .0078 .0062 .0056 .0050

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THETA (θ)

•			••••••••••••••••••••••••••••••••••••••		THET	<u> </u>				
n 	Z	.1	. 2	.3	. 4	.5	.6	.7	. 8	.9
3	38 39 41 42 44 45 55 55 55 55 55 56 66 66 66 66 66 77 73								.0003 .0002 .0001 .0001 .0001 .0001 .0001 .0000	.0044 .0040 .0036 .0032 .0028 .0025 .0023 .0020 .0018 .0016 .0015 .0013 .0012 .0010 .0009 .0008 .0007 .0007 .0007 .0007 .0007 .0007 .0007 .0005 .0005 .0005 .0005 .0004 .0003 .0003 .0003 .0003 .0002 .0002 .0002 .0002 .0002 .0002 .0001 .0001 .0001 .0001 .0001 .0001 .0001
4	8 9 10 11 12 13 14 15 16 17	.7569 .2018 .0353 .0051 .0007 .0001 .0000 .0000 .0000 .0000	.5577 .2074 .1041 .0303 .0079 .0020 .0005 .0001 .0000 .0000	.3975 .3180 .1669 .0728 .0286 .0106 .0037 .0013 .0001	.2715 .2896 .2027 .1179 .0618 .0304 .0143 .0065 .0029 .0013	.1754 .2339 .2047 .1488 .0976 .0599 .0353 .0201 .0112 .0061	.1049 .1678 .1762 .1537 .1210 .0892 .0630 .0431 .0288 .0189	.0559 .1043 .1277 .1300 .1193 .1027 .0845 .0675 .0526 .0403	.0244 .0521 .0730 .0849 .0890 .0875 .0824 .0751 .0670 .0587	.0070 .0167 .0263 .0344 .0406 .0449 .0475 .0488 .0489 .0482

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ΤΗΕΤΑ (θ)

~			<u>^</u>	~	THET					
n 	Z	.1	. 2	. 3	. 4	.5	.6	.7	. 8	.9
	18	.0000	.0000	.0000	.0006	.0033	.0123	.0305	.0507	.0468
	19 20 .	.0000	.0000	.0000	.0002	.0018	.0079	.0228	.0433	.0450
	20 21	.0000	.0000	.0000	.0001	.0009	.0050	.0169	.0367	.0429
	22	.0000	.0000	.0000	.0000	.0005	.0031	.0124	.0308	.0406
	23	.0000	.0000	.0000	.0000	.0003	.0020	.0091 .0066	.0258 .0214	.0382 .0357
	24	.0000	.0000	.0000	.0000	.0001	.00012	.0048	.0177	.0333
	25	.0000	.0000	.0000	.0000	.0000	.0005	.0035	.0146	.0309
	26	.0000	.0000	.0000	.0000	.0000	.0003	.0025	.0120	.0285
	27	.0000	.0000	.0000	.0000	.0000	.0002	.0018	.0099	.0263
	28	.0000	.0000	.0000	.0000	.0000	.0001	.0013	.0081	.0242
	29 30	.0000	.0000	.0000	.0000	.0000	.0001	.0009	.0066	.0222
	30 31	.0000	.0000	.0000	.0000	.0000	.0000	.0007	.0054	.0204
	32	.0000	.0000	.0000	.0000	.0000	.0000	.0005	.0044	.0187 .0170
	33	.0000	.0000	.0000	.0000	.0000	.0000	.0002	.0029	.0156
	34	.0000	.0000	.0000	.0000	.0000	.0000	.0002	.0023	.0142
	35	.0000	.0000	.0000	.0000	.0000	.0000	.0001	.0019	.0129
	36	.0000	.0000	.0000	.0000	.0000	.0000	.0001	.0015	.0117
	37 38	.0000	.0000	.0000	.0000	.0000	.0000	.0001	.0012	.0107
	39	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0010 .0008	.0097 .0088
	40	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0006	.0080
	41	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0005	.0072
	42	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0004	.0065
	+3	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0003	.0059
	44 45	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0003	.0054
	46	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0002	.0048 .0044
	47	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0001	.0040
1	+8	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0001	.0036
	+9	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0001	.0032
	50	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0001	.0029
	51 52	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0001	.0026
	53	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0024 .0021
	54	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0019
	55	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0017
	56	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0016
	57	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0014
	58 59	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0013
	50	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0011 .0010
	61	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0009
ŧ	62	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0008
	53	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0008
ŧ	54	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0007

THETA (0)

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	·····				THET	$\frac{1}{2}$				
	Z	.1	. 2	. 3	.4	. 5	.6	.7	. 8	.9
4	65 66 67 68 69 71 72 73 74 75 76 77 80 81 82	.0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000	.0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000	.0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000	.0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000	.0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000	.0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000	.0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000	.0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000	.0006 .0005 .0004 .0004 .0004 .0003 .0003 .0003 .0003 .0002 .0002 .0002 .0002 .0002 .0002 .0001 .0001 .0001 .0001
5	10 11 12 13 14 15 16 7 18 90 22 23 24 56 7 28 90 12 33 35 35 37 35 37	.7060 .2353 .0490 .0082 .0012 .0000	.4819 .3213 .1339 .0448 .0132 .0036 .0009 .0002 .0001 .0000	.3156 .3156 .1972 .0991 .0438 .0179 .0069 .0025 .0009 .0003 .0001 .0000	.1960 .2613 .2178 .1450 .0861 .0468 .0240 .0118 .0056 .0026 .0012 .0005 .0002 .0001 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000	.1135 .1892 .1971 .0650 .1217 .0827 .0530 .0326 .0194 .0113 .0064 .0036 .0020 .0011 .0006 .0003 .0002 .0001 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000	.0597 .1194 .1492 .1500 .1327 .1082 .0832 .0614 .0439 .0306 .0209 .0141 .0094 .0062 .0040 .0026 .0017 .0011 .0007 .0001 .0007 .0004 .0003 .0002 .0001 .0000 .0000 .0000 .0000	.0272 .0634 .0924 .1083 .1118 .1063 .0955 .0822 .0685 .0558 .0445 .0349 .0271 .0208 .0158 .0119 .0089 .0066 .0019 .0066 .0026 .0019 .0014 .0010 .0007 .0005 .0004 .0005	.0097 .0258 .0429 .0575 .0679 .0737 .0757 .0744 .0710 .0660 .0602 .0540 .0478 .0419 .0364 .0419 .0364 .0268 .0228 .0228 .0193 .0162 .0136 .0114 .0095 .0079 .0065 .0054 .0037	.0020 .0060 .0113 .0170 .0226 .0276 .0319 .0353 .0378 .0396 .0406 .0406 .0409 .0409 .0409 .0403 .0393 .0381 .0367 .0351 .0334 .0316 .0299 .0281 .0263 .0229 .0223 .0223 .0223 .0223 .0223 .0223 .0223 .0223 .0223 .0223 .0223 .0223 .0223 .0223 .0223 .0224 .0229 .0223 .0226 .0229 .0226 .0229 .0228 .0226 .0229 .0228 .0226 .0226 .0398 .0351 .0351 .0351 .0351 .0351 .0351 .0351 .0351 .0351 .0351 .0351 .0351 .0351 .0351 .0351 .0351 .0353 .0351 .0353 .0355 .0356 .0259 .0256 .0259 .0256 .0259 .0256 .0259 .0256 .0259 .0256 .0259 .0256 .0259 .0256 .0259 .0256 .0259 .0256 .0259 .0256 .0256 .0256 .0259 .02566 .0256 .02566 .02566 .02566 .02566 .02566 .02566 .02566 .02566 .02

THETA (9)

•	InEIA (9)									
n	z	.1	. 2	. 3	.4	.5	.6	. 7	. 8	.9
5	38	.0000	.0000	.0000	.0000	.0000	.0000	.0002	.0030	.0170
	39	.0000	.0000	.0000	.0000	.0000	.0000	.0001	.0025	.0157
	40	.0000	.0000	.0000	.0000	.0000	.0000	.0001	.0020	.0145
	41	.0000	.0000	.0000	.0000	.0000	.0000	.0001	.0017	.0133
	42	.0000	.0000	.0000	.0000	.0000	.0000	.0001	.0014	.0122
	43 44	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0011	.0112
	45	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0009	.0103
	46	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0007	.0095
	47	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0006	.0087 .0079
	48	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0003	.0073
	49	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0003	.0066
	50	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0003	.0061
	51	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0002	.0055
	52	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0002	.0050
	53 54	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0001	.0046
	55	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0001	.0042
	56	.0000.	.0000	.0000	.0000	.0000	.0000	.0000	.0001	.0038
	57	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0001 .0001	.0035
	58	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0029
	59	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0026
	60	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0024
	61	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0021
	62 62	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0020
	63 64	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0018
	65	.0000.	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0016
	66	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0015 .0013
	67	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0012
	68	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0011
	69	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0010
	70	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0009
	71 72	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0008
	73	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0007
	74	.0000	.0000	.0000	.0000	.0000	.0000	.0000.000.000	.0000	.0007 .0006
	75	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0005
	76	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0005
	77	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0004
	78	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0004
	79	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	:0004
	80	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0003
	81 82	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0003
	83	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000.	.0003
	84	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0002

n	z	.1	• 2	. 3	. 4	.5	.6	.7	. 8	.9
5	85 86 87 88 89 90 91	.0000 .0000 .0000 .0000 .0000 .0000	.0000 .0000 .0000 .0000 .0000 .0000	.0000 .0000 .0000 .0000 .0000 .0000	.0000 .0000 .0000 .0000 .0000 .0000	.0000 .0000 .0000 .0000 .0000 .0000	.0000 .0000 .0000 .0000 .0000 .0000	.0000 .0000 .0000 .0000 .0000 .0000	.0000 .0000 .0000 .0000 .0000 .0000 .0000	.0002 .0002 .0002 .0001 .0001 .0001 .0001
6	12 13 14 15 16 17 18 9 21 22 32 23 24 26 27 29 31 23 34 35 67 89 41 42 44 45 46	.6585 .2634 .0637 .0121 .0020 .0003 .00000 .0000 .0000 .00000 .00000 .000000	.4165 .3332 .1610 .0611 .0200 .0060 .0017 .0004 .0000	.2506 .3007 .2180 .1240 .0610 .0272 .0114 .0045 .0017 .0006 .0002 .0001 .00000 .00000 .00000 .000000	.1415 .2264 .2188 .1659 .1088 .0648 .0360 .0196 .0097 .0048 .0023 .0011 .0005 .0002 .0001 .00000 .00000 .00000 .000000	.0735 .1469 .1776 .1683 .1380 .1027 .0714 .0471 .0299 .0184 .0111 .0065 .0038 .0021 .0012 .0007 .0004 .0002 .0001 .00000 .00000 .00000 .000000	.0340 .0815 .1182 .1345 .1323 .1182 .0985 .0781 .0595 .0440 .0317 .0224 .0155 .0106 .0072 .0048 .0032 .0021 .0014 .0009 .0004 .0001 .0001 .0001 .0001 .0000 .0000 .0000 .0000 .0000 .0000 .0000	.0132 .0370 .0625 .0830 .0952 .0992 .0965 .0893 .0793 .0684 .0575 .0474 .0384 .0306 .0241 .0188 .0146 .0112 .0085 .0064 .00241 .0085 .0064 .0027 .0020 .0057 .0020 .0015 .0001 .0001 .0001	.0038 .0122 .0236 .0358 .0470 .0560 .0622 .0657 .0668 .0658 .0658 .0658 .0595 .0551 .0503 .0404 .0357 .0313 .0273 .0236 .0203 .0273 .0203 .0174 .0148 .0126 .0090 .0076 .0053 .0053 .0053 .0053 .0053 .0053 .0051 .0031 .0025 .0021 .0017	.0006 .0023 .0045 .0077 .0114 .0153 .0191 .0228 .0260 .0288 .0260 .0288 .0312 .0330 .0353 .0353 .0355 .0355 .0355 .0355 .0355 .0355 .0355 .0355 .0355 .0355 .0355 .0355 .0325 .0325 .0273 .0259 .0245 .0228 .0228 .0228 .0214 .0259 .0259 .0259 .0259 .0259 .0215 .0215 .0214 .0259 .0259 .0259 .0259 .0215 .0215 .0215 .0215 .0259 .0259 .0215 .0215 .0215 .0215 .0259 .0259 .0215 .0215 .0215 .0215 .0259 .0259 .0259 .0217 .0259 .0217 .0259 .0217 .0259 .0217 .0259 .0217 .0259 .0217 .0259 .0217 .0259 .0259 .0259 .0255 .0217 .0259 .0256 .0156 .01556
	47 48 49- 50	.0000 .0000 .0000 .0000	.0000 .0000 .0000 .0000	.0000 .0000 .0000 .0000	.0000 .0000 .0000 .0000	.0000 .0000 .0000 .0000	.0000 .0000 .0000 .0000	.0000 .0000 .0000 .0000	.0014 .0012 .0010 .0008	.0135 .0125 .0116 .0107

THETA (0)

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THETA (0)

	THETA (9)									
n	Z	.1	.2	. 3	.4	. 5	.6	.7	. 8	.9
6	512345678901234566789012345678900123456789001234567890012345678000000000000000000000000000000000000									.0099 .0091 .0084 .0078 .0072 .0066 .0072 .0066 .0051 .0047 .0043 .0039 .0036 .0033 .0030 .0028 .0023 .0023 .0023 .0023 .0021 .0019 .0018 .0019 .0018 .0019 .0018 .0019 .0018 .0015 .0013 .0010 .0019 .0018 .0015 .0011 .0010 .0010 .0008 .0005 .0005 .0005 .0001 .0006 .0005 .0005 .0005 .0005 .0001 .0006 .0005 .0005 .0005 .0005 .0005 .0005 .0005 .0005 .0005 .0005 .0005 .0005 .0005 .0005 .0005 .0005 .0001 .0010 .0000 .0006 .0005 .0005 .0001 .0010 .0010 .00000 .00000 .00000 .00000 .00000 .00000 .00000 .00000 .00000 .00000 .00000 .00000 .00000 .00000 .00000 .000000

THETA (0)

-	ΤΗΕΤΑ (θ)									
n	z	.1	. 2	. 3	.4	. 5	.6	. 7	. 8	.9
6	98 99 100	.0000 .0000 .0000	.0000 .0000 .0000	.0000 .0000 .0000	.0000 .0000 .0000	.0000 .0000 .0000	.0000 .0000 .0000	.0000 .0000 .0000	.0000 .0000 .0000	.0001 .0001 .0001
7	14 15 17 18 90 12 22 22 22 22 22 22 22 22 22 22 22 22		. 3599 . 3359 . 1848 . 0782 . 0202 . 0091 . 0027 . 0008 . 0002 . 0001 . 00000 . 0000 . 0000 . 0000 . 0000 . 0000 . 0000 . 0000	.1990 .2785 .2298 .1460 .0790 .0384 .0173 .0073 .0030 .0002 .0001 .0000 .	<pre>.1021 .1906 .2097 .1776 .1282 .0830 .0498 .0281 .0152 .0079 .0040 .0020 .0010 .00000 .0000 .0000 .00000 .000000</pre>	.0476 .1110 .1526 .1615 .1457 .1180 .0884 .0624 .0421 .0274 .0173 .0107 .0064 .0038 .0022 .0013 .0007 .0004 .0000 .	.0193 .0541 .0893 .1135 .1228 .1194 .1073 .0909 .0736 .0575 .0436 .0117 .0081 .0055 .0037 .0025 .0017 .0011 .0007 .0001 .0001 .0001 .0001 .00000 .00000 .00000 .000000	.0064 .0210 .0404 .0598 .0755 .0856 .0898 .0888 .0839 .0764 .0676 .0583 .0493 .0409 .0335 .0271 .0216 .0171 .0134 .0067 .0271 .0134 .0067 .0027 .0021 .0067 .0027 .0020 .0015 .0001 .0001 .0001 .0001 .0000 .0000 .0000 .0000 .0000	.0015 .0056 .0124 .0210 .0303 .0471 .0532 .0574 .0598 .0604 .0596 .0575 .0546 .0575 .0546 .0575 .0546 .0575 .0546 .0575 .0546 .0274 .0240 .0274 .0240 .0274 .0240 .0274 .0240 .0274 .0240 .0274 .0240 .0274 .0240 .0274 .0240 .0274 .0240 .0274 .0240 .0274 .0240 .0274 .0240 .0274 .0240 .0274 .0240 .0274 .0240 .0274 .0257 .0135 .0157 .0135 .0068 .0072 .0051 .0051 .0051 .0051 .0051 .0051 .0057 .0057 .0057 .0157 .0077 .0157 .0077 .0157 .0077 .0157 .0077 .0157 .0077 .0157 .00777 .00777 .0077777777	.0002 .0007 .0017 .0033 .0054 .0135 .0163 .0191 .0218 .0241 .0262 .0295 .0306 .0314 .0320 .0322 .0326 .0310 .0322 .0326 .0316 .0310 .0325 .0255 .0264 .0255 .0264 .0255 .0264 .0255 .0264 .0255 .0264 .0255 .0265 .0275 .0264 .0255 .0265 .0275 .0264 .0255 .0265 .0275 .0265 .0275 .0265 .0275 .0265 .0275 .0264 .0218 .0218 .0218 .0310 .0310 .0310 .0310 .0327 .0265 .0275 .0265 .0275 .0264 .02275 .0264 .02285 .0275 .0265 .0275 .0266 .0310 .0310 .0310 .0310 .0310 .0310 .0310 .0310 .0310 .0310 .0310 .0310 .0310 .0310 .0218 .0275 .0265 .0314 .0320 .0316 .0310 .0310 .0310 .0310 .0310 .0310 .0310 .0310 .0310 .0310 .0310 .0310 .0310 .0310 .0310 .0218 .0275 .0265 .0316 .0310 .0310 .0310 .0310 .0218 .0275 .0266 .0310 .0310 .0310 .0218 .0275 .0267 .0275 .0267 .0275 .0267 .0275 .0267 .0275 .0267 .0275 .0267 .0275 .0267 .0275 .0267 .0275 .0267 .0275 .0267 .0275 .0267 .0275 .0267 .0275 .0267 .0275 .0267 .0275 .0267 .0275 .0275 .0267 .0176 .0174 .0154 .0154 .0177 .0109

THETA (0)

THETA (θ)

					THETA	<u>7 (0)</u>				
	z	.1	. 2	. 3	. 4	.5	.6	.7	.8	.9
1 1 1	04 05 06 07 08 09	.0000 .0000 .0000 .0000 .0000	.0000 .0000 .0000 .0000 .0000	.0000 .0000 .0000 .0000 .0000	.0000 .0000 .0000 .0000 .0000	.0000 .0000 .0000 .0000 .0000	.0000 .0000 .0000 .0000 .0000	.0000 .0000 .0000 .0000 .0000	.0000 .0000 .0000 .0000 .0000	.0002 .0001 .0001 .0001 .0001 .0001
	16 17 19 02 22 22 22 22 22 22 22 22 22 22 22 22	.5729 .3056 .0942 .0220 .0043 .0008 .0001 .00000 .0000 .0000 .0000 .0000 .0000 .000000	.3110 .3318 .2046 .0957 .0377 .0132 .0042 .0013 .0004 .0001 .00000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .00000 .00000 .000000	.1580 .2538 .2338 .1640 .0969 .0509 .0245 .0111 .0048 .0020 .0003 .0001 .0000	.0737 1573 1940 .1815 .1430 .1001 .0644 .0387 .0222 .0122 .0064 .0033 .0017 .0008 .0004 .0002 .0001 .0000 .00	.0308 .0821 .1265 .1479 .1457 .1276 .1025 .0771 .0551 .0378 .0251 .0162 .0102 .0162 .0162 .0162 .0162 .0162 .0162 .0162 .0162 .0163 .0038 .0023 .0063 .0003 .0003 .0004 .00000 .0000 .0000 .0000 .0000 .00000 .000000	.0110 .0352 .0651 .0914 .1080 .1135 .1094 .0988 .0847 .0697 .0555 .0429 .0324 .0240 .0175 .0125 .0088 .0062 .0029 .0020 .0013 .0009 .0005 .0001 .0001 .00000 .00000 .00000 .000000	.0031 .0116 .0251 .0411 .0567 .0695 .0782 .0824 .0825 .0792 .0735 .0663 .0585 .0505 .0429 .0358 .0295 .0241 .0194 .0155 .0295 .0241 .0194 .0155 .0295 .0241 .0194 .0155 .0027 .0076 .0059 .0045 .0035 .0027 .0020 .0015 .0001 .0001 .0001	.0006 .0025 .0063 .0117 .0185 .0259 .0333 .0401 .0459 .0504 .0555 .0558 .0555 .0548 .0555 .0548 .0555 .0548 .0479 .0446 .0411 .0376 .04411 .0376 .0273 .0242 .0214 .0188 .0164 .0143 .0124 .0107 .0092 .0079 .0068 .0049 .0042 .0035 .0030 .0025 .0030 .0025 .0030 .0025 .0030 .0025 .0030 .0045 .00555 .00555 .00555 .005555 .005555 .005555 .0055555555	.0000 .0002 .0006 .0014 .0024 .0038 .0055 .0074 .0095 .0118 .0141 .0163 .0141 .0163 .0205 .0224 .0205 .02241 .0255 .0228 .02294 .0295 .029

THETA (0)

THETA (θ)

	-			THETA	<u>(</u> 0)				
n z	.1	. 2	.3	.4	. 5	.6	.7	. 8	• 9
<pre>8 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117</pre>	.0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000	.0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000	.0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000	.0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000	.0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000	.0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000	.0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000	.0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000	.0004 .0003 .0003 .0003 .0003 .0002 .0002 .0002 .0002 .0002 .0002 .0002 .0001 .0001 .0001
9 18 19 20 21 22 23 24 25 26 27 28 29 31 32 33 4 35 37 39 41 24 45 46 48	.5344 .3206 .1096 .0281 .0060 .0011 .0002 .0000	.2688 .3225 .2204 .1129 .0482 .0062 .0020 .0006 .0002 .0000	.1254 .2258 .2314 .1778 .1139 .0643 .0331 .0159 .0072 .0031 .0013 .0005 .0002 .0001 .0000	.0532 .1277 .1746 .1778 .1527 .1150 .0789 .0504 .0305 .0176 .0098 .0053 .0028 .0014 .0007 .0004 .0002 .0001 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000	.0199 .0597 .1021 .1307 .1395 .1313 .1127 .0900 .0680 .0490 .0341 .0229 .0150 .0096 .0061 .0037 .0023 .0014 .0008 .0005 .0001 .0001 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000	.0063 .0225 .0462 .0710 .0910 .1027 .1058 .1014 .0919 .0796 .0663 .0536 .0422 .0324 .0244 .0181 .0132 .0095 .0068 .0048 .0033 .0023 .0023 .0016 .0001 .0001 .0001 .0001	.0015 .0064 .0152 .0273 .0408 .0538 .0646 .0723 .0764 .0772 .0750 .0777 .0649 .0582 .0512 .0443 .0377 .0316 .0263 .0216 .0175 .0141 .0113 .0090 .0071 .0055 .0043 .0026 .0020 .0015	.0002 .0011 .0031 .0063 .0108 .0163 .0224 .0286 .0346 .0399 .0444 .0478 .0501 .0517 .0510 .0496 .0476 .0452 .04517 .0510 .0496 .0452 .0424 .0394 .0363 .0332 .0301 .0271 .0243 .0217 .0192 .0169 .0130	.0000 .0001 .0002 .0005 .0010 .0017 .0027 .0039 .0052 .0068 .0085 .0103 .0122 .0141 .0159 .0177 .0193 .0209 .0223 .0246 .0255 .0246 .0255 .0262 .0271 .0273 .0274 .0273 .0274 .0273 .0274 .0273 .0274

THETA (θ)

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					THETA	A (0)				
n	z	.1	. 2	. 3	.4	.5	.6	, 7	. 8	.9
9	49012345678901234566789012345678901234567890123456789012345678901234567890123456789012345678901234	.0000 .0000						.0012 .0009 .0007 .0005 .0004 .0003 .0002 .0002 .0002 .0001 .0001 .00000 .0000 .0000 .0000 .0000 .00000 .00000 .000000	.0114 .0099 .0085 .0074 .0063 .0054 .0047 .0040 .0034 .0029 .0024 .0021 .0018 .0015 .0012 .0010 .0007 .0006 .0007 .0006 .0007 .0006 .0007 .0006 .0007 .0001 .0001 .0001 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000	.0259 .0253 .0246 .0239 .0232 .0247 .0232 .0224 .0215 .0207 .0198 .0190 .0181 .0173 .0164 .0156 .0148 .0140 .0132 .0125 .0148 .0140 .0132 .0125 .0148 .0140 .0132 .0125 .0148 .0140 .0132 .0125 .0148 .0140 .0132 .0125 .0148 .0140 .0156 .0046 .0057 .0053 .0046 .0046 .0040 .0057 .0053 .0025 .0025 .0027 .0025 .0027 .0025 .0027 .0025 .0027 .0025 .0027 .0025 .0027 .0025 .0027 .0025 .0027 .0025 .0027 .0025 .0027 .0025 .0027 .0025 .0027 .0025 .0027 .0025 .0027 .0026 .0027 .0025 .0027 .0026 .0027 .0027 .0027 .0027 .0027 .0027 .0027 .0028 .0027 .0028 .0027 .0028 .0027 .0028 .0027 .0028 .0027 .0028 .0027 .0028 .0027 .0028 .0027 .0028 .0027 .0028 .0027 .0028 .0027 .0028 .0027 .0028 .0027 .0028 .0027 .0028 .0027 .0028 .0027 .0028 .0027 .0028 .0027 .0028 .0027 .0027 .0028 .0027 .0027 .0027 .0028 .0027 .0027 .0027 .0028 .0027

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					THET	$A(\Theta)$				
n	z	.1	. 2	.3	.4	• 5	.6	. 7	. 8	.9
9	96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 120 121 122 123 124 125									.0014 .0013 .0012 .0011 .0010 .0009 .0009 .0009 .0007 .0007 .0007 .0006 .0005 .0005 .0005 .0005 .0004 .0004 .0004 .0004 .0004 .0004 .0003 .0003 .0003 .0003 .0003 .0002 .0002 .0002 .0002 .0002 .0001 .0001 .0001 .0001 .0001 .0001 .0001 .0002 .0002 .0002 .0001 .0001 .0001 .0001 .0001 .0003 .0003 .0003 .0003 .0003 .0003 .0003 .0003 .00004 .00004 .00004 .00004 .00004 .00004 .00004 .00004 .00004 .00004 .00004 .00004 .00004 .00003 .00002 .000002 .000002 .00002 .00002 .00000000
10	20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35	.4985 .3323 .1246 .0347 .0080 .0016 .0003 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000	.2323 .3097 .2323 .1292 .0595 .0240 .0088 .0030 .0009 .0003 .0001 .0000 .0000 .0000 .0000 .0000	.0996 .1992 .2241 .1870 .1291 .0780 .0427 .0217 .0103 .0047 .0021 .0009 .0004 .0001 .0001	.0384 .1024 .1537 .1710 .1574 .1269 .0926 .0626 .0399 .0242 .0140 .0079 .0043 .0023 .0012 .0006	.0129 .0430 .0806 .1121 .1289 .1299 .1185 .1002 .0797 .0604 .0439 .0308 .0210 .0140 .0091 .0058	.0036 .0143 .0321 .0535 .0739 .0894 .0979 .0993 .0948 .0861 .0751 .0633 .0518 .0413 .0322 .0247	.0007 .0034 .0090 .0176 .0283 .0406 .0511 .0604 .0673 .0714 .0726 .0714 .0818 .0634 .0577 .0515	.0001 .0005 .0015 .0033 .0061 .0099 .0144 .0195 .0248 .0300 .0349 .0392 .0428 .0455 .0473 .0483	.0000 .0001 .0002 .0004 .0008 .0013 .0019 .0027 .0037 .0049 .0062 .0076 .0091 .0106 .0122

THETA (Θ)

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THETA (0)

-					THETA	<u>(0)</u>				
n	Z	.1	. 2	. 3	. 4	.5	.6	.7	. 8	.9
10	3678901234567890123456789012345678901234567777777777888888 3333442444445555555555556666666666667777777777			.0000 .0000		.0036 .0022 .0014 .0008 .0005 .0003 .0002 .0001 .0000		.0453 .0391 .0334 .0281 .0235 .0194 .0159 .0129 .0104 .0083 .0066 .0052 .0041 .0032 .0025 .0019 .0015 .0011 .0009 .0005 .0011 .0009 .0005 .0001 .0005 .0001 .0001 .0000	.0485 .0479 .0467 .0450 .0429 .0405 .0379 .0351 .0323 .0296 .0269 .0243 .0218 .0195 .0173 .0154 .0195 .0173 .0154 .0195 .0173 .0154 .0091 .0079 .0069 .0051 .0044 .0038 .0028 .0024 .0033 .0028 .0027 .0051 .0015 .0017 .0015 .0017 .0015 .0017 .0007 .0007 .0005 .0007 .0005 .0007 .0006 .0007 .0006 .0007 .0006 .0007 .0006 .0007 .0006 .0007 .0006 .0007 .0006 .0007 .0006 .0007 .0006 .0007 .0000 .0007 .0000 .0007 .00000 .000000	.0138 .0153 .0168 .0182 .0208 .0218 .0228 .0228 .0228 .0228 .0228 .0228 .0228 .0225 .0256 .0256 .0256 .0256 .0256 .0256 .0256 .0256 .0256 .0257 .0243 .0243 .0243 .0243 .0243 .0248 .0255 .0256 .0256 .0256 .0256 .0257 .0243 .0243 .0248 .0255 .0256 .0256 .0256 .0256 .0257 .0243 .0248 .0248 .0255 .0256 .0256 .0256 .0257 .0243 .0248 .0248 .0255 .0256 .0256 .0256 .0256 .0257 .0243 .0248 .0248 .0257 .0256 .0256 .0256 .0258 .0258 .0258 .0258 .0256 .0256 .0256 .0258 .0258 .0258 .0256 .0256 .0256 .0258 .0258 .0258 .0257 .0256 .0256 .0258 .0267 .0268 .0190 .0183 .0175 .0167 .0183 .0177 .00183 .00277 .0087 .0087 .0087 .0087 .0087 .0087 .0088 .0087 .0088 .0087 .0088 .0087 .0088 .0087 .0088 .0086 .0088 .0086 .008

THETA (9)

		·····			THET	<u>(9)</u>				
	Z	.1	,2	.3	.4	.5	,6	.7	, 8	.9
10	84 85 86 87 88 90 91 92 93 94 95 97 99 90 102 103 104 105 107 108 109 112 113 114 116 122 123 124 125 128 130									.0059 .0055 .0052 .0048 .0045 .0042 .0039 .0036 .0034 .0032 .0029 .0027 .0025 .0023 .0022 .0020 .0017 .0016 .0015 .0014 .0013 .0012 .0011 .0010 .0015 .0014 .0013 .0012 .0011 .0010 .0007 .0006 .0005 .0007 .0006 .0005 .0007 .0005

ΤΗΕΊΤΑ (Θ)

					11111	4 (0)				
	z	.1	. 2	. 3	.4	.5	.6	.7	. 8	.9
10	131 132 133 134	.0000 .0000 .0000 .0000	.0000 .0000 .0000 .0000	.0000 .0000 .0000 .0000	.0000 .0000 .0000 .0000	.0000 .0000 .0000 .0000	.0000 .0000 .0000 .0000	.0000 .0000 .0000 .0000	.0000 .0000 .0000 .0000	.0001 .0001 .0001 .0001
11	2234567890123456789012345678901234567890123 33333333444444445555555555666666666666	.4649 .3410 .1392 .0418 .0103 .0022 .0004 .0000	.2007 .2944 .2404 .1445 .0713 .0306 .0118 .0042 .0014 .0004 .0000	.0791 .1740 .2131 .1921 .1421 .0916 .0531 .0285 .0143 .0068 .0031 .0014 .0006 .0000	.0277 .0813 .1329 .1596 .1575 .1353 .047 .0747 .0500 .0317 .0193 .0193 .0064 .0035 .0010 .0001 .0001 .0001 .0000 .0	.0083 .0306 .0624 .0938 .1157 .1242 .1202 .1072 .0897 .0711 .0540 .0395 .0280 .0193 .0130 .0085 .0035 .0035 .0035 .0035 .0035 .0035 .0035 .0035 .0035 .0035 .0035 .0035 .0001 .0000	.0020 .0089 .0219 .0394 .0583 .0751 .0872 .0934 .0937 .0892 .0813 .0713 .0606 .0501 .0404 .0320 .0248 .0189 .0142 .0105 .0077 .0056 .0040 .0029 .0020 .0014 .0010 .0005 .0001 .0001 .0001 .0000 .0000 .0000 .0000 .0000 .0000 .0000	.0004 .0018 .0053 .0111 .0191 .0287 .0389 .0486 .0569 .0631 .0671 .0687 .0687 .0681 .0657 .0618 .0570 .0516 .0459 .0403 .0252 .0211 .0175 .0144 .0117 .0095 .0077 .0061 .0039 .0030 .0024 .0011 .0011 .0029 .0030 .0024 .0011 .0011 .0029 .0030 .0024 .0011 .0009 .0014 .0011 .0009 .0007 .0005 .0007 .0005 .0007 .0005 .0007	.0000 .0002 .0007 .0017 .0034 .0058 .0089 .0127 .0170 .0216 .0262 .0307 .0348 .0435 .0453 .0453 .0453 .0457 .0458 .0453 .0457 .0458 .0453 .0453 .0455 .0453 .0455 .0340 .0365 .0340 .0265 .0241 .0265 .0241 .0265 .0241 .0265 .0241 .0265 .0241 .0265 .0241 .0265 .0241 .0265 .0241 .0265 .0241 .0265 .0241 .0265 .0241 .0265 .0241 .0265 .0241 .0265 .0241 .0265 .0241 .0265 .0241 .0265 .0241 .0265 .0265 .0241 .0265 .0265 .0241 .0265 .0056 .0056 .0056 .0056	.0000 .0000 .0001 .0002 .0003 .0006 .0009 .0014 .0020 .0027 .0035 .0045 .0056 .0068 .0080 .0093 .0107 .0121 .0134 .0147 .0160 .0172 .0134 .0147 .0160 .0172 .0184 .0204 .0213 .0220 .0223 .0223 .0223 .02241 .0242 .0241 .0242 .0241 .0242 .0241 .0239 .0223 .0223 .0223 .0225 .0220

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					THET	<u>(0)</u>				
n	z	.1	. 2	.3	. 4	.5	.6	.7	. 8	.9
	645 667 667 777 777777777777777777777777								.0048 .0042 .0036 .0031 .0027 .0023 .0020 .0017 .0014 .0012 .0010 .0009 .0007 .0006 .0005 .0004 .0004 .0003 .0003 .0002 .0001 .0001 .00000 .0000 .0000 .0000 .00000 .00000 .000000	.0214 .0208 .0202 .0196 .0189 .0183 .0176 .0169 .0162 .0155 .0149 .0142 .0135 .0129 .0122 .0116 .0104 .0099 .0093 .0088 .0074 .0069 .0065 .0065 .0065 .0065 .0065 .0065 .0065 .0057 .0054 .0057 .0054 .0057 .0054 .0057 .0054 .0057 .0054 .0057 .0054 .0057 .0054 .0057 .0054 .0057 .0054 .0057 .0054 .0057 .0054 .0057 .0054 .0057 .0054 .0057 .0054 .0057 .0055 .0025

THETA (0)

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THETA (0)

n	z	.1	. 2	. 3	.4	.5	.6	.7	. 8	.9
11	111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142									.0014 .0013 .0012 .0011 .0010 .0009 .0009 .0009 .0007 .0007 .0006 .0005 .0005 .0005 .0005 .0005 .0005 .0005 .0005 .0004 .0004 .0004 .0004 .0004 .0004 .0003 .0003 .0003 .0002 .0002 .0002 .0002 .0002 .0002 .0001 .0001 .0001 .0001 .0001 .0001
12	24 25 26 27 28 29 30 31 32 33 34 35 36 37	.4337 .3469 .1532 .0494 .0130 .0030 .0006 .0001 .0000 .0000 .0000 .0000 .0000	.1735 .2775 .2452 .1582 .0833 .0380 .0155 .0058 .0020 .0007 .0002 .0001 .0000 .0000	.0628 .1507 .1997 .1932 .1526 .1044 .0640 .0361 .0190 .0094 .0045 .0020 .0009 .0004	.0200 .0641 .1132 .1460 .1538 .1402 .1147 .0862 .0605 .0401 .0254 .0154 .0091 .0052	.0054 .0216 .0477 .0769 .1013 .1154 .1180 .1108 .0972 .0806 .0638 .0485 .0356 .0254	.0012 .0055 .0147 .0284 .0449 .0614 .0753 .0849 .0893 .0889 .0844 .0770 .0679 .0581	.0002 .0010 .0030 .0068 .0126 .0200 .0287 .0377 .0463 .0537 .0595 .0634 .0652 .0651	.0000 .0001 .0003 .0009 .0018 .0033 .0053 .0080 .0113 .0150 .0189 .0230 .0271 .0309	.0000 .0000 .0000 .0001 .0001 .0002 .0004 .0007 .0010 .0014 .0019 .0026 .0033

THETA (0)

					THET	A (0)				
n	z	.1	. 2	.3	•4	. 5	.6	.7	. 8	.9
12	38	.0000	.0000	.0002	.0029	.0177	.0485	.0634	.0344	.0041
	39	.0000	.0000	.0001	.0016	.0120	.0395	.0603	.0374	.0050
	40	.0.000	.0000	.0000	.0008	.0080	.0316	.0562	.0398	.0060
	41	.00.00	.0000	.0000	.0004	.0052	.0248	.0514	.0417	.0071
	42	.0000	.0000	.0000	.0002	.0034	.0191	.0463	.0429	.0082
	43 44	.0000	.0000	.0000	.0001	.0021	.0146	.0411	.0435	.0094
	44	.0000	.0000	.0000	.0001	.0013	.0109	.0360	.0436	.0106
	46	.0000	.0000	.0000	.0000	.0008	.0081	.0312	.0431	.0118
	47	.0000	.0000	.00000000	.0000.	.0005	.0060	.0267	.0422	.0130
	48	.0000	.0000	.0000	.0000	.0003	.0043	.0226	.0409	.0141
	49	.0000	.0000	.0000	.0000	.0001	.0031 .0022	.0190 .0158	.0392	.0153
	50	.0000	.0000	.0000	.0000	.0001	.0016	.0131	.0352	.0163 .0174
	51	.0000	.0000	.0000	.0000	.0000	.0011	.0107	.0330	.0183
	52	.0000	.0000	.0000	.0000	.0000	.0008	.0087	.0308	.0192
	53	.0000	.0000	.0000	.0000	.0000	.0005	.0071	.0285	.0200
	54	.0000	.0000	.0000	.0000	.0000	.0004	.0057	.0262	.0207
	55	.0000	.0000	.0000	.0000	.0000	.0003	.0046	.0240	.0213
	56	.0000	.0000	.0000	.0000	.0000	.0002	.0036	.0218	.0218
	57	.0000	.0000	.0000	.0000	.0000	.0001	.0029	.0198	.0222
	58	.0000	.0000	.0000	.0000	.0000	.0001	.0023	.0178	.0225
	59	.0000	.0000	.0000	.0000	.0000	.0001	.0018	.0160	.0228
	60 61	.0000	.0000	.0000	.0000	.0000	.0000	.0014	.0143	.0229
	62	.0000	.0000	.0000	.0000	.0000	.0000	.0011	.0128	.0230
	63	.0000	.0000	.0000	.0000	.0000	.0000	.0008	.0113	.0229
	64	.0000	.0000	.0000	.0000	.0000	.0000	.0007	.0100 .0088	.0228 .0227
	65	.0000	.0000	.0000	.0000	.0000	.0000	.0004	.0078	.0224
	66	.0000	.0000	.0000	.0000	.0000	.0000	.0003	.0068	.0221
	67	.0000	.0000	.0000	.0000	.0000	.0000	.0002	.0060	.0218
	68	.0000	.0000	.0000	.0000	.0000	.0000	.0002	.0052	.0214
	69	.0000	.0000	.0000	.0000	.0000	.0000	.0001	.0045	.0209
	70	.0000	.0000	.0000	.0000	.0000	.0000	.0001	.0039	.0204
	71	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0034	.0199
	72	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0029	.0194
	73	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0025	.0188
	74 75	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0022	.0182
	76	.0000.	.0000	.0000	.0000	.0000	.0000	.0000	.0019	.0176
	77	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0016 .0014	.0170 .0164
	78	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0012	.0157
	79	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0010	.0151
	80	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0009	.0145
	81	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0007	.0139
	82	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0006	.0133
	83	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0005	.0127
	84	.0000	.0000	.0000	.0000	.0000	:0000	.0000	.0004	.0121

THETA (Θ)

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					Inci	A (U)				
n	Z	.1	• 2	.3	.4	. 5	.6	.7	. 8	. 9
12	85	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0004	.0119
	86	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0003	.0110
	87	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0003	.0104
	88	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0002	.0099
	89	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0002	.0091
	90	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0001	.0089
	91	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0001	.008
	92	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0001	.0079
	93	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.007
	94	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.007
	95	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.006
	96	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.006
	97	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.005
	98	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.005
	99	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.005
	100	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.004
	101	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.004
	102	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.004
	103	.0000	.0000	.0000	.0000	.0000	.0000			
	104	.0000	.0000	.0000				.0000	.0000	.004
	105	.0000	.0000		.0000	.0000	.0000	.0000	.0000	.003
	106	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.003
	107	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.003
	108	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.003
	109	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.002
	110	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.002
	111	.0000	.0000	.0000		.0000	.0000	.0000	.0000	.002
	112	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.002
	113	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.002
	114	.0000	.0000		.0000	.0000	.0000		.0000	.002
	115	.0000	.0000	.0000		.0000	.0000	.0000	.0000	.001
	116	.0000			.0000	.0000	.0000	.0000	.0000	.001
	117	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.001
	118	.0000	.0000	.0000	.0000	.0000	.0000	.0000		.001
	119	.0000			.0000		.0000	.0000	.0000	.001
	120		.0000	.0000	.0000	.0000	.0000	.0000	.0000	.001
	121	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.001
	122	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.001
	123	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.001
	124	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.001
	125	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.000
	126	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.000
	127	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.000
	128	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.000
	129	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.000
	130	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.000
	131	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.000
	- 0 - I	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.000

THETA (θ)

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					111214	4 (0)				
	Z	.1	. 2	. 3	.4	. 5	.6	.7	.8	.9
12	132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150				.0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000			.0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000	$\begin{array}{c} 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 \\ 0 & 0 &$.0005 .0004 .0004 .0003 .0003 .0003 .0003 .0003 .0003 .0003 .0002 .0002 .0002 .0002 .0002 .0002 .0002 .0001 .0001 .0001 .0001
13	26 27 29 31 32 34 367 390 442 445 47 890 512 52	.4045 .3506 .1665 .0574 .0161 .0039 .0008 .0002 .0000	.1499 .3598 .2468 .1702 .0953 .0460 .0198 .0078 .0029 .0010 .0003 .0001 .0000	.0499 .1296 .1847 .1911 .1604 .1161 .0750 .0444 .0245 .0127 .0063 .0030 .0014 .0006 .0003 .0001 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000	.0144 .0501 .0952 .1313 .1470 .1418 .1222 .0964 .0708 .0490 .0323 .0204 .0124 .0073 .0042 .0024 .0024 .0024 .0004 .0002 .0004 .0000 .0000 .0000 .0000 .0000	.0035 .0151 .0360 .0620 .0868 .1046 .1127 .1112 .1020 .0883 .0727 .0574 .0437 .0574 .0437 .0574 .0437 .0574 .0437 .0232 .0162 .0111 .0075 .0049 .0032 .0021 .0013 .0008 .0005 .0003 .0002 .0001	.0007 .0034 .0097 .0201 .0338 .0489 .0633 .0749 .0825 .0857 .0847 .0802 .0733 .0649 .0559 .0470 .0387 .0312 .0247 .0387 .0312 .0247 .0193 .0148 .0113 .0085 .0063 .0046 .0034 .0024	.0001 .0005 .0017 .0041 .0081 .0136 .0206 .0284 .0365 .0442 .0510 .0564 .0601 .0624 .0601 .0624 .0612 .0587 .0553 .0551 .0465 .0418 .0370 .0324 .0281 .0281 .0281 .0281 .0281 .0281 .0281 .0370 .0324 .0281 .0206 .0281 .0281 .0465 .0465 .0475 .0475 .0475 .0475 .0475 .0553 .0475 .0475 .0475 .0553 .0475 .0475 .0475 .0553 .0475 .0475 .0553 .0475 .0475 .0553 .0475 .0475 .0553 .0475 .0475 .0553 .0475 .0475 .0553 .0475 .0475 .0475 .0553 .0475 .0475 .0475 .0553 .0475 .0475 .0553 .0475 .0475 .0553 .0475 .0475 .0553 .0475 .0475 .0553 .0475 .0475 .0553 .0475 .0475 .0553 .0475 .0475 .0553 .0475 .0475 .0553 .0475 .0553 .0475 .0553 .0475 .0475 .0553 .0475 .0553 .0475 .0553 .0475 .0475 .0553 .0475 .0553 .0475 .0475 .0475 .0553 .0475 .0475 .0475 .0553 .0475 .0475 .0475 .0553 .0475 .0475 .0475 .0553 .0475 .0475 .0553 .0475 .0475 .0553 .0575 .07553 .07553 .0757 .07553 .07577 .07553 .07577 .07553 .07577 .075777 .07553 .07577777777777777777777777777777777777	.0000 .0002 .0004 .0009 .0018 .0031 .0049 .0072 .0100 .0132 .0167 .0203 .0240 .0275 .0309 .0338 .0364 .0385 .0400 .0411 .0416 .0416 .0412 .0403 .0392 .0377	.0000 .0000 .0000 .0000 .0001 .0001 .0002 .0003 .0005 .0007 .0010 .0014 .0019 .0024 .0019 .0024 .0030 .0014 .0019 .0024 .0030 .0045 .0054 .0054 .0054 .0054 .0054 .0054 .0054 .0054 .0054 .0054 .0054 .0054 .0054 .0054 .0054 .0054 .0054 .0054 .00555 .00555 .00555 .00555 .005555 .005555 .005555 .0055555 .0055555555

THETA (θ)

		<u> </u>			THE	$\Gamma A (\theta)$				
	z	.1	. 2	. 3	. 4	.5	.6	.7	. 8	• 9
13	5345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678999999999999999999999999999999999999							.0144 .0119 .0098 .0080 .0065 .0053 .0043 .0034 .0027 .0022 .0017 .0013 .0011 .0008 .0005 .0004 .0003 .0002 .0002 .0001 .0000	.0360 .0341 .0321 .0300 .0279 .0258 .0238 .0217 .0198 .0180 .0162 .0146 .0131 .0117 .0104 .0092 .0082 .0072 .0063 .0056 .0049 .0043 .0056 .0049 .0043 .0056 .0049 .0043 .0056 .0049 .0043 .0021 .0028 .0024 .0021 .0018 .0016 .0013 .0011 .0010 .0005 .0004 .0005 .0004 .0005 .0004 .0005 .0004 .0005 .0004 .0005 .0004 .0005 .0004 .0005 .0004 .0005 .0004 .0005 .0004 .0005 .0004 .0005 .0005 .0006 .0005 .0006 .0005 .0006 .0005 .0006 .0005 .0007 .0006 .0007 .0006 .0006 .0007 .0007 .0006 .0007 .0007 .0006 .0007 .0006 .0007 .00007 .0007	.0146 .0155 .0166 .0173 .0181 .0188 .0195 .0201 .0206 .0210 .0213 .0216 .0219 .0176 .0170 .0170 .0170 .0170 .0142 .0130 .0125 .0119 .0125 .0129 .0029

THETA (θ)

A		r			IHE.	$\Gamma A (\theta)$				
n	Z	.1	. 2	.3	.4	. 5	.6	.7	. 8	.9
13	100 101	.0000	.0000 .0000	.0000	.0000.	.0000	.0000	.0000	.0000	.0072
	102	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0068
	103	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0060
	104	.00.00	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0057
	105	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0054
	106 107	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0050
	108	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0047
	109	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0045
	110	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0039
	111	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0037
	112	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0035
	113 114	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0032
	115	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0030 .0028
	116	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0027
	117	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0025
	118	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0023
	119	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0022
	120 121	.0000	.0000	.0000	.0000	.0000	.0000.	.0000	.0000	.0020 .0019
	122	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0013
	123	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0016
	124	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0015
	125	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0014
	126 127	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0013
	128	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0012 .0011
	129	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0011
	130	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0010
	131	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0009
	132 133	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0008
	134	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0007
	135	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0007
	136	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0006
	137	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0006
	138	.0000	.0000	.0000	.0000		.0000	.0000	.0000	.0005
	139 140	.0000	.0000	.0000	.0000	.0000	.0000	.0000.	.0000	.0005
	141	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0004
	142	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0004
	143	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0004
	144	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0003
,	145 146	.0000	.0000	.0000	,0000,	.0000	.0000	.0000	.0000	.0003
	T401		.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0003

n	z	.1	. 2	. 3	.4	. 5	.6	.7	. 8	.9
13	147 148 149 150 151 152 153 154 155 156 157	.0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000	.0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000	.0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000	.0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000	.0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000	.0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000	.0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000	.0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000	.0003 .0002 .0002 .0002 .0002 .0002 .0002 .0001 .0001 .0001
14	289 3123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678900012345678900123456789000000000000000000000000000000000000	.3773 .3521 .1790 .0657 .0195 .0050 .0011 .0002 .0000	.1295 .2418 .2458 .1804 .1070 .0545 .0247 .0102 .0039 .0014 .0005 .0000 .	.0396 .1108 .1690 .1861 .1655 .1264 .0859 .0532 .0306 .0166 .0085 .0042 .0020 .0009 .0004 .0002 .0001 .0000	.0104 .0389 .0792 .1162 .1379 .1403 .1271 .1051 .0806 .0582 .0398 .0261 .0165 .0000 .0059 .0034 .0019 .0011 .0006 .0003 .0003 .0001 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000	.0023 .0106 .0268 .0492 .0730 .0928 .1051 .1086 .1043 .0939 .0804 .0659 .0519 .0396 .0293 .0212 .0149 .0103 .0293 .0212 .0149 .0103 .0070 .0047 .0031 .0020 .0013 .0003 .0003 .0005 .0001 .0000 .0000 .0000 .0000 .0000	.0004 .0021 .0064 .0141 .0250 .0382 .0519 .0643 .0740 .0801 .0823 .0809 .0765 .0700 .0622 .0539 .0456 .0378 .0307 .0246 .0378 .0307 .0246 .0194 .0151 .0115 .0088 .0026 .0026 .0019 .0014 .0010 .0007 .0005 .0003	.0000 .0003 .0010 .0025 .0051 .0091 .0144 .0208 .0280 .0353 .0424 .0486 .0536 .0572 .0593 .0599 .0592 .0572 .0593 .0599 .0592 .0572 .0543 .0557 .0543 .0292 .0572 .0543 .0292 .0572 .0543 .0292 .0253 .0217 .0185 .0131 .0109 .0090 .0074 .0060 .0049	.0000 .0001 .0002 .0005 .0010 .0018 .0029 .0045 .0045 .0045 .0045 .0089 .0117 .0147 .0147 .0147 .0147 .0147 .0147 .0147 .0147 .0213 .0246 .0277 .0306 .0335 .0372 .0386 .0395 .0395 .0399 .0395 .0399 .0395 .0387 .0363 .0348 .03313 .0313 .0294 .0255	.0000 .0000 .0000 .0000 .0000 .0000 .0000 .0001 .0001 .0001 .0002 .0004 .0005 .0007 .0010 .0014 .0018 .0022 .0028 .0034 .0018 .0022 .0028 .0034 .0041 .0048 .0056 .0065 .0074 .0083 .0092 .0102 .0121 .0130 .0139 .0148 .0156 .0164 .0172

THETA (θ)

THETA (θ)

THETA (θ)

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THETA (θ)

•••••		1			INLIF					
	Z	.1	. 2	. 3	.4	.5	.6	.7	. 8	.9
14	157 158 159 160 161 162 163 164 165 166				.0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000					.0002 .0002 .0002 .0001 .0001 .0001 .0001 .0001 .0001
15	30123456789012345678901234567890123456789012345 555555555556666666666666666666666666	.3519 .3519 .1906 .0742 .0232 .0062 .0015 .0003 .0000	<pre>.1119 .2239 .2425 .1888 .1183 .0633 .0301 .0130 .0052 .0020 .0007 .0002 .0000 .</pre>	.0314 .0943 .1532 .1789 .1681 .1350 .0962 .0623 .0374 .0211 .0112 .0057 .0028 .0013 .0006 .0003 .0001 .0000	.0075 .0301 .0653 .1016 .1273 .1363 .1295 .1119 .0895 .0672 .0478 .0324 .0211 .0133 .0081 .0048 .0028 .0016 .0009 .0005 .0003 .0001 .0001 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000	.0015 .0073 .0198 .0386 .0604 .0808 .0960 .1037 .1037 .0973 .0865 .0734 .0598 .0471 .0359 .0267 .0194 .0137 .0095 .0065 .0044 .0029 .0019 .0012 .0005 .0001 .0001 .0001 .0000 .0000 .0000 .0000 .0000	.0002 .0013 .0041 .0097 .0182 .0292 .0417 .0540 .0648 .0730 .0778 .0772 .0775 .0732 .0775 .0732 .0671 .0598 .0520 .0443 .0370 .0303 .0244 .0194 .0152 .0118 .0090 .0068 .0024 .0038 .0026 .0051 .0038 .0025 .0018 .0020 .00182 .0020 .00182 .00182 .0182 .0778 .0779 .0775 .0779 .0775 .0779 .0775 .0779 .0775 .0779 .0775 .0770 .0778 .0792 .0118 .0090 .0051 .0008 .0020 .0015 .0011 .0008 .0020 .0015 .0011 .0008 .0020 .0015 .0001 .0008 .0002 .0015 .0001 .0003 .0002 .0001 .0003 .0002 .0003 .0002 .0003 .0002 .0000 .0005 .0003 .0002 .0003 .0002 .0003 .0002 .0003 .0000 .0003 .0000 .0003 .0000 .0003 .0000 .0003 .0000 .0003 .0000 .0003 .00000 .00000 .00000 .00000 .00000 .00000 .000000	.0000 .0001 .0005 .0014 .0032 .0059 .0099 .0150 .0209 .0275 .0342 .0406 .0464 .0511 .0546 .0568 .0577 .0573 .0558 .0557 .0573 .0558 .0557 .0558 .0555 .0343 .0565 .0343 .0265 .0343 .0265 .0229 .0197 .0168 .0142 .0100 .0168 .0142 .0100 .0168 .01656	.0000 .0000 .0000 .0001 .0002 .0005 .0010 .0017 .0027 .0041 .0059 .0079 .0104 .0131 .0159 .0220 .0249 .0277 .0303 .0326 .0345 .0361 .0373 .0384 .0384 .0384 .0384 .0384 .0384 .03851 .0325 .0269	.0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0001 .0001 .0001 .0002 .0003 .0004 .0005 .0007 .0010 .0013 .0017 .0021 .0021 .0021 .0021 .0021 .0021 .0021 .0031 .0037 .0043 .0050 .0058 .0059 .0058 .0058 .0058 .0059 .0058 .0059 .0058 .0059 .0058 .0059 .0058 .0059 .0058 .0059 .0058 .0059 .0058 .0059 .0058 .0059 .0058 .0059 .0059 .0058 .0059 .0058 .0059 .0059 .0059 .0058 .0059 .0059 .0059 .0059 .0059 .0059 .0059 .0059 .0058 .0059 .0059 .0059 .0059 .0059 .0058 .0059 .0058 .0059 .0014 .0017 .0014 .0059 .0014 .0014 .0017 .0014

THETA (0)

					INEI	1 (0)				
n	z	.1	. 2	. 3	.4	.5	.6	.7	. 8	. 9
	2 667890123456789001234567890012345678900123456789001234567890012345678900123456789001234567890012345678900123456789000000000000000000000000000000000000		. 2 . 0000 . 00000 . 00000 . 00000 . 0000 . 0000 . 0000 . 0000 . 0000 . 0000						.8 .0251 .0164 .0148 .0134 .0120 .0096 .0096 .0096 .0075 .0067 .0059 .0052 .0046 .0040 .0035 .0023 .0023 .0023 .0023 .0023 .0023 .0023 .0023 .0023 .0023 .0023 .0023 .0023 .0015 .0016 .0023 .0023 .0020 .0023 .0020 .0017 .0015 .0017 .0015 .0017 .0010 .0010 .0023 .0020 .0023 .0020 .0023 .0020 .0020 .0020 .0020 .0020 .0020 .0020 .00000 .000000	.9 .0156 .0163 .0170 .0175 .0185 .0190 .0193 .0196 .0193 .0196 .0202 .0203 .0197 .0194 .0197 .0194 .0197 .0177 .0175 .0169 .0126 .0126 .0126 .0126 .0126 .0127 .0177 .0169 .0126 .0026 .00

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THETA (0)

					THET	<u>A (0)</u>				
	z	.1	. 2	.3	. 4	.5	.6	.7	. 8	.9
<u>1</u> 15	113 114 115 117 118 120 1223 125 127 128 130 132 133 136 138 140 142 145 148 148 148 148 148 148 155 155 155 155 155 155 155 155 155				. 4 . 0000 . 0000					.9 .0069 .0066 .0059 .0056 .0053 .0050 .0044 .0042 .0040 .0037 .0035 .0033 .0031 .0029 .0027 .0026 .0024 .0023 .0021 .0020 .0021 .0020 .0017 .0016 .0015 .0015 .0014 .0015 .0015 .0014 .0012 .0010 .0015 .0014 .0015 .0015 .0014 .0015 .0015 .0014 .0015 .0015 .0016 .0015 .0016 .0015 .0016 .0015 .0016 .0015 .0016 .0015 .0017 .0016 .0015 .0017 .0016 .0015 .0017 .0016 .0015 .0017 .0016 .0015 .0017 .0016 .0015 .0017 .0016 .0015 .0017 .0016 .0015 .0017 .0016 .0015 .0017 .0016 .0015 .0017 .0016 .0015 .0017 .0016 .0015 .0017 .0016 .0015 .0017 .0016 .0015 .0017 .0016 .0015 .0017 .0016 .0015 .0017 .0016 .0015 .0017 .0016 .0015 .0017 .0016 .0017 .0016 .0015 .0017 .0016 .0017 .0016 .0017 .0016 .0017 .0016 .0017 .0016 .0017 .0016 .0017 .0016 .0017 .0016 .0017 .0016 .0017 .0016 .0017 .0016 .0017 .0016 .0017 .0016 .0017 .0016 .00017 .00010 .0010 .0010 .0010 .00000 .0000 .0000 .0000 .0000 .0000 .00000 .00000 .00000 .00000 .00000 .00000 .000000

THETA (0)

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