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I. INTRODUCTION

The Riemann Zeta function has been of fundamental importance in the theory of prime numbers and also for allied functions such as the Gamma function. The literature and numerical tables for the Riemann Zeta function are hence relatively abundant. This is, however, not the case for the generalized Riemann Zeta function.

This report introduces the Riemann Zeta function of incomplete mode, a further generalization. The values of the generalized Riemann function and those of the incomplete mode are given for a specific range of the variables. The present calculation was initiated in order to fulfill a need in the neutron cross-section study as described in Section IV below. Other physical applications of the tables in a wider scope are also suggested.

II. DEFINITIONS

The generalized Riemann Zeta function of incomplete mode is defined by the equation

$$\zeta_N(s,a) = \sum_{n=0}^{N} \frac{1}{(a+n)^s}, \tag{1}$$

where n and N are nonnegative integers, and we suppose that the constant "a" is a real number. The function $\zeta_N(s,a)$ is also defined in terms of infinite integrals as follows:

$$\Gamma(s)\zeta_N(s,a) = \sum_{n=0}^{N} \int_0^\infty x^{s-1} e^{-(n+a)x} dx$$

$$= \int_0^\infty \frac{x^{s-1}e^{-ax}}{1-e^{-x}} dx - \int_0^\infty \frac{x^{s-1}}{1-e^{-x}} e^{-(N+1+a)x} dx, \tag{2}$$

where

$$\int_0^{\infty} \frac{x^{s-1}e^{-ax}}{1 - e^{-x}}\, dx = \Gamma(s)\zeta(s,a). \tag{3}$$

Here $\zeta(s,a)$ is the generalized Riemann Zeta function (of complete mode) (see Ref. 16, p. 265), and

$$\lim_{N\to\infty} \zeta_N(s,a) = \zeta(s,a). \tag{4}$$

It is evident that

$$\zeta_N(s,a+m) = \zeta_N(s,a) - \zeta_{m-1}(s,a), \tag{5}$$

where m is a positive integer and $m \leq N$. The Riemann Zeta function of incomplete mode, $\zeta_N(s)$, is defined by the equation

$$\zeta_N(s) = \zeta_{N-1}(s,1) = \sum_{n=1}^{N} \frac{1}{n^s}. \tag{6}$$

Titchmarsh[15] and Chandrasekharan[2] have reviewed the literature on $\zeta(s)$ and $\zeta(s,a)$.

III. NUMERICAL CALCULATIONS

We confine ourselves to the case for which $a > 0$. Numerical tables for $\zeta(s,a)$ have been available for some specific cases:

$a = 0(0.1)2$, $s = -10(0.1)0$ and $(s-1)\zeta(s,a)$ for $a = 0(0.1)2$, $s = 0(0.1)1$ (Ref. 8);

$a = 0.1(0.1)10$ for $s = -7, -6(0.5)0, 1.5(0.5)7.5$ and for $s = \sigma + it$ with $\sigma = 1(1)5$ and $t = 0(1)5$ (Ref. 13);

$a = 3(1/12)4$ and $a = 3(0.05)4$, each for $s = 2(2)8$ (Ref. 3).

Pearson and Pearson[12] have given tables for $\zeta_N(s)$ with $s = 1(1)4$ and $N = 1$ to 100. Jones[11] has computed $\zeta_N(s)$ for $s = 2$ and $N = 100$, 200(200)1000. Several useful equations for evaluating $\zeta(s)$ and $\zeta_N(s)$ are given by Jolley.[10] For other related tables, one may refer to Fletcher et al.[6]

For our numerical calculations, the following formulae were derived and found to be the most practical. We utilize the equation

$$\frac{x}{e^x - 1} = \sum_{n=0}^{\infty} \frac{B_n}{n!} x^n, \tag{7}$$

where B_n is Bernoulli's number. Equation (2) is then expressed as

$$\Gamma(s)\zeta_N(s,a) = \Gamma(s)\zeta(s,a) - \sum_{n=0}^{\infty} \frac{B_n(n+s-2)!}{n!(N+a)^{n+s-1}}, \tag{8}$$

where $s \geq 2$. The series in (8) converges very rapidly for large N. We also obtain

$$\Gamma(s)\zeta(s,a) = \sum_{n=0}^{\infty} \frac{B_n(n+s-2)!}{n!(a-1)^{n+s-1}}, \tag{9}$$

where $s \geq 2$ and $a \neq 1$. For $a < 1$, the series in (9) should be replaced by two terms:

$$\Gamma(s)\zeta(s,a) = \sum_{n=0}^{m} \frac{1}{(a+n)^s} + \sum_{n=0}^{\infty} \frac{B_n(n+s-2)!}{n!(a+m)^{n+s-1}}, \tag{10}$$

where m is an arbitrary positive integer and the second series converges more rapidly for larger m.

The formulae for special cases are as follows. Taking $s = 1$ and $a = 1$, we have

$$\zeta_{N-1}(1,1) = \zeta_N(1) = \sum_{n=1}^{N} \frac{1}{n}$$

$$= \text{Euler's constant} + \log_e N - \sum_{n=1}^{\infty} \frac{B_n}{nN^n}$$

$$= 0.57721566 + 2.30258509 \log_{10} N$$

$$+ \frac{1}{2N} - \frac{1}{12N^2} + \frac{1}{120N^4} - \frac{1}{252N^6} + \cdots\,. \tag{11}$$

The rate of divergence in $\zeta_N(1)$ is slow as demonstrated below:

$$\zeta_N(1) = 7.48547 \text{ for } N = 10^3;$$

$$14.39273 \text{ for } N = 10^6;$$

$$21.30048 \text{ for } N = 10^9.$$

When $s \geq 2$ and $a = 1$, we have

$$\zeta_{N-1}(s,1) = \zeta_N(s) = \zeta(s) - \sum_{n=0}^{\infty} \frac{1}{(N+1+n)^s}$$

$$= \zeta(s) - \frac{1}{\Gamma(s)} \sum_{n=0}^{\infty} \frac{B_n(n+s-2)!}{n!N^{n+s-1}}, \tag{12}$$

where

$$\zeta(s) = \frac{(2\pi)^s |B_s|}{2(s!)} \tag{13}$$

for an even integer of s and the $\zeta(s)$ values for odd integers of s are given by Jolley.[10] When $s = 2$, we have

$$\zeta_{N-1}(2,1) = \zeta_N(2) = \sum_{n=1}^{N} \frac{1}{n^2} = \frac{\pi^2}{6} - \sum_{n=0}^{\infty} \frac{B_n}{N^{n+1}}$$

$$= 1.64493407 - \frac{1}{N} + \frac{1}{2N^2} - \frac{1}{6N^3} + \frac{1}{30N^5} - \frac{1}{42N^7} + \ldots . \tag{14}$$

In particular, if $a = 0.5$, since

$$\zeta(s,0.5) = (2^s - 1)\,\zeta(s) \tag{15}$$

(see Ref. 16, p. 267), we have, as an example,

$$\zeta(2,0.5) = 3\zeta(2) = 4.93480220. \tag{16}$$

Table 1 lists 4 places-after-decimal values of the following:

$$\zeta^1_N(1,a) = \sum_{n=1}^{N} \frac{1}{a+n} = \zeta_N(1,a) - \frac{1}{a}, \tag{17}$$

where $a = 0.01(0.01)0.5$; $0.5(0.02)1$, and $N = 1(1)100$;

$$\zeta^1_N(2,a) = \sum_{n=1}^{N} \frac{1}{(a+n)^2} = \zeta_N(2,a) - \frac{1}{a^2}, \tag{18}$$

where a = 0.01(0.01)0.5; 0.5(0.02)1, and N = 1(1)50. For $a > 1$, one may utilize the Equation (5).

In Table 2, 4 places-after-decimal values of $\zeta(2,a)$ are given for a = 0.01(0.0005)0.5; 0.5(0.001)1. The calculation was carried out by use of the relation,

$$\zeta(2,a) = \sum_{n=0}^{m} \frac{1}{(a+n)^2} + \sum_{n=0}^{\infty} \frac{B_n}{(a+m)^n}. \tag{19}$$

For 6 places-after-decimal accuracy, if m = 10, only five terms are needed in the second summation.

The computer programs were coded in the FORTRAN language and are also given in Tables 1 and 2. The calculation was carried out with the Control Data 3600 computation.

Table 1

COMPUTER PROGRAM AND NUMERICAL VALUES FOR $\zeta_N^1(1, A)$ AND $\zeta_N^1(2, A)$

FTN4.10 01/05/65

```
      PROGRAM C114
      DIMENSION ZETA(2,1001),AA(100)
 1000 FORMAT(6X,1HA,F5.2,3X,7(F5.2,3X))
 2000 FORMAT(2X,I3,8F8.4)
 3000 FORMAT(19X,8HCASE S =I2)
 4000 FORMAT(4X,1HN)
 8000 FORMAT(1H1)
 9000 FORMAT(1H )
      P2 = .01
      DO 10 I = 1,2
      DO 10 J = 1,1001
   10 ZETA(I,J) = 0.
      III = 0
      IS = 1
  120 INI = 1
      INF = 8
   90 I1 = 1
      I2 = 50
   60 III = III + 1
      WRITE OUTPUT TAPE 61, 8000
      WRITE OUTPUT TAPE 62, 3000, IS
      WRITE OUTPUT TAPE 61, 9000
      DO 40 IN = I1,I2
      NN = IN - 1
      A = (INI - 1)*P2
      IF (INI - 49)4196,4197,4197
 4197 A = A - .5
 4196 DO 1 IA = INI,INF
      IF (IA - 49)4293,4291,4292
 4292 IF (IA - 51)4293,4294,4293
 4291 A = A + .5
      GO TO 4293
 4294 P2 = .02
 4293 A = A + P2
      ZETA(IS,IA) = ZETA(IS,IA) + 1./(A+IN)**IS
    1 AA(IA) = A
      IF (NN)20,20,30
   30 IF (NN - 50)44,20,44
   20 WRITE OUTPUT TAPE 61, 1000, (AA(IA),IA = INI,INF)
      WRITE OUTPUT TAPE 61, 4000
   44 WRITE OUTPUT TAPE 61, 2000, IN, (ZETA(IS,IA),IA = INI,INF)
      IF (INI - 49)40,41,40
   41 P2 = .01
   40 CONTINUE
      IF (IS - 2)88,70,70
   88 IF (I1 - 51)50,70,70
   50 I1 = 51
      I2 = 100
      GO TO 60
   70 INI = INI + 8
      INF = INF + 8
      IF (INI - 50)90,91,91
   91 P2 = .02
      IF (INI - 73)90,54,110
   54 INF = 75
      GO TO 90
```

FTN4.10 01/05/65

```
110 IF (IS - 1)112,112,119
112 IS = 2
    P2 = .01
    III = 0
    GO TO 120
119 WRITE OUTPUT TAPE 61, 8000
    END
```

$\zeta^{1}_{N}(1,A)$

N \ A	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08
1	0.9901	0.9804	0.9709	0.9615	0.9524	0.9434	0.9346	0.9259
2	1.4876	1.4754	1.4635	1.4517	1.4402	1.4288	1.4177	1.4067
3	1.8198	1.8066	1.7935	1.7807	1.7681	1.7556	1.7434	1.7314
4	2.0692	2.0553	2.0417	2.0282	2.0150	2.0019	1.9891	1.9765
5	2.2688	2.2545	2.2405	2.2266	2.2130	2.1996	2.1863	2.1733
6	2.4352	2.4206	2.4063	2.3922	2.3783	2.3646	2.3511	2.3378
7	2.5779	2.5631	2.5485	2.5342	2.5201	2.5062	2.4925	2.4790
8	2.7027	2.6878	2.6731	2.6586	2.6443	2.6303	2.6164	2.6028
9	2.8137	2.7986	2.7838	2.7692	2.7548	2.7407	2.7267	2.7129
10	2.9136	2.8984	2.8835	2.8688	2.8543	2.8401	2.8260	2.8121
11	3.0044	2.9892	2.9742	2.9594	2.9448	2.9305	2.9163	2.9024
12	3.0877	3.0724	3.0573	3.0425	3.0278	3.0134	2.9992	2.9852
13	3.1645	3.1492	3.1341	3.1192	3.1045	3.0900	3.0757	3.0616
14	3.2359	3.2205	3.2053	3.1904	3.1756	3.1611	3.1468	3.1326
15	3.3025	3.2871	3.2719	3.2569	3.2421	3.2275	3.2131	3.1990
16	3.3650	3.3495	3.3343	3.3192	3.3044	3.2898	3.2754	3.2611
17	3.4238	3.4083	3.3930	3.3779	3.3630	3.3484	3.3339	3.3197
18	3.4793	3.4638	3.4484	3.4333	3.4184	3.4038	3.3893	3.3750
19	3.5319	3.5163	3.5010	3.4858	3.4709	3.4562	3.4417	3.4274
20	3.5819	3.5663	3.5509	3.5357	3.5208	3.5061	3.4915	3.4772
21	3.6295	3.6139	3.5985	3.5833	3.5683	3.5536	3.5390	3.5247
22	3.6749	3.6593	3.6439	3.6286	3.6137	3.5989	3.5843	3.5699
23	3.7184	3.7027	3.6873	3.6721	3.6570	3.6423	3.6277	3.6133
24	3.7600	3.7443	3.7289	3.7136	3.6986	3.6838	3.6692	3.6548
25	3.8000	3.7843	3.7688	3.7536	3.7385	3.7237	3.7091	3.6947
26	3.8385	3.8227	3.8073	3.7920	3.7769	3.7621	3.7475	3.7330
27	3.8755	3.8598	3.8443	3.8290	3.8139	3.7990	3.7844	3.7699
28	3.9112	3.8954	3.8799	3.8646	3.8496	3.8347	3.8200	3.8056
29	3.9457	3.9299	3.9144	3.8991	3.8840	3.8691	3.8544	3.8399
30	3.9790	3.9632	3.9477	3.9324	3.9173	3.9024	3.8877	3.8732
31	4.0112	3.9955	3.9799	3.9646	3.9495	3.9346	3.9199	3.9054
32	4.0425	4.0267	4.0111	3.9958	3.9807	3.9657	3.9510	3.9365
33	4.0728	4.0570	4.0414	4.0261	4.0109	3.9960	3.9813	3.9668
34	4.1022	4.0864	4.0708	4.0554	4.0403	4.0254	4.0106	3.9961
35	4.1307	4.1149	4.0993	4.0840	4.0688	4.0539	4.0391	4.0246
36	4.1585	4.1427	4.1271	4.1117	4.0966	4.0816	4.0669	4.0523
37	4.1855	4.1697	4.1541	4.1387	4.1235	4.1086	4.0938	4.0793
38	4.2118	4.1960	4.1804	4.1650	4.1498	4.1349	4.1201	4.1056
39	4.2375	4.2216	4.2060	4.1906	4.1754	4.1605	4.1457	4.1311
40	4.2625	4.2466	4.2310	4.2156	4.2004	4.1854	4.1707	4.1561
41	4.2868	4.2710	4.2554	4.2400	4.2248	4.2098	4.1950	4.1804
42	4.3106	4.2948	4.2792	4.2637	4.2485	4.2336	4.2188	4.2042
43	4.3339	4.3180	4.3024	4.2870	4.2718	4.2568	4.2420	4.2274
44	4.3566	4.3407	4.3251	4.3097	4.2945	4.2795	4.2647	4.2501
45	4.3788	4.3630	4.3473	4.3319	4.3167	4.3017	4.2869	4.2723
46	4.4006	4.3847	4.3690	4.3536	4.3384	4.3234	4.3086	4.2940
47	4.4218	4.4060	4.3903	4.3749	4.3596	4.3446	4.3298	4.3152
48	4.4427	4.4268	4.4111	4.3957	4.3805	4.3654	4.3506	4.3360
49	4.4631	4.4472	4.4315	4.4161	4.4008	4.3858	4.3710	4.3564
50	4.4831	4.4672	4.4515	4.4361	4.4208	4.4058	4.3910	4.3764

$\zeta_N^1(1,A)$

N \ A	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08
51	4.5027	4.4868	4.4711	4.4556	4.4404	4.4254	4.4106	4.3959
52	4.5219	4.5060	4.4903	4.4749	4.4596	4.4446	4.4298	4.4152
53	4.5408	4.5249	4.5092	4.4937	4.4785	4.4634	4.4486	4.4340
54	4.5593	4.5434	4.5277	4.5122	4.4970	4.4819	4.4671	4.4525
55	4.5775	4.5615	4.5459	4.5304	4.5151	4.5001	4.4853	4.4706
56	4.5953	4.5794	4.5637	4.5482	4.5330	4.5179	4.5031	4.4885
57	4.6129	4.5969	4.5812	4.5658	4.5505	4.5355	4.5206	4.5060
58	4.6301	4.6142	4.5985	4.5830	4.5677	4.5527	4.5378	4.5232
59	4.6470	4.6311	4.6154	4.5999	4.5847	4.5696	4.5548	4.5401
60	4.6637	4.6478	4.6321	4.6166	4.6013	4.5863	4.5714	4.5568
61	4.6801	4.6642	4.6485	4.6330	4.6177	4.6026	4.5878	4.5731
62	4.6962	4.6803	4.6646	4.6491	4.6338	4.6188	4.6039	4.5893
63	4.7121	4.6962	4.6804	4.6650	4.6497	4.6346	4.6198	4.6051
64	4.7277	4.7118	4.6961	4.6806	4.6653	4.6502	4.6354	4.6207
65	4.7431	4.7272	4.7114	4.6959	4.6807	4.6656	4.6507	4.6361
66	4.7582	4.7423	4.7266	4.7111	4.6958	4.6807	4.6659	4.6512
67	4.7732	4.7572	4.7415	4.7260	4.7107	4.6957	4.6808	4.6661
68	4.7879	4.7719	4.7562	4.7407	4.7254	4.7103	4.6955	4.6808
69	4.8024	4.7864	4.7707	4.7552	4.7399	4.7248	4.7100	4.6953
70	4.8166	4.8007	4.7850	4.7695	4.7542	4.7391	4.7242	4.7096
71	4.8307	4.8148	4.7990	4.7835	4.7682	4.7532	4.7383	4.7236
72	4.8446	4.8287	4.8129	4.7974	4.7821	4.7670	4.7522	4.7375
73	4.8583	4.8424	4.8266	4.8111	4.7958	4.7807	4.7659	4.7512
74	4.8718	4.8559	4.8401	4.8246	4.8093	4.7942	4.7794	4.7647
75	4.8852	4.8692	4.8535	4.8379	4.8226	4.8076	4.7927	4.7780
76	4.8983	4.8823	4.8666	4.8511	4.8358	4.8207	4.8058	4.7911
77	4.9113	4.8953	4.8796	4.8641	4.8488	4.8337	4.8188	4.8041
78	4.9241	4.9081	4.8924	4.8769	4.8616	4.8465	4.8316	4.8169
79	4.9368	4.9208	4.9051	4.8895	4.8742	4.8591	4.8443	4.8296
80	4.9493	4.9333	4.9176	4.9020	4.8867	4.8716	4.8567	4.8421
81	4.9616	4.9456	4.9299	4.9144	4.8991	4.8840	4.8691	4.8544
82	4.9738	4.9578	4.9421	4.9266	4.9113	4.8962	4.8813	4.8666
83	4.9859	4.9699	4.9541	4.9386	4.9233	4.9082	4.8933	4.8786
84	4.9978	4.9818	4.9660	4.9505	4.9352	4.9201	4.9052	4.8905
85	5.0095	4.9935	4.9778	4.9623	4.9470	4.9318	4.9170	4.9023
86	5.0212	5.0052	4.9894	4.9739	4.9586	4.9435	4.9286	4.9139
87	5.0326	5.0167	5.0009	4.9854	4.9701	4.9550	4.9401	4.9254
88	5.0440	5.0280	5.0123	4.9967	4.9814	4.9663	4.9514	4.9367
89	5.0552	5.0393	5.0235	5.0080	4.9926	4.9775	4.9626	4.9479
90	5.0664	5.0504	5.0346	5.0191	5.0038	4.9886	4.9737	4.9590
91	5.0773	5.0614	5.0456	5.0301	5.0147	4.9996	4.9847	4.9700
92	5.0882	5.0722	5.0565	5.0409	5.0256	5.0105	4.9956	4.9809
93	5.0990	5.0830	5.0672	5.0517	5.0363	5.0212	5.0063	4.9916
94	5.1096	5.0936	5.0778	5.0623	5.0470	5.0319	5.0170	5.0023
95	5.1201	5.1041	5.0884	5.0728	5.0575	5.0424	5.0275	5.0128
96	5.1305	5.1145	5.0988	5.0832	5.0679	5.0528	5.0379	5.0232
97	5.1408	5.1249	5.1091	5.0935	5.0782	5.0631	5.0482	5.0335
98	5.1510	5.1351	5.1193	5.1037	5.0884	5.0733	5.0584	5.0437
99	5.1611	5.1452	5.1294	5.1138	5.0985	5.0834	5.0685	5.0538
100	5.1711	5.1552	5.1394	5.1238	5.1085	5.0934	5.0785	5.0638

$\zeta_N^1(1,A)$

N \ A	0.09	0.10	0.11	0.12	0.13	0.14	0.15	0.16
1	0.9174	0.9091	0.9009	0.8929	0.8850	0.8772	0.8696	0.8621
2	1.3959	1.3853	1.3748	1.3646	1.3544	1.3445	1.3347	1.3250
3	1.7195	1.7079	1.6964	1.6851	1.6739	1.6630	1.6521	1.6415
4	1.9640	1.9518	1.9397	1.9278	1.9161	1.9045	1.8931	1.8819
5	2.1605	2.1478	2.1354	2.1231	2.1110	2.0991	2.0873	2.0757
6	2.3247	2.3118	2.2990	2.2865	2.2741	2.2619	2.2499	2.2380
7	2.4657	2.4526	2.4397	2.4269	2.4144	2.4020	2.3897	2.3777
8	2.5893	2.5761	2.5630	2.5501	2.5374	2.5248	2.5124	2.5002
9	2.6994	2.6860	2.6728	2.6597	2.6469	2.6342	2.6217	2.6094
10	2.7985	2.7850	2.7717	2.7586	2.7456	2.7329	2.7203	2.7078
11	2.8886	2.8751	2.8617	2.8485	2.8355	2.8226	2.8099	2.7974
12	2.9713	2.9577	2.9443	2.9310	2.9179	2.9050	2.8922	2.8797
13	3.0477	3.0340	3.0205	3.0072	2.9941	2.9811	2.9683	2.9556
14	3.1187	3.1050	3.0914	3.0780	3.0648	3.0518	3.0390	3.0263
15	3.1850	3.1712	3.1576	3.1442	3.1309	3.1179	3.1050	3.0922
16	3.2471	3.2333	3.2197	3.2062	3.1929	3.1798	3.1669	3.1541
17	3.3056	3.2918	3.2781	3.2646	3.2513	3.2382	3.2252	3.2124
18	3.3609	3.3470	3.3333	3.3198	3.3065	3.2933	3.2803	3.2675
19	3.4133	3.3994	3.3857	3.3721	3.3587	3.3455	3.3325	3.3196
20	3.4631	3.4491	3.4354	3.4218	3.4084	3.3952	3.3821	3.3693
21	3.5105	3.4965	3.4828	3.4692	3.4557	3.4425	3.4294	3.4165
22	3.5558	3.5418	3.5280	3.5144	3.5009	3.4877	3.4746	3.4616
23	3.5991	3.5851	3.5713	3.5576	3.5442	3.5309	3.5178	3.5048
24	3.6406	3.6266	3.6127	3.5991	3.5856	3.5723	3.5592	3.5462
25	3.6804	3.6664	3.6526	3.6389	3.6254	3.6121	3.5989	3.5859
26	3.7188	3.7047	3.6909	3.6772	3.6637	3.6503	3.6372	3.6242
27	3.7557	3.7416	3.7277	3.7141	3.7005	3.6872	3.6740	3.6610
28	3.7913	3.7772	3.7633	3.7496	3.7361	3.7227	3.7095	3.6965
29	3.8257	3.8116	3.7977	3.7840	3.7704	3.7570	3.7438	3.7308
30	3.8589	3.8448	3.8309	3.8172	3.8036	3.7902	3.7770	3.7640
31	3.8911	3.8770	3.8630	3.8493	3.8357	3.8223	3.8091	3.7960
32	3.9222	3.9081	3.8942	3.8804	3.8668	3.8534	3.8402	3.8271
33	3.9524	3.9383	3.9244	3.9106	3.8970	3.8836	3.8704	3.8573
34	3.9818	3.9676	3.9537	3.9399	3.9263	3.9129	3.8997	3.8866
35	4.0103	3.9961	3.9822	3.9684	3.9548	3.9414	3.9281	3.9150
36	4.0380	4.0238	4.0099	3.9961	3.9825	3.9690	3.9558	3.9427
37	4.0649	4.0508	4.0368	4.0230	4.0094	3.9960	3.9827	3.9696
38	4.0912	4.0770	4.0631	4.0493	4.0356	4.0222	4.0089	3.9958
39	4.1168	4.1026	4.0886	4.0748	4.0612	4.0477	4.0344	4.0213
40	4.1417	4.1275	4.1136	4.0997	4.0861	4.0726	4.0594	4.0462
41	4.1661	4.1519	4.1379	4.1241	4.1104	4.0970	4.0837	4.0705
42	4.1898	4.1756	4.1616	4.1478	4.1342	4.1207	4.1074	4.0942
43	4.2130	4.1988	4.1848	4.1710	4.1573	4.1439	4.1306	4.1174
44	4.2357	4.2215	4.2075	4.1937	4.1800	4.1665	4.1532	4.1401
45	4.2579	4.2437	4.2297	4.2158	4.2022	4.1887	4.1754	4.1622
46	4.2796	4.2654	4.2513	4.2375	4.2238	4.2103	4.1970	4.1839
47	4.3008	4.2866	4.2726	4.2587	4.2451	4.2316	4.2182	4.2051
48	4.3216	4.3074	4.2934	4.2795	4.2658	4.2523	4.2390	4.2258
49	4.3420	4.3278	4.3137	4.2999	4.2862	4.2727	4.2593	4.2462
50	4.3620	4.3477	4.3337	4.3198	4.3061	4.2926	4.2793	4.2661

$\zeta^{1}_{N}(1,A)$

N \ A	0.09	0.10	0.11	0.12	0.13	0.14	0.15	0.16
51	4.3815	4.3673	4.3532	4.3394	4.3257	4.3122	4.2988	4.2857
52	4.4007	4.3865	4.3724	4.3586	4.3449	4.3314	4.3180	4.3048
53	4.4196	4.4053	4.3913	4.3774	4.3637	4.3502	4.3368	4.3236
54	4.4380	4.4238	4.4097	4.3959	4.3822	4.3686	4.3553	4.3421
55	4.4562	4.4420	4.4279	4.4140	4.4003	4.3868	4.3734	4.3602
56	4.4740	4.4598	4.4457	4.4318	4.4181	4.4046	4.3912	4.3780
57	4.4915	4.4773	4.4632	4.4493	4.4356	4.4221	4.4087	4.3955
58	4.5088	4.4945	4.4804	4.4665	4.4528	4.4393	4.4259	4.4127
59	4.5257	4.5114	4.4973	4.4835	4.4697	4.4562	4.4428	4.4296
60	4.5423	4.5281	4.5140	4.5001	4.4864	4.4728	4.4595	4.4462
61	4.5587	4.5444	4.5303	4.5165	4.5027	4.4892	4.4758	4.4626
62	4.5748	4.5605	4.5464	4.5326	4.5188	4.5053	4.4919	4.4787
63	4.5906	4.5764	4.5623	4.5484	4.5347	4.5211	4.5077	4.4945
64	4.6063	4.5920	4.5779	4.5640	4.5503	4.5367	4.5233	4.5101
65	4.6216	4.6073	4.5933	4.5793	4.5656	4.5521	4.5387	4.5255
66	4.6367	4.6225	4.6084	4.5945	4.5807	4.5672	4.5538	4.5406
67	4.6517	4.6374	4.6233	4.6094	4.5956	4.5821	4.5687	4.5555
68	4.6663	4.6521	4.6380	4.6240	4.6103	4.5967	4.5834	4.5701
69	4.6808	4.6665	4.6524	4.6385	4.6248	4.6112	4.5978	4.5846
70	4.6951	4.6808	4.6667	4.6528	4.6390	4.6255	4.6121	4.5988
71	4.7091	4.6949	4.6808	4.6668	4.6531	4.6395	4.6261	4.6129
72	4.7230	4.7087	4.6946	4.6807	4.6670	4.6534	4.6400	4.6268
73	4.7367	4.7224	4.7083	4.6944	4.6806	4.6671	4.6537	4.6404
74	4.7502	4.7359	4.7218	4.7079	4.6941	4.6805	4.6671	4.6539
75	4.7635	4.7492	4.7351	4.7212	4.7074	4.6939	4.6805	4.6672
76	4.7767	4.7624	4.7482	4.7343	4.7206	4.7070	4.6936	4.6803
77	4.7896	4.7753	4.7612	4.7473	4.7335	4.7200	4.7065	4.6933
78	4.8024	4.7881	4.7740	4.7601	4.7463	4.7328	4.7193	4.7061
79	4.8151	4.8008	4.7867	4.7727	4.7590	4.7454	4.7320	4.7187
80	4.8276	4.8133	4.7991	4.7852	4.7715	4.7579	4.7445	4.7312
81	4.8399	4.8256	4.8115	4.7975	4.7838	4.7702	4.7568	4.7435
82	4.8521	4.8378	4.8237	4.8097	4.7960	4.7824	4.7689	4.7557
83	4.8641	4.8498	4.8357	4.8217	4.8080	4.7944	4.7810	4.7677
84	4.8760	4.8617	4.8476	4.8336	4.8199	4.8063	4.7929	4.7796
85	4.8878	4.8734	4.8593	4.8454	4.8316	4.8180	4.8046	4.7913
86	4.8994	4.8851	4.8709	4.8570	4.8432	4.8296	4.8162	4.8030
87	4.9109	4.8965	4.8824	4.8685	4.8547	4.8411	4.8277	4.8144
88	4.9222	4.9079	4.8938	4.8798	4.8660	4.8525	4.8390	4.8258
89	4.9334	4.9191	4.9050	4.8910	4.8773	4.8637	4.8502	4.8370
90	4.9445	4.9302	4.9161	4.9021	4.8884	4.8748	4.8613	4.8481
91	4.9555	4.9412	4.9271	4.9131	4.8993	4.8857	4.8723	4.8590
92	4.9664	4.9520	4.9379	4.9240	4.9102	4.8966	4.8832	4.8699
93	4.9771	4.9628	4.9487	4.9347	4.9209	4.9073	4.8939	4.8806
94	4.9877	4.9734	4.9593	4.9453	4.9316	4.9180	4.9045	4.8912
95	4.9983	4.9839	4.9698	4.9558	4.9421	4.9285	4.9150	4.9018
96	5.0087	4.9943	4.9802	4.9662	4.9525	4.9389	4.9254	4.9122
97	5.0190	5.0046	4.9905	4.9765	4.9628	4.9492	4.9357	4.9224
98	5.0292	5.0148	5.0007	4.9867	4.9730	4.9593	4.9459	4.9326
99	5.0392	5.0249	5.0108	4.9968	4.9830	4.9694	4.9560	4.9427
100	5.0492	5.0349	5.0208	5.0068	4.9930	4.9794	4.9660	4.9527

$\zeta^{1}_{N}(1,A)$

N \ A	0.17	0.18	0.19	0.20	0.21	0.22	0.23	0.24
1	0.8547	0.8475	0.8403	0.8333	0.8264	0.8197	0.8130	0.8065
2	1.3155	1.3062	1.2970	1.2879	1.2789	1.2701	1.2614	1.2529
3	1.6310	1.6206	1.6104	1.6004	1.5905	1.5807	1.5710	1.5615
4	1.8708	1.8599	1.8491	1.8385	1.8280	1.8176	1.8074	1.7974
5	2.0642	2.0529	2.0418	2.0308	2.0199	2.0092	1.9986	1.9882
6	2.2263	2.2147	2.2033	2.1921	2.1810	2.1700	2.1592	2.1485
7	2.3658	2.3540	2.3424	2.3310	2.3197	2.3085	2.2975	2.2866
8	2.4882	2.4763	2.4645	2.4529	2.4415	2.4301	2.4190	2.4079
9	2.5972	2.5852	2.5733	2.5616	2.5500	2.5386	2.5273	2.5162
10	2.6955	2.6834	2.6715	2.6596	2.6480	2.6365	2.6251	2.6138
11	2.7851	2.7729	2.7608	2.7489	2.7372	2.7256	2.7141	2.7028
12	2.8672	2.8550	2.8429	2.8309	2.8191	2.8074	2.7959	2.7845
13	2.9432	2.9308	2.9187	2.9067	2.8948	2.8831	2.8715	2.8600
14	3.0137	3.0014	2.9891	2.9771	2.9652	2.9534	2.9417	2.9303
15	3.0797	3.0672	3.0550	3.0429	3.0309	3.0191	3.0074	2.9959
16	3.1415	3.1290	3.1167	3.1046	3.0926	3.0807	3.0690	3.0574
17	3.1997	3.1873	3.1749	3.1627	3.1507	3.1388	3.1271	3.1154
18	3.2548	3.2423	3.2299	3.2177	3.2056	3.1937	3.1819	3.1703
19	3.3069	3.2944	3.2820	3.2698	3.2577	3.2457	3.2339	3.2222
20	3.3565	3.3440	3.3315	3.3193	3.3072	3.2952	3.2833	3.2717
21	3.4038	3.3912	3.3787	3.3664	3.3543	3.3423	3.3305	3.3187
22	3.4489	3.4363	3.4238	3.4115	3.3993	3.3873	3.3754	3.3637
23	3.4920	3.4794	3.4669	3.4546	3.4424	3.4304	3.4185	3.4067
24	3.5334	3.5207	3.5083	3.4959	3.4837	3.4717	3.4598	3.4480
25	3.5731	3.5605	3.5480	3.5356	3.5234	3.5113	3.4994	3.4876
26	3.6113	3.5987	3.5861	3.5738	3.5615	3.5495	3.5375	3.5257
27	3.6481	3.6355	3.6229	3.6105	3.5983	3.5862	3.5742	3.5624
28	3.6836	3.6709	3.6584	3.6460	3.6337	3.6216	3.6097	3.5978
29	3.7179	3.7052	3.6926	3.6802	3.6680	3.6559	3.6439	3.6320
30	3.7511	3.7383	3.7258	3.7133	3.7011	3.6889	3.6770	3.6651
31	3.7832	3.7704	3.7578	3.7454	3.7331	3.7210	3.7090	3.6971
32	3.8142	3.8015	3.7889	3.7765	3.7642	3.7520	3.7400	3.7281
33	3.8444	3.8316	3.8190	3.8066	3.7943	3.7821	3.7701	3.7582
34	3.8737	3.8609	3.8483	3.8358	3.8235	3.8113	3.7993	3.7874
35	3.9021	3.8893	3.8767	3.8642	3.8519	3.8397	3.8277	3.8158
36	3.9297	3.9170	3.9043	3.8918	3.8795	3.8673	3.8553	3.8434
37	3.9566	3.9438	3.9312	3.9187	3.9064	3.8942	3.8822	3.8702
38	3.9828	3.9700	3.9574	3.9449	3.9326	3.9204	3.9083	3.8964
39	4.0084	3.9956	3.9829	3.9704	3.9581	3.9459	3.9338	3.9219
40	4.0333	4.0204	4.0078	3.9953	3.9829	3.9707	3.9587	3.9467
41	4.0575	4.0447	4.0321	4.0196	4.0072	3.9950	3.9829	3.9710
42	4.0813	4.0684	4.0558	4.0433	4.0309	4.0187	4.0066	3.9947
43	4.1044	4.0916	4.0789	4.0664	4.0540	4.0418	4.0297	4.0178
44	4.1271	4.1142	4.1016	4.0890	4.0767	4.0644	4.0523	4.0404
45	4.1492	4.1364	4.1237	4.1112	4.0988	4.0865	4.0744	4.0625
46	4.1709	4.1580	4.1453	4.1328	4.1204	4.1082	4.0961	4.0841
47	4.1921	4.1792	4.1665	4.1540	4.1416	4.1294	4.1172	4.1053
48	4.2128	4.2000	4.1873	4.1747	4.1623	4.1501	4.1380	4.1260
49	4.2332	4.2203	4.2076	4.1951	4.1827	4.1704	4.1583	4.1463
50	4.2531	4.2402	4.2275	4.2150	4.2026	4.1903	4.1782	4.1662

$\zeta^{1}_{N}(1,A)$

N \ A	0.17	0.18	0.19	0.20	0.21	0.22	0.23	0.24
51	4.2726	4.2598	4.2471	4.2345	4.2221	4.2098	4.1977	4.1857
52	4.2918	4.2789	4.2662	4.2537	4.2413	4.2290	4.2169	4.2049
53	4.3106	4.2977	4.2850	4.2725	4.2601	4.2478	4.2357	4.2237
54	4.3291	4.3162	4.3035	4.2909	4.2785	4.2662	4.2541	4.2421
55	4.3472	4.3343	4.3216	4.3090	4.2966	4.2843	4.2722	4.2602
56	4.3650	4.3521	4.3394	4.3268	4.3144	4.3021	4.2900	4.2780
57	4.3825	4.3696	4.3569	4.3443	4.3319	4.3196	4.3075	4.2955
58	4.3997	4.3868	4.3741	4.3615	4.3491	4.3368	4.3246	4.3126
59	4.4166	4.4037	4.3910	4.3784	4.3660	4.3537	4.3415	4.3295
60	4.4332	4.4203	4.4076	4.3950	4.3826	4.3703	4.3581	4.3461
61	4.4495	4.4367	4.4239	4.4113	4.3989	4.3866	4.3745	4.3624
62	4.4656	4.4527	4.4400	4.4274	4.4150	4.4027	4.3905	4.3785
63	4.4815	4.4686	4.4558	4.4432	4.4308	4.4185	4.4063	4.3943
64	4.4970	4.4841	4.4714	4.4588	4.4464	4.4341	4.4219	4.4099
65	4.5124	4.4995	4.4867	4.4741	4.4617	4.4494	4.4372	4.4252
66	4.5275	4.5146	4.5019	4.4893	4.4768	4.4645	4.4523	4.4403
67	4.5424	4.5295	4.5167	4.5041	4.4917	4.4794	4.4672	4.4552
68	4.5571	4.5442	4.5314	4.5188	4.5063	4.4940	4.4819	4.4698
69	4.5715	4.5586	4.5459	4.5332	4.5208	4.5085	4.4963	4.4843
70	4.5858	4.5729	4.5601	4.5475	4.5350	4.5227	4.5105	4.4985
71	4.5998	4.5869	4.5741	4.5615	4.5491	4.5368	4.5246	4.5126
72	4.6137	4.6008	4.5880	4.5754	4.5629	4.5506	4.5384	4.5264
73	4.6273	4.6144	4.6017	4.5891	4.5766	4.5643	4.5521	4.5400
74	4.6408	4.6279	4.6151	4.6025	4.5901	4.5777	4.5656	4.5535
75	4.6541	4.6412	4.6284	4.6158	4.6034	4.5910	4.5789	4.5668
76	4.6673	4.6543	4.6416	4.6289	4.6165	4.6042	4.5920	4.5799
77	4.6802	4.6673	4.6545	4.6419	4.6294	4.6171	4.6049	4.5929
78	4.6930	4.6801	4.6673	4.6547	4.6422	4.6299	4.6177	4.6057
79	4.7056	4.6927	4.6799	4.6673	4.6548	4.6425	4.6303	4.6183
80	4.7181	4.7052	4.6924	4.6798	4.6673	4.6550	4.6428	4.6307
81	4.7304	4.7175	4.7047	4.6921	4.6796	4.6673	4.6551	4.6430
82	4.7426	4.7297	4.7169	4.7043	4.6918	4.6795	4.6673	4.6552
83	4.7546	4.7417	4.7289	4.7163	4.7038	4.6915	4.6793	4.6672
84	4.7665	4.7536	4.7408	4.7282	4.7157	4.7033	4.6911	4.6791
85	4.7782	4.7653	4.7525	4.7399	4.7274	4.7151	4.7029	4.6908
86	4.7899	4.7769	4.7641	4.7515	4.7390	4.7267	4.7145	4.7024
87	4.8013	4.7884	4.7756	4.7630	4.7505	4.7381	4.7259	4.7139
88	4.8127	4.7997	4.7869	4.7743	4.7618	4.7495	4.7373	4.7252
89	4.8239	4.8109	4.7982	4.7855	4.7730	4.7607	4.7485	4.7364
90	4.8350	4.8220	4.8092	4.7966	4.7841	4.7718	4.7596	4.7475
91	4.8459	4.8330	4.8202	4.8076	4.7951	4.7827	4.7705	4.7585
92	4.8568	4.8438	4.8311	4.8184	4.8059	4.7936	4.7814	4.7693
93	4.8675	4.8546	4.8418	4.8291	4.8166	4.8043	4.7921	4.7800
94	4.8781	4.8652	4.8524	4.8398	4.8273	4.8149	4.8027	4.7906
95	4.8887	4.8757	4.8629	4.8503	4.8378	4.8254	4.8132	4.8011
96	4.8990	4.8861	4.8733	4.8607	4.8482	4.8358	4.8236	4.8115
97	4.9093	4.8964	4.8836	4.8709	4.8584	4.8461	4.8339	4.8218
98	4.9195	4.9066	4.8938	4.8811	4.8686	4.8563	4.8441	4.8320
99	4.9296	4.9167	4.9039	4.8912	4.8787	4.8664	4.8541	4.8421
100	4.9396	4.9266	4.9138	4.9012	4.8887	4.8763	4.8641	4.8520

$\zeta^1_N(1,A)$

N \ A	0.25	0.26	0.27	0.28	0.29	0.30	0.31	0.32
1	0.8000	0.7937	0.7874	0.7813	0.7752	0.7692	0.7634	0.7576
2	1.2444	1.2361	1.2279	1.2198	1.2119	1.2040	1.1963	1.1886
3	1.5521	1.5429	1.5337	1.5247	1.5158	1.5070	1.4984	1.4898
4	1.7874	1.7776	1.7679	1.7584	1.7489	1.7396	1.7304	1.7213
5	1.9779	1.9677	1.9577	1.9478	1.9380	1.9283	1.9187	1.9093
6	2.1379	2.1275	2.1172	2.1070	2.0969	2.0870	2.0772	2.0675
7	2.2758	2.2652	2.2547	2.2444	2.2341	2.2240	2.2140	2.2041
8	2.3971	2.3863	2.3756	2.3651	2.3547	2.3445	2.3343	2.3243
9	2.5052	2.4943	2.4835	2.4729	2.4624	2.4520	2.4417	2.4316
10	2.6027	2.5917	2.5809	2.5702	2.5596	2.5491	2.5387	2.5285
11	2.6916	2.6806	2.6696	2.6588	2.6481	2.6376	2.6272	2.6168
12	2.7732	2.7621	2.7511	2.7403	2.7295	2.7189	2.7084	2.6980
13	2.8487	2.8375	2.8265	2.8156	2.8048	2.7941	2.7835	2.7731
14	2.9189	2.9077	2.8966	2.8856	2.8747	2.8640	2.8534	2.8429
15	2.9845	2.9732	2.9620	2.9510	2.9401	2.9294	2.9187	2.9082
16	3.0460	3.0347	3.0235	3.0125	3.0015	2.9907	2.9800	2.9695
17	3.1040	3.0926	3.0814	3.0703	3.0594	3.0485	3.0378	3.0272
18	3.1588	3.1474	3.1361	3.1250	3.1140	3.1032	3.0924	3.0818
19	3.2107	3.1993	3.1880	3.1769	3.1659	3.1550	3.1442	3.1335
20	3.2601	3.2487	3.2374	3.2262	3.2152	3.2042	3.1934	3.1828
21	3.3072	3.2957	3.2844	3.2732	3.2621	3.2512	3.2404	3.2297
22	3.3521	3.3406	3.3293	3.3181	3.3070	3.2960	3.2852	3.2745
23	3.3951	3.3836	3.3723	3.3610	3.3499	3.3390	3.3281	3.3173
24	3.4363	3.4248	3.4135	3.4022	3.3911	3.3801	3.3692	3.3585
25	3.4760	3.4644	3.4530	3.4418	3.4306	3.4196	3.4087	3.3980
26	3.5140	3.5025	3.4911	3.4798	3.4687	3.4577	3.4467	3.4359
27	3.5507	3.5392	3.5278	3.5165	3.5053	3.4943	3.4834	3.4726
28	3.5861	3.5746	3.5632	3.5518	3.5407	3.5296	3.5187	3.5079
29	3.6203	3.6088	3.5973	3.5860	3.5748	3.5637	3.5528	3.5420
30	3.6534	3.6418	3.6304	3.6190	3.6078	3.5967	3.5858	3.5750
31	3.6854	3.6738	3.6623	3.6510	3.6398	3.6287	3.6177	3.6069
32	3.7164	3.7048	3.6933	3.6820	3.6708	3.6597	3.6487	3.6378
33	3.7465	3.7349	3.7234	3.7120	3.7008	3.6897	3.6787	3.6678
34	3.7757	3.7640	3.7526	3.7412	3.7300	3.7188	3.7078	3.6970
35	3.8040	3.7924	3.7809	3.7695	3.7583	3.7472	3.7362	3.7253
36	3.8316	3.8200	3.8085	3.7971	3.7859	3.7747	3.7637	3.7528
37	3.8585	3.8468	3.8353	3.8239	3.8127	3.8015	3.7905	3.7796
38	3.8846	3.8730	3.8614	3.8501	3.8388	3.8276	3.8166	3.8057
39	3.9101	3.8984	3.8869	3.8755	3.8642	3.8531	3.8421	3.8311
40	3.9349	3.9233	3.9117	3.9003	3.8891	3.8779	3.8669	3.8559
41	3.9592	3.9475	3.9360	3.9246	3.9133	3.9021	3.8911	3.8801
42	3.9828	3.9712	3.9596	3.9482	3.9369	3.9258	3.9147	3.9038
43	4.0060	3.9943	3.9827	3.9713	3.9600	3.9488	3.9378	3.9269
44	4.0286	4.0169	4.0053	3.9939	3.9826	3.9714	3.9604	3.9494
45	4.0507	4.0390	4.0274	4.0160	4.0047	3.9935	3.9824	3.9715
46	4.0723	4.0606	4.0490	4.0376	4.0263	4.0151	4.0040	3.9931
47	4.0935	4.0818	4.0702	4.0587	4.0474	4.0362	4.0252	4.0142
48	4.1142	4.1025	4.0909	4.0795	4.0681	4.0569	4.0459	4.0349
49	4.1345	4.1228	4.1112	4.0997	4.0884	4.0772	4.0661	4.0552
50	4.1544	4.1427	4.1311	4.1196	4.1083	4.0971	4.0860	4.0750

$\zeta_N^1(1,A)$

N \ A	0.25	0.26	0.27	0.28	0.29	0.30	0.31	0.32
51	4.1739	4.1622	4.1506	4.1391	4.1278	4.1166	4.1055	4.0945
52	4.1930	4.1813	4.1697	4.1583	4.1469	4.1357	4.1246	4.1136
53	4.2118	4.2001	4.1885	4.1770	4.1657	4.1545	4.1434	4.1324
54	4.2302	4.2185	4.2069	4.1955	4.1841	4.1729	4.1618	4.1508
55	4.2483	4.2366	4.2250	4.2135	4.2022	4.1910	4.1799	4.1689
56	4.2661	4.2544	4.2428	4.2313	4.2200	4.2087	4.1976	4.1866
57	4.2836	4.2719	4.2603	4.2488	4.2374	4.2262	4.2151	4.2041
58	4.3008	4.2890	4.2774	4.2659	4.2546	4.2433	4.2322	4.2212
59	4.3176	4.3059	4.2943	4.2828	4.2714	4.2602	4.2491	4.2381
60	4.3342	4.3225	4.3109	4.2994	4.2880	4.2768	4.2657	4.2547
61	4.3506	4.3388	4.3272	4.3157	4.3043	4.2931	4.2820	4.2710
62	4.3666	4.3549	4.3433	4.3318	4.3204	4.3092	4.2980	4.2870
63	4.3824	4.3707	4.3591	4.3476	4.3362	4.3250	4.3138	4.3028
64	4.3980	4.3862	4.3746	4.3631	4.3518	4.3405	4.3294	4.3184
65	4.4133	4.4016	4.3899	4.3784	4.3671	4.3558	4.3447	4.3337
66	4.4284	4.4167	4.4050	4.3935	4.3822	4.3709	4.3598	4.3488
67	4.4433	4.4315	4.4199	4.4084	4.3970	4.3858	4.3746	4.3636
68	4.4579	4.4462	4.4345	4.4230	4.4117	4.4004	4.3893	4.3782
69	4.4724	4.4606	4.4490	4.4375	4.4261	4.4148	4.4037	4.3927
70	4.4866	4.4748	4.4632	4.4517	4.4403	4.4291	4.4179	4.4069
71	4.5006	4.4889	4.4772	4.4657	4.4543	4.4431	4.4319	4.4209
72	4.5145	4.5027	4.4911	4.4796	4.4682	4.4569	4.4458	4.4347
73	4.5281	4.5164	4.5047	4.4932	4.4818	4.4706	4.4594	4.4484
74	4.5416	4.5298	4.5182	4.5067	4.4953	4.4840	4.4729	4.4618
75	4.5549	4.5431	4.5315	4.5200	4.5086	4.4973	4.4861	4.4751
76	4.5680	4.5562	4.5446	4.5331	4.5217	4.5104	4.4992	4.4882
77	4.5810	4.5692	4.5575	4.5460	4.5346	4.5233	4.5122	4.5011
78	4.5937	4.5820	4.5703	4.5588	4.5474	4.5361	4.5250	4.5139
79	4.6064	4.5946	4.5829	4.5714	4.5600	4.5487	4.5376	4.5265
80	4.6188	4.6070	4.5954	4.5839	4.5725	4.5612	4.5500	4.5390
81	4.6311	4.6193	4.6077	4.5962	4.5848	4.5735	4.5623	4.5513
82	4.6433	4.6315	4.6198	4.6083	4.5969	4.5856	4.5745	4.5634
83	4.6553	4.6435	4.6318	4.6203	4.6089	4.5976	4.5865	4.5754
84	4.6672	4.6554	4.6437	4.6322	4.6208	4.6095	4.5983	4.5873
85	4.6789	4.6671	4.6554	4.6439	4.6325	4.6212	4.6100	4.5990
86	4.6905	4.6787	4.6670	4.6555	4.6441	4.6328	4.6216	4.6106
87	4.7020	4.6902	4.6785	4.6670	4.6555	4.6443	4.6331	4.6220
88	4.7133	4.7015	4.6898	4.6783	4.6669	4.6556	4.6444	4.6334
89	4.7245	4.7127	4.7010	4.6895	4.6781	4.6668	4.6556	4.6446
90	4.7356	4.7238	4.7121	4.7006	4.6891	4.6779	4.6667	4.6556
91	4.7465	4.7347	4.7231	4.7115	4.7001	4.6888	4.6776	4.6666
92	4.7574	4.7456	4.7339	4.7224	4.7109	4.6996	4.6885	4.6774
93	4.7681	4.7563	4.7446	4.7331	4.7217	4.7104	4.6992	4.6881
94	4.7787	4.7669	4.7552	4.7437	4.7323	4.7210	4.7098	4.6987
95	4.7892	4.7774	4.7657	4.7542	4.7428	4.7315	4.7203	4.7092
96	4.7996	4.7878	4.7761	4.7646	4.7531	4.7418	4.7307	4.7196
97	4.8099	4.7981	4.7864	4.7748	4.7634	4.7521	4.7409	4.7299
98	4.8200	4.8082	4.7966	4.7850	4.7736	4.7623	4.7511	4.7400
99	4.8301	4.8183	4.8066	4.7951	4.7837	4.7724	4.7612	4.7501
100	4.8401	4.8283	4.8166	4.8051	4.7936	4.7823	4.7711	4.7601

$\zeta_N^1(1,A)$

N \ A	0.33	0.34	0.35	0.36	0.37	0.38	0.39	0.40
1	0.7519	0.7463	0.7407	0.7353	0.7299	0.7246	0.7194	0.7143
2	1.1811	1.1736	1.1663	1.1590	1.1519	1.1448	1.1378	1.1310
3	1.4814	1.4730	1.4648	1.4566	1.4486	1.4407	1.4328	1.4251
4	1.7123	1.7034	1.6947	1.6860	1.6774	1.6690	1.6606	1.6523
5	1.8999	1.8907	1.8816	1.8726	1.8637	1.8548	1.8461	1.8375
6	2.0579	2.0484	2.0391	2.0298	2.0206	2.0116	2.0026	1.9938
7	2.1943	2.1847	2.1751	2.1657	2.1563	2.1471	2.1380	2.1289
8	2.3144	2.3046	2.2949	2.2853	2.2758	2.2664	2.2571	2.2480
9	2.4216	2.4116	2.4018	2.3921	2.3825	2.3730	2.3636	2.3543
10	2.5184	2.5084	2.4984	2.4886	2.4790	2.4694	2.4599	2.4505
11	2.6066	2.5965	2.5866	2.5767	2.5669	2.5572	2.5477	2.5382
12	2.6877	2.6776	2.6675	2.6576	2.6477	2.6380	2.6284	2.6189
13	2.7627	2.7525	2.7424	2.7324	2.7225	2.7128	2.7031	2.6935
14	2.8325	2.8223	2.8121	2.8021	2.7921	2.7823	2.7726	2.7629
15	2.8978	2.8875	2.8773	2.8672	2.8572	2.8473	2.8375	2.8279
16	2.9590	2.9487	2.9384	2.9283	2.9183	2.9084	2.8986	2.8888
17	3.0167	3.0063	2.9961	2.9859	2.9759	2.9659	2.9561	2.9463
18	3.0713	3.0609	3.0506	3.0404	3.0303	3.0203	3.0104	3.0007
19	3.1230	3.1126	3.1022	3.0920	3.0819	3.0719	3.0620	3.0522
20	3.1722	3.1617	3.1514	3.1411	3.1310	3.1210	3.1111	3.1012
21	3.2191	3.2086	3.1982	3.1880	3.1778	3.1678	3.1578	3.1480
22	3.2638	3.2533	3.2430	3.2327	3.2225	3.2124	3.2025	3.1926
23	3.3067	3.2962	3.2858	3.2755	3.2653	3.2552	3.2452	3.2353
24	3.3478	3.3373	3.3269	3.3165	3.3063	3.2962	3.2862	3.2763
25	3.3873	3.3767	3.3663	3.3560	3.3457	3.3356	3.3256	3.3157
26	3.4253	3.4147	3.4043	3.3939	3.3837	3.3735	3.3635	3.3536
27	3.4619	3.4513	3.4408	3.4305	3.4202	3.4101	3.4000	3.3901
28	3.4972	3.4866	3.4761	3.4657	3.4555	3.4453	3.4352	3.4253
29	3.5313	3.5207	3.5102	3.4998	3.4895	3.4793	3.4693	3.4593
30	3.5642	3.5536	3.5431	3.5327	3.5224	3.5122	3.5022	3.4922
31	3.5961	3.5855	3.5750	3.5646	3.5543	3.5441	3.5340	3.5240
32	3.6271	3.6164	3.6059	3.5955	3.5852	3.5750	3.5649	3.5549
33	3.6571	3.6464	3.6359	3.6255	3.6152	3.6050	3.5948	3.5848
34	3.6862	3.6756	3.6650	3.6546	3.6443	3.6340	3.6239	3.6139
35	3.7145	3.7039	3.6933	3.6829	3.6725	3.6623	3.6522	3.6422
36	3.7420	3.7314	3.7208	3.7104	3.7000	3.6898	3.6797	3.6696
37	3.7688	3.7582	3.7476	3.7371	3.7268	3.7165	3.7064	3.6964
38	3.7949	3.7842	3.7737	3.7632	3.7528	3.7426	3.7325	3.7224
39	3.8203	3.8097	3.7991	3.7886	3.7782	3.7680	3.7578	3.7478
40	3.8451	3.8344	3.8239	3.8134	3.8030	3.7928	3.7826	3.7725
41	3.8693	3.8586	3.8480	3.8376	3.8272	3.8169	3.8068	3.7967
42	3.8930	3.8822	3.8717	3.8612	3.8508	3.8405	3.8303	3.8203
43	3.9160	3.9053	3.8947	3.8842	3.8739	3.8636	3.8534	3.8433
44	3.9386	3.9279	3.9173	3.9068	3.8964	3.8861	3.8759	3.8658
45	3.9607	3.9499	3.9393	3.9288	3.9184	3.9081	3.8980	3.8879
46	3.9822	3.9715	3.9609	3.9504	3.9400	3.9297	3.9195	3.9094
47	4.0034	3.9926	3.9820	3.9715	3.9611	3.9508	3.9406	3.9305
48	4.0241	4.0133	4.0027	3.9922	3.9818	3.9715	3.9613	3.9512
49	4.0443	4.0336	4.0230	4.0124	4.0020	3.9917	3.9815	3.9714
50	4.0642	4.0535	4.0428	4.0323	4.0219	4.0116	4.0014	3.9913

$\zeta_N^1(1,A)$

N \ A	0.33	0.34	0.35	0.36	0.37	0.38	0.39	0.40
51	4.0837	4.0729	4.0623	4.0518	4.0414	4.0310	4.0208	4.0107
52	4.1028	4.0920	4.0814	4.0709	4.0604	4.0501	4.0399	4.0298
53	4.1215	4.1108	4.1001	4.0896	4.0792	4.0689	4.0586	4.0485
54	4.1399	4.1292	4.1185	4.1080	4.0976	4.0873	4.0770	4.0669
55	4.1580	4.1473	4.1366	4.1261	4.1156	4.1053	4.0951	4.0850
56	4.1758	4.1650	4.1544	4.1438	4.1334	4.1230	4.1128	4.1027
57	4.1932	4.1824	4.1718	4.1612	4.1508	4.1405	4.1302	4.1201
58	4.2104	4.1996	4.1889	4.1784	4.1679	4.1576	4.1474	4.1372
59	4.2272	4.2164	4.2058	4.1952	4.1848	4.1744	4.1642	4.1541
60	4.2438	4.2330	4.2224	4.2118	4.2014	4.1910	4.1808	4.1706
61	4.2601	4.2493	4.2387	4.2281	4.2176	4.2073	4.1971	4.1869
62	4.2761	4.2654	4.2547	4.2441	4.2337	4.2233	4.2131	4.2029
63	4.2919	4.2811	4.2705	4.2599	4.2495	4.2391	4.2289	4.2187
64	4.3075	4.2967	4.2860	4.2755	4.2650	4.2546	4.2444	4.2342
65	4.3228	4.3120	4.3013	4.2908	4.2803	4.2699	4.2597	4.2495
66	4.3379	4.3271	4.3164	4.3058	4.2954	4.2850	4.2747	4.2646
67	4.3527	4.3419	4.3312	4.3207	4.3102	4.2998	4.2896	4.2794
68	4.3673	4.3565	4.3459	4.3353	4.3248	4.3145	4.3042	4.2940
69	4.3818	4.3710	4.3603	4.3497	4.3392	4.3289	4.3186	4.3085
70	4.3960	4.3852	4.3745	4.3639	4.3535	4.3431	4.3328	4.3227
71	4.4100	4.3992	4.3885	4.3779	4.3675	4.3571	4.3468	4.3367
72	4.4238	4.4130	4.4023	4.3918	4.3813	4.3709	4.3606	4.3505
73	4.4375	4.4267	4.4160	4.4054	4.3949	4.3845	4.3743	4.3641
74	4.4509	4.4401	4.4294	4.4188	4.4084	4.3980	4.3877	4.3775
75	4.4642	4.4534	4.4427	4.4321	4.4216	4.4113	4.4010	4.3908
76	4.4773	4.4665	4.4558	4.4452	4.4347	4.4243	4.4141	4.4039
77	4.4902	4.4794	4.4687	4.4581	4.4476	4.4373	4.4270	4.4168
78	4.5030	4.4922	4.4815	4.4709	4.4604	4.4500	4.4397	4.4296
79	4.5156	4.5048	4.4941	4.4835	4.4730	4.4626	4.4523	4.4422
80	4.5280	4.5172	4.5065	4.4959	4.4854	4.4751	4.4648	4.4546
81	4.5403	4.5295	4.5188	4.5082	4.4977	4.4874	4.4771	4.4669
82	4.5525	4.5417	4.5310	4.5204	4.5099	4.4995	4.4892	4.4790
83	4.5645	4.5537	4.5430	4.5324	4.5219	4.5115	4.5012	4.4910
84	4.5763	4.5655	4.5548	4.5442	4.5337	4.5233	4.5130	4.5029
85	4.5881	4.5772	4.5665	4.5559	4.5454	4.5350	4.5248	4.5146
86	4.5996	4.5888	4.5781	4.5675	4.5570	4.5466	4.5363	4.5261
87	4.6111	4.6003	4.5896	4.5790	4.5685	4.5581	4.5478	4.5376
88	4.6224	4.6116	4.6009	4.5903	4.5798	4.5694	4.5591	4.5489
89	4.6336	4.6228	4.6121	4.6015	4.5910	4.5806	4.5703	4.5601
90	4.6447	4.6339	4.6231	4.6125	4.6020	4.5916	4.5813	4.5711
91	4.6556	4.6448	4.6341	4.6235	4.6130	4.6026	4.5923	4.5821
92	4.6665	4.6556	4.6449	4.6343	4.6238	4.6134	4.6031	4.5929
93	4.6772	4.6664	4.6556	4.6450	4.6345	4.6241	4.6138	4.6036
94	4.6878	4.6770	4.6662	4.6556	4.6451	4.6347	4.6244	4.6142
95	4.6983	4.6874	4.6767	4.6661	4.6556	4.6452	4.6349	4.6247
96	4.7087	4.6978	4.6871	4.6765	4.6660	4.6556	4.6453	4.6351
97	4.7189	4.7081	4.6974	4.6868	4.6762	4.6658	4.6555	4.6453
98	4.7291	4.7183	4.7075	4.6969	4.6864	4.6760	4.6657	4.6555
99	4.7392	4.7283	4.7176	4.7070	4.6965	4.6861	4.6758	4.6656
100	4.7491	4.7383	4.7276	4.7169	4.7064	4.6960	4.6857	4.6755

$\zeta^1_N(1,A)$

N \ A	0.41	0.42	0.43	0.44	0.45	0.46	0.47	0.48
1	0.7092	0.7042	0.6993	0.6944	0.6897	0.6849	0.6803	0.6757
2	1.1242	1.1174	1.1108	1.1043	1.0978	1.0914	1.0851	1.0789
3	1.4174	1.4098	1.4024	1.3950	1.3877	1.3805	1.3733	1.3663
4	1.6442	1.6361	1.6281	1.6202	1.6124	1.6047	1.5970	1.5895
5	1.8290	1.8206	1.8123	1.8040	1.7959	1.7878	1.7798	1.7720
6	1.9850	1.9764	1.9678	1.9593	1.9509	1.9426	1.9344	1.9263
7	2.1200	2.1111	2.1024	2.0937	2.0851	2.0767	2.0683	2.0600
8	2.2389	2.2299	2.2210	2.2122	2.2035	2.1949	2.1863	2.1779
9	2.3451	2.3360	2.3270	2.3181	2.3093	2.3006	2.2919	2.2834
10	2.4412	2.4320	2.4229	2.4139	2.4050	2.3962	2.3874	2.3788
11	2.5289	2.5196	2.5104	2.5013	2.4923	2.4834	2.4746	2.4659
12	2.6094	2.6001	2.5909	2.5817	2.5727	2.5637	2.5548	2.5460
13	2.6840	2.6746	2.6653	2.6561	2.6470	2.6380	2.6291	2.6202
14	2.7534	2.7440	2.7346	2.7254	2.7162	2.7071	2.6982	2.6893
15	2.8183	2.8088	2.7994	2.7901	2.7809	2.7718	2.7628	2.7539
16	2.8792	2.8697	2.8603	2.8510	2.8417	2.8326	2.8235	2.8146
17	2.9367	2.9271	2.9177	2.9083	2.8990	2.8899	2.8808	2.8718
18	2.9910	2.9814	2.9719	2.9625	2.9532	2.9440	2.9349	2.9259
19	3.0425	3.0329	3.0234	3.0140	3.0047	2.9954	2.9863	2.9772
20	3.0915	3.0819	3.0723	3.0629	3.0535	3.0443	3.0351	3.0260
21	3.1382	3.1286	3.1190	3.1095	3.1002	3.0909	3.0817	3.0726
22	3.1828	3.1732	3.1636	3.1541	3.1447	3.1354	3.1262	3.1171
23	3.2255	3.2159	3.2063	3.1968	3.1874	3.1780	3.1688	3.1597
24	3.2665	3.2568	3.2472	3.2377	3.2283	3.2189	3.2097	3.2005
25	3.3059	3.2961	3.2865	3.2770	3.2675	3.2582	3.2489	3.2398
26	3.3437	3.3340	3.3244	3.3148	3.3054	3.2960	3.2867	3.2775
27	3.3802	3.3705	3.3608	3.3513	3.3418	3.3324	3.3231	3.3139
28	3.4154	3.4057	3.3960	3.3864	3.3769	3.3675	3.3582	3.3490
29	3.4494	3.4396	3.4300	3.4204	3.4109	3.4015	3.3922	3.3830
30	3.4823	3.4725	3.4628	3.4532	3.4437	3.4343	3.4250	3.4158
31	3.5141	3.5043	3.4946	3.4850	3.4755	3.4661	3.4568	3.4475
32	3.5450	3.5352	3.5255	3.5159	3.5063	3.4969	3.4876	3.4783
33	3.5749	3.5651	3.5554	3.5458	3.5362	3.5268	3.5174	3.5082
34	3.6040	3.5942	3.5844	3.5748	3.5653	3.5558	3.5465	3.5372
35	3.6322	3.6224	3.6127	3.6030	3.5935	3.5840	3.5747	3.5654
36	3.6597	3.6499	3.6401	3.6305	3.6209	3.6114	3.6021	3.5928
37	3.6864	3.6766	3.6668	3.6572	3.6476	3.6381	3.6288	3.6195
38	3.7125	3.7026	3.6929	3.6832	3.6736	3.6641	3.6548	3.6454
39	3.7378	3.7280	3.7182	3.7085	3.6990	3.6895	3.6801	3.6708
40	3.7626	3.7527	3.7429	3.7333	3.7237	3.7142	3.7048	3.6955
41	3.7867	3.7769	3.7671	3.7574	3.7478	3.7383	3.7289	3.7196
42	3.8103	3.8004	3.7907	3.7810	3.7714	3.7619	3.7525	3.7431
43	3.8333	3.8235	3.8137	3.8040	3.7944	3.7849	3.7755	3.7661
44	3.8559	3.8460	3.8362	3.8265	3.8169	3.8074	3.7979	3.7886
45	3.8779	3.8680	3.8582	3.8485	3.8389	3.8294	3.8199	3.8106
46	3.8994	3.8895	3.8797	3.8700	3.8604	3.8509	3.8415	3.8321
47	3.9205	3.9106	3.9008	3.8911	3.8815	3.8720	3.8625	3.8532
48	3.9412	3.9313	3.9215	3.9118	3.9021	3.8926	3.8832	3.8738
49	3.9614	3.9515	3.9417	3.9320	3.9224	3.9128	3.9034	3.8940
50	3.9813	3.9713	3.9615	3.9518	3.9422	3.9326	3.9232	3.9138

$\zeta_N^1(1,A)$

N \ A	0.41	0.42	0.43	0.44	0.45	0.46	0.47	0.48
51	4.0007	3.9908	3.9810	3.9712	3.9616	3.9521	3.9426	3.9332
52	4.0198	4.0099	4.0000	3.9903	3.9807	3.9711	3.9617	3.9523
53	4.0385	4.0286	4.0188	4.0090	3.9994	3.9898	3.9804	3.9710
54	4.0569	4.0470	4.0371	4.0274	4.0178	4.0082	3.9987	3.9894
55	4.0749	4.0650	4.0552	4.0454	4.0358	4.0262	4.0168	4.0074
56	4.0927	4.0827	4.0729	4.0632	4.0535	4.0439	4.0345	4.0251
57	4.1101	4.1001	4.0903	4.0806	4.0709	4.0613	4.0519	4.0425
58	4.1272	4.1173	4.1074	4.0977	4.0880	4.0785	4.0690	4.0596
59	4.1440	4.1341	4.1242	4.1145	4.1048	4.0953	4.0858	4.0764
60	4.1606	4.1506	4.1408	4.1310	4.1214	4.1118	4.1023	4.0929
61	4.1769	4.1669	4.1571	4.1473	4.1377	4.1281	4.1186	4.1092
62	4.1929	4.1829	4.1731	4.1633	4.1537	4.1441	4.1346	4.1252
63	4.2087	4.1987	4.1889	4.1791	4.1694	4.1598	4.1504	4.1410
64	4.2242	4.2142	4.2044	4.1946	4.1849	4.1754	4.1659	4.1565
65	4.2395	4.2295	4.2197	4.2099	4.2002	4.1906	4.1811	4.1717
66	4.2545	4.2446	4.2347	4.2249	4.2153	4.2057	4.1962	4.1868
67	4.2694	4.2594	4.2495	4.2398	4.2301	4.2205	4.2110	4.2016
68	4.2840	4.2740	4.2642	4.2544	4.2447	4.2351	4.2256	4.2162
69	4.2984	4.2884	4.2786	4.2688	4.2591	4.2495	4.2400	4.2306
70	4.3126	4.3026	4.2928	4.2830	4.2733	4.2637	4.2542	4.2448
71	4.3266	4.3166	4.3068	4.2970	4.2873	4.2777	4.2682	4.2588
72	4.3404	4.3304	4.3206	4.3108	4.3011	4.2915	4.2820	4.2726
73	4.3540	4.3441	4.3342	4.3244	4.3147	4.3051	4.2956	4.2862
74	4.3675	4.3575	4.3476	4.3378	4.3281	4.3185	4.3090	4.2996
75	4.3807	4.3708	4.3609	4.3511	4.3414	4.3318	4.3223	4.3129
76	4.3938	4.3838	4.3740	4.3642	4.3545	4.3449	4.3354	4.3259
77	4.4067	4.3968	4.3869	4.3771	4.3674	4.3578	4.3483	4.3388
78	4.4195	4.4095	4.3996	4.3898	4.3801	4.3705	4.3610	4.3516
79	4.4321	4.4221	4.4122	4.4024	4.3927	4.3831	4.3736	4.3642
80	4.4445	4.4345	4.4247	4.4149	4.4052	4.3955	4.3860	4.3766
81	4.4568	4.4468	4.4369	4.4271	4.4174	4.4078	4.3983	4.3889
82	4.4689	4.4590	4.4491	4.4393	4.4296	4.4199	4.4104	4.4010
83	4.4809	4.4709	4.4610	4.4513	4.4415	4.4319	4.4224	4.4130
84	4.4928	4.4828	4.4729	4.4631	4.4534	4.4438	4.4342	4.4248
85	4.5045	4.4945	4.4846	4.4748	4.4651	4.4555	4.4459	4.4365
86	4.5161	4.5061	4.4962	4.4864	4.4767	4.4670	4.4575	4.4481
87	4.5275	4.5175	4.5076	4.4978	4.4881	4.4785	4.4689	4.4595
88	4.5388	4.5288	4.5189	4.5091	4.4994	4.4898	4.4802	4.4708
89	4.5500	4.5400	4.5301	4.5203	4.5106	4.5010	4.4914	4.4820
90	4.5611	4.5511	4.5412	4.5313	4.5216	4.5120	4.5025	4.4930
91	4.5720	4.5620	4.5521	4.5423	4.5326	4.5229	4.5134	4.5039
92	4.5828	4.5728	4.5629	4.5531	4.5434	4.5338	4.5242	4.5148
93	4.5935	4.5835	4.5736	4.5638	4.5541	4.5445	4.5349	4.5255
94	4.6041	4.5941	4.5842	4.5744	4.5647	4.5550	4.5455	4.5360
95	4.6146	4.6046	4.5947	4.5849	4.5751	4.5655	4.5560	4.5465
96	4.6250	4.6150	4.6051	4.5952	4.5855	4.5759	4.5663	4.5569
97	4.6352	4.6252	4.6153	4.6055	4.5958	4.5861	4.5766	4.5671
98	4.6454	4.6354	4.6255	4.6157	4.6059	4.5963	4.5868	4.5773
99	4.6555	4.6454	4.6355	4.6257	4.6160	4.6064	4.5968	4.5873
100	4.6654	4.6554	4.6455	4.6357	4.6259	4.6163	4.6068	4.5973

$\zeta_N^1(1,A)$

N \ A	0.49	0.50	0.52	0.54	0.56	0.58	0.60	0.62
1	0.6711	0.6667	0.6579	0.6494	0.6410	0.6329	0.6250	0.6173
2	1.0727	1.0667	1.0547	1.0431	1.0317	1.0205	1.0096	0.9990
3	1.3593	1.3524	1.3388	1.3255	1.3125	1.2998	1.2874	1.2752
4	1.5820	1.5746	1.5600	1.5458	1.5318	1.5182	1.5048	1.4917
5	1.7641	1.7564	1.7412	1.7263	1.7117	1.6974	1.6834	1.6696
6	1.9182	1.9103	1.8946	1.8792	1.8641	1.8494	1.8349	1.8206
7	2.0517	2.0436	2.0276	2.0118	1.9964	1.9813	1.9664	1.9519
8	2.1695	2.1612	2.1449	2.1289	2.1132	2.0978	2.0827	2.0679
9	2.2749	2.2665	2.2500	2.2338	2.2178	2.2022	2.1869	2.1718
10	2.3702	2.3617	2.3450	2.3286	2.3125	2.2967	2.2812	2.2660
11	2.4573	2.4487	2.4318	2.4153	2.3990	2.3831	2.3674	2.3521
12	2.5373	2.5287	2.5117	2.4950	2.4787	2.4626	2.4468	2.4313
13	2.6115	2.6028	2.5857	2.5689	2.5524	2.5362	2.5203	2.5047
14	2.6805	2.6717	2.6545	2.6377	2.6211	2.6048	2.5888	2.5731
15	2.7450	2.7363	2.7190	2.7020	2.6854	2.6690	2.6529	2.6371
16	2.8057	2.7969	2.7795	2.7625	2.7457	2.7293	2.7132	2.6973
17	2.8628	2.8540	2.8366	2.8195	2.8027	2.7862	2.7700	2.7541
18	2.9169	2.9081	2.8906	2.8734	2.8566	2.8400	2.8238	2.8078
19	2.9682	2.9593	2.9418	2.9246	2.9077	2.8911	2.8748	2.8587
20	3.0170	3.0081	2.9905	2.9733	2.9563	2.9397	2.9233	2.9072
21	3.0636	3.0546	3.0370	3.0197	3.0027	2.9860	2.9696	2.9535
22	3.1080	3.0991	3.0814	3.0641	3.0470	3.0303	3.0139	2.9977
23	3.1506	3.1416	3.1239	3.1066	3.0895	3.0727	3.0562	3.0400
24	3.1914	3.1825	3.1647	3.1473	3.1302	3.1134	3.0969	3.0807
25	3.2307	3.2217	3.2039	3.1865	3.1693	3.1525	3.1359	3.1197
26	3.2684	3.2594	3.2416	3.2241	3.2070	3.1901	3.1735	3.1573
27	3.3048	3.2958	3.2779	3.2605	3.2433	3.2264	3.2098	3.1935
28	3.3399	3.3309	3.3130	3.2955	3.2783	3.2614	3.2447	3.2284
29	3.3738	3.3648	3.3469	3.3293	3.3121	3.2952	3.2785	3.2622
30	3.4066	3.3975	3.3797	3.3621	3.3448	3.3279	3.3112	3.2948
31	3.4384	3.4293	3.4114	3.3938	3.3765	3.3595	3.3428	3.3264
32	3.4691	3.4601	3.4421	3.4245	3.4072	3.3902	3.3735	3.3571
33	3.4990	3.4899	3.4720	3.4543	3.4370	3.4200	3.4033	3.3868
34	3.5280	3.5189	3.5009	3.4833	3.4660	3.4489	3.4322	3.4157
35	3.5562	3.5471	3.5291	3.5114	3.4941	3.4770	3.4603	3.4438
36	3.5836	3.5745	3.5565	3.5388	3.5214	3.5044	3.4876	3.4711
37	3.6103	3.6011	3.5831	3.5654	3.5481	3.5310	3.5142	3.4977
38	3.6362	3.6271	3.6091	3.5914	3.5740	3.5569	3.5401	3.5236
39	3.6616	3.6524	3.6344	3.6167	3.5993	3.5822	3.5654	3.5488
40	3.6863	3.6771	3.6591	3.6413	3.6239	3.6068	3.5900	3.5734
41	3.7104	3.7012	3.6831	3.6654	3.6480	3.6309	3.6140	3.5975
42	3.7339	3.7247	3.7067	3.6889	3.6715	3.6543	3.6375	3.6209
43	3.7569	3.7477	3.7296	3.7119	3.6944	3.6773	3.6604	3.6439
44	3.7794	3.7702	3.7521	3.7343	3.7169	3.6997	3.6829	3.6663
45	3.8013	3.7922	3.7741	3.7563	3.7388	3.7217	3.7048	3.6882
46	3.8229	3.8137	3.7956	3.7778	3.7603	3.7431	3.7262	3.7096
47	3.8439	3.8347	3.8166	3.7988	3.7813	3.7641	3.7473	3.7306
48	3.8645	3.8553	3.8372	3.8194	3.8019	3.7847	3.7678	3.7512
49	3.8847	3.8755	3.8574	3.8396	3.8221	3.8049	3.7880	3.7714
50	3.9045	3.8954	3.8772	3.8594	3.8419	3.8247	3.8078	3.7911

$$\zeta_N^1(1,A)$$

N \ A	0.49	0.50	0.52	0.54	0.56	0.58	0.60	0.62
51	3.9240	3.9148	3.8966	3.8788	3.8613	3.8441	3.8271	3.8105
52	3.9430	3.9338	3.9157	3.8978	3.8803	3.8631	3.8461	3.8295
53	3.9617	3.9525	3.9343	3.9165	3.8990	3.8817	3.8648	3.8481
54	3.9801	3.9709	3.9527	3.9348	3.9173	3.9001	3.8831	3.8664
55	3.9981	3.9889	3.9707	3.9528	3.9353	3.9181	3.9011	3.8844
56	4.0158	4.0066	3.9884	3.9705	3.9530	3.9357	3.9188	3.9021
57	4.0332	4.0240	4.0058	3.9879	3.9704	3.9531	3.9361	3.9194
58	4.0503	4.0411	4.0229	4.0050	3.9874	3.9702	3.9532	3.9365
59	4.0671	4.0579	4.0397	4.0218	4.0042	3.9870	3.9700	3.9533
60	4.0836	4.0744	4.0562	4.0383	4.0207	4.0035	3.9865	3.9698
61	4.0999	4.0907	4.0724	4.0546	4.0370	4.0197	4.0027	3.9860
62	4.1159	4.1067	4.0884	4.0705	4.0530	4.0357	4.0187	4.0020
63	4.1316	4.1224	4.1042	4.0863	4.0687	4.0514	4.0344	4.0177
64	4.1471	4.1379	4.1197	4.1018	4.0842	4.0669	4.0499	4.0332
65	4.1624	4.1532	4.1349	4.1170	4.0994	4.0821	4.0651	4.0484
66	4.1775	4.1682	4.1500	4.1321	4.1145	4.0972	4.0801	4.0634
67	4.1923	4.1830	4.1648	4.1469	4.1293	4.1120	4.0949	4.0782
68	4.2069	4.1976	4.1794	4.1615	4.1438	4.1265	4.1095	4.0928
69	4.2213	4.2120	4.1938	4.1758	4.1582	4.1409	4.1239	4.1071
70	4.2354	4.2262	4.2079	4.1900	4.1724	4.1551	4.1380	4.1213
71	4.2494	4.2402	4.2219	4.2040	4.1864	4.1690	4.1520	4.1353
72	4.2632	4.2540	4.2357	4.2178	4.2002	4.1828	4.1658	4.1490
73	4.2768	4.2676	4.2493	4.2314	4.2137	4.1964	4.1794	4.1626
74	4.2903	4.2810	4.2627	4.2448	4.2272	4.2098	4.1928	4.1760
75	4.3035	4.2943	4.2760	4.2580	4.2404	4.2231	4.2060	4.1892
76	4.3166	4.3073	4.2891	4.2711	4.2535	4.2361	4.2191	4.2023
77	4.3295	4.3202	4.3019	4.2840	4.2663	4.2490	4.2319	4.2152
78	4.3422	4.3330	4.3147	4.2967	4.2791	4.2617	4.2447	4.2279
79	4.3548	4.3455	4.3273	4.3093	4.2916	4.2743	4.2572	4.2405
80	4.3672	4.3580	4.3397	4.3217	4.3041	4.2867	4.2696	4.2529
81	4.3795	4.3702	4.3519	4.3340	4.3163	4.2990	4.2819	4.2651
82	4.3916	4.3824	4.3641	4.3461	4.3284	4.3111	4.2940	4.2772
83	4.4036	4.3943	4.3760	4.3581	4.3404	4.3230	4.3060	4.2892
84	4.4154	4.4062	4.3879	4.3699	4.3522	4.3349	4.3178	4.3010
85	4.4271	4.4179	4.3996	4.3816	4.3639	4.3465	4.3295	4.3127
86	4.4387	4.4294	4.4111	4.3931	4.3755	4.3581	4.3410	4.3242
87	4.4501	4.4409	4.4225	4.4046	4.3869	4.3695	4.3524	4.3356
88	4.4614	4.4522	4.4338	4.4159	4.3982	4.3808	4.3637	4.3469
89	4.4726	4.4633	4.4450	4.4270	4.4093	4.3920	4.3749	4.3581
90	4.4837	4.4744	4.4561	4.4381	4.4204	4.4030	4.3859	4.3691
91	4.4946	4.4853	4.4670	4.4490	4.4313	4.4139	4.3968	4.3800
92	4.5054	4.4961	4.4778	4.4598	4.4421	4.4247	4.4076	4.3908
93	4.5161	4.5068	4.4885	4.4705	4.4528	4.4354	4.4183	4.4015
94	4.5267	4.5174	4.4991	4.4811	4.4634	4.4460	4.4289	4.4121
95	4.5371	4.5279	4.5095	4.4915	4.4738	4.4564	4.4393	4.4225
96	4.5475	4.5382	4.5199	4.5019	4.4842	4.4668	4.4497	4.4329
97	4.5578	4.5485	4.5302	4.5121	4.4944	4.4771	4.4599	4.4431
98	4.5679	4.5586	4.5403	4.5223	4.5046	4.4872	4.4701	4.4533
99	4.5780	4.5687	4.5504	4.5323	4.5146	4.4972	4.4801	4.4633
100	4.5879	4.5786	4.5603	4.5423	4.5246	4.5072	4.4901	4.4732

$\zeta^{1}_{N}(1,A)$

N \ A	0.64	0.66	0.68	0.70	0.72	0.74	0.76	0.78
1	0.6098	0.6024	0.5952	0.5882	0.5814	0.5747	0.5682	0.5618
2	0.9885	0.9783	0.9684	0.9586	0.9490	0.9397	0.9305	0.9215
3	1.2633	1.2516	1.2401	1.2289	1.2179	1.2071	1.1965	1.1861
4	1.4788	1.4662	1.4538	1.4416	1.4297	1.4180	1.4065	1.3953
5	1.6561	1.6428	1.6298	1.6171	1.6045	1.5922	1.5802	1.5683
6	1.8067	1.7930	1.7795	1.7663	1.7534	1.7406	1.7281	1.7158
7	1.9376	1.9235	1.9098	1.8962	1.8829	1.8698	1.8569	1.8443
8	2.0533	2.0390	2.0250	2.0111	1.9976	1.9842	1.9711	1.9582
9	2.1571	2.1425	2.1283	2.1142	2.1005	2.0869	2.0736	2.0604
10	2.2510	2.2363	2.2219	2.2077	2.1937	2.1800	2.1665	2.1532
11	2.3370	2.3221	2.3075	2.2932	2.2791	2.2652	2.2515	2.2381
12	2.4161	2.4011	2.3864	2.3719	2.3577	2.3437	2.3299	2.3163
13	2.4894	2.4743	2.4595	2.4449	2.4306	2.4165	2.4026	2.3889
14	2.5577	2.5425	2.5276	2.5129	2.4985	2.4843	2.4703	2.4566
15	2.6216	2.6064	2.5914	2.5766	2.5621	2.5478	2.5338	2.5199
16	2.6817	2.6664	2.6513	2.6365	2.6219	2.6076	2.5934	2.5795
17	2.7384	2.7230	2.7079	2.6930	2.6784	2.6639	2.6498	2.6358
18	2.7921	2.7766	2.7614	2.7465	2.7318	2.7173	2.7031	2.6890
19	2.8430	2.8275	2.8122	2.7972	2.7825	2.7680	2.7537	2.7396
20	2.8914	2.8759	2.8606	2.8455	2.8307	2.8162	2.8018	2.7877
21	2.9376	2.9220	2.9067	2.8916	2.8768	2.8622	2.8478	2.8336
22	2.9818	2.9662	2.9508	2.9357	2.9208	2.9061	2.8917	2.8775
23	3.0241	3.0084	2.9930	2.9779	2.9630	2.9483	2.9338	2.9196
24	3.0647	3.0490	3.0336	3.0184	3.0034	2.9887	2.9742	2.9599
25	3.1037	3.0880	3.0725	3.0573	3.0423	3.0275	3.0130	2.9987
26	3.1412	3.1255	3.1100	3.0947	3.0797	3.0649	3.0504	3.0361
27	3.1774	3.1616	3.1461	3.1308	3.1158	3.1010	3.0864	3.0721
28	3.2123	3.1965	3.1810	3.1657	3.1506	3.1358	3.1212	3.1068
29	3.2461	3.2302	3.2147	3.1993	3.1843	3.1694	3.1548	3.1404
30	3.2787	3.2629	3.2473	3.2319	3.2168	3.2019	3.1873	3.1729
31	3.3103	3.2944	3.2788	3.2635	3.2483	3.2334	3.2188	3.2043
32	3.3409	3.3251	3.3094	3.2940	3.2789	3.2640	3.2493	3.2348
33	3.3707	3.3548	3.3391	3.3237	3.3086	3.2936	3.2789	3.2645
34	3.3995	3.3836	3.3680	3.3525	3.3374	3.3224	3.3077	3.2932
35	3.4276	3.4117	3.3960	3.3805	3.3654	3.3504	3.3357	3.3212
36	3.4549	3.4389	3.4232	3.4078	3.3926	3.3776	3.3629	3.3483
37	3.4815	3.4655	3.4498	3.4343	3.4191	3.4041	3.3893	3.3748
38	3.5073	3.4914	3.4756	3.4602	3.4449	3.4299	3.4151	3.4006
39	3.5326	3.5166	3.5008	3.4853	3.4701	3.4551	3.4403	3.4257
40	3.5572	3.5412	3.5254	3.5099	3.4947	3.4796	3.4648	3.4503
41	3.5812	3.5652	3.5494	3.5339	3.5186	3.5036	3.4888	3.4742
42	3.6046	3.5886	3.5728	3.5573	3.5420	3.5270	3.5122	3.4976
43	3.6276	3.6115	3.5957	3.5802	3.5649	3.5498	3.5350	3.5204
44	3.6500	3.6339	3.6181	3.6026	3.5873	3.5722	3.5574	3.5427
45	3.6719	3.6558	3.6400	3.6245	3.6091	3.5941	3.5792	3.5646
46	3.6933	3.6772	3.6614	3.6459	3.6305	3.6155	3.6006	3.5860
47	3.7143	3.6982	3.6824	3.6668	3.6515	3.6364	3.6215	3.6069
48	3.7349	3.7188	3.7029	3.6874	3.6720	3.6569	3.6420	3.6274
49	3.7550	3.7389	3.7231	3.7075	3.6921	3.6770	3.6621	3.6475
50	3.7747	3.7586	3.7428	3.7272	3.7119	3.6967	3.6818	3.6672

$\zeta_N^1(1,A)$

N \ A	0.64	0.66	0.68	0.70	0.72	0.74	0.76	0.78
51	3.7941	3.7780	3.7622	3.7465	3.7312	3.7161	3.7012	3.6865
52	3.8131	3.7970	3.7811	3.7655	3.7502	3.7350	3.7201	3.7054
53	3.8318	3.8156	3.7998	3.7841	3.7688	3.7536	3.7387	3.7240
54	3.8501	3.8339	3.8181	3.8024	3.7870	3.7719	3.7570	3.7423
55	3.8680	3.8519	3.8360	3.8204	3.8050	3.7898	3.7749	3.7602
56	3.8857	3.8695	3.8537	3.8380	3.8226	3.8075	3.7925	3.7778
57	3.9030	3.8869	3.8710	3.8553	3.8399	3.8248	3.8098	3.7951
58	3.9201	3.9039	3.8880	3.8724	3.8570	3.8418	3.8269	3.8121
59	3.9369	3.9207	3.9048	3.8891	3.8737	3.8585	3.8436	3.8289
60	3.9533	3.9372	3.9213	3.9056	3.8902	3.8750	3.8601	3.8453
61	3.9696	3.9534	3.9375	3.9218	3.9064	3.8912	3.8762	3.8615
62	3.9855	3.9694	3.9534	3.9378	3.9223	3.9071	3.8922	3.8774
63	4.0012	3.9851	3.9691	3.9535	3.9380	3.9228	3.9079	3.8931
64	4.0167	4.0005	3.9846	3.9689	3.9535	3.9383	3.9233	3.9085
65	4.0319	4.0158	3.9998	3.9841	3.9687	3.9535	3.9385	3.9238
66	4.0470	4.0308	4.0148	3.9991	3.9837	3.9685	3.9535	3.9387
67	4.0617	4.0455	4.0296	4.0139	3.9985	3.9832	3.9682	3.9535
68	4.0763	4.0601	4.0442	4.0285	4.0130	3.9978	3.9828	3.9680
69	4.0907	4.0745	4.0585	4.0428	4.0273	4.0121	3.9971	3.9823
70	4.1048	4.0886	4.0727	4.0570	4.0415	4.0263	4.0113	3.9965
71	4.1188	4.1026	4.0866	4.0709	4.0554	4.0402	4.0252	4.0104
72	4.1325	4.1163	4.1004	4.0847	4.0692	4.0539	4.0389	4.0241
73	4.1461	4.1299	4.1139	4.0982	4.0827	4.0675	4.0525	4.0377
74	4.1595	4.1433	4.1273	4.1116	4.0961	4.0809	4.0659	4.0511
75	4.1727	4.1565	4.1405	4.1248	4.1093	4.0941	4.0791	4.0643
76	4.1858	4.1696	4.1536	4.1379	4.1224	4.1071	4.0921	4.0773
77	4.1987	4.1824	4.1665	4.1507	4.1352	4.1200	4.1050	4.0902
78	4.2114	4.1952	4.1792	4.1634	4.1479	4.1327	4.1177	4.1028
79	4.2239	4.2077	4.1917	4.1760	4.1605	4.1452	4.1302	4.1154
80	4.2363	4.2201	4.2041	4.1884	4.1729	4.1576	4.1426	4.1278
81	4.2486	4.2323	4.2164	4.2006	4.1851	4.1698	4.1548	4.1400
82	4.2607	4.2444	4.2285	4.2127	4.1972	4.1819	4.1669	4.1521
83	4.2727	4.2564	4.2404	4.2247	4.2091	4.1939	4.1788	4.1640
84	4.2845	4.2682	4.2522	4.2365	4.2209	4.2057	4.1906	4.1758
85	4.2961	4.2799	4.2639	4.2481	4.2326	4.2173	4.2023	4.1875
86	4.3077	4.2914	4.2754	4.2597	4.2441	4.2289	4.2138	4.1990
87	4.3191	4.3028	4.2868	4.2711	4.2555	4.2403	4.2252	4.2104
88	4.3304	4.3141	4.2981	4.2823	4.2668	4.2515	4.2365	4.2216
89	4.3415	4.3253	4.3093	4.2935	4.2780	4.2627	4.2476	4.2328
90	4.3526	4.3363	4.3203	4.3045	4.2890	4.2737	4.2586	4.2438
91	4.3635	4.3472	4.3312	4.3154	4.2999	4.2846	4.2695	4.2547
92	4.3743	4.3580	4.3420	4.3262	4.3107	4.2954	4.2803	4.2655
93	4.3850	4.3687	4.3527	4.3369	4.3213	4.3060	4.2910	4.2761
94	4.3955	4.3792	4.3632	4.3474	4.3319	4.3166	4.3015	4.2867
95	4.4060	4.3897	4.3737	4.3579	4.3423	4.3270	4.3120	4.2971
96	4.4163	4.4000	4.3840	4.3682	4.3527	4.3374	4.3223	4.3075
97	4.4266	4.4103	4.3942	4.3785	4.3629	4.3476	4.3325	4.3177
98	4.4367	4.4204	4.4044	4.3886	4.3731	4.3577	4.3427	4.3278
99	4.4467	4.4304	4.4144	4.3986	4.3831	4.3678	4.3527	4.3378
100	4.4567	4.4404	4.4243	4.4086	4.3930	4.3777	4.3626	4.3477

$\zeta^{1}_{N}(1,A)$

N \ A	0.80	0.82	0.84	0.86	0.88	0.90	0.92	0.94
1	0.5556	0.5495	0.5435	0.5376	0.5319	0.5263	0.5208	0.5155
2	0.9127	0.9041	0.8956	0.8873	0.8791	0.8711	0.8633	0.8556
3	1.1759	1.1658	1.1560	1.1464	1.1369	1.1276	1.1184	1.1094
4	1.3842	1.3733	1.3626	1.3521	1.3418	1.3316	1.3217	1.3118
5	1.5566	1.5451	1.5339	1.5228	1.5119	1.5011	1.4906	1.4802
6	1.7037	1.6918	1.6801	1.6685	1.6572	1.6461	1.6351	1.6243
7	1.8319	1.8196	1.8076	1.7958	1.7841	1.7726	1.7613	1.7502
8	1.9455	1.9330	1.9207	1.9086	1.8967	1.8850	1.8735	1.8621
9	2.0475	2.0348	2.0224	2.0100	1.9979	1.9860	1.9743	1.9627
10	2.1401	2.1273	2.1146	2.1021	2.0898	2.0777	2.0658	2.0541
11	2.2249	2.2119	2.1991	2.1864	2.1740	2.1618	2.1497	2.1378
12	2.3030	2.2899	2.2769	2.2642	2.2517	2.2393	2.2271	2.2151
13	2.3755	2.3622	2.3492	2.3364	2.3237	2.3112	2.2990	2.2869
14	2.4430	2.4297	2.4166	2.4037	2.3909	2.3784	2.3660	2.3538
15	2.5063	2.4929	2.4797	2.4667	2.4539	2.4413	2.4288	2.4165
16	2.5659	2.5524	2.5391	2.5260	2.5131	2.5004	2.4879	2.4756
17	2.6220	2.6085	2.5951	2.5820	2.5691	2.5563	2.5437	2.5313
18	2.6752	2.6616	2.6482	2.6350	2.6220	2.6092	2.5966	2.5841
19	2.7257	2.7121	2.6986	2.6854	2.6723	2.6595	2.6468	2.6343
20	2.7738	2.7601	2.7466	2.7333	2.7202	2.7073	2.6946	2.6820
21	2.8197	2.8059	2.7924	2.7791	2.7659	2.7530	2.7402	2.7276
22	2.8635	2.8498	2.8362	2.8228	2.8096	2.7966	2.7838	2.7712
23	2.9056	2.8917	2.8781	2.8647	2.8515	2.8385	2.8256	2.8129
24	2.9459	2.9320	2.9184	2.9049	2.8917	2.8786	2.8657	2.8530
25	2.9846	2.9708	2.9571	2.9436	2.9303	2.9172	2.9043	2.8916
26	3.0220	3.0080	2.9943	2.9808	2.9675	2.9544	2.9415	2.9287
27	3.0579	3.0440	3.0303	3.0167	3.0034	2.9903	2.9773	2.9645
28	3.0926	3.0787	3.0649	3.0514	3.0380	3.0249	3.0119	2.9991
29	3.1262	3.1122	3.0985	3.0849	3.0715	3.0583	3.0453	3.0325
30	3.1587	3.1447	3.1309	3.1173	3.1039	3.0907	3.0776	3.0648
31	3.1901	3.1761	3.1623	3.1487	3.1352	3.1220	3.1090	3.0961
32	3.2206	3.2066	3.1927	3.1791	3.1657	3.1524	3.1393	3.1264
33	3.2502	3.2361	3.2223	3.2086	3.1952	3.1819	3.1688	3.1559
34	3.2789	3.2649	3.2510	3.2373	3.2238	3.2106	3.1975	3.1845
35	3.3069	3.2928	3.2789	3.2652	3.2517	3.2384	3.2253	3.2124
36	3.3340	3.3199	3.3060	3.2923	3.2788	3.2655	3.2524	3.2394
37	3.3605	3.3464	3.3325	3.3188	3.3052	3.2919	3.2788	3.2658
38	3.3863	3.3721	3.3582	3.3445	3.3310	3.3176	3.3044	3.2915
39	3.4114	3.3972	3.3833	3.3696	3.3560	3.3427	3.3295	3.3165
40	3.4359	3.4217	3.4078	3.3940	3.3805	3.3671	3.3539	3.3409
41	3.4598	3.4457	3.4317	3.4179	3.4044	3.3910	3.3778	3.3648
42	3.4832	3.4690	3.4550	3.4413	3.4277	3.4143	3.4011	3.3881
43	3.5060	3.4918	3.4778	3.4641	3.4505	3.4371	3.4239	3.4108
44	3.5283	3.5141	3.5002	3.4864	3.4728	3.4593	3.4461	3.4331
45	3.5502	3.5360	3.5220	3.5082	3.4946	3.4811	3.4679	3.4548
46	3.5715	3.5573	3.5433	3.5295	3.5159	3.5025	3.4892	3.4761
47	3.5925	3.5782	3.5642	3.5504	3.5368	3.5233	3.5101	3.4970
48	3.6129	3.5987	3.5847	3.5709	3.5572	3.5438	3.5305	3.5174
49	3.6330	3.6188	3.6048	3.5909	3.5773	3.5638	3.5506	3.5375
50	3.6527	3.6385	3.6244	3.6106	3.5969	3.5835	3.5702	3.5571

$\zeta_N^1(1,A)$

N \ A	0.80	0.82	0.84	0.86	0.88	0.90	0.92	0.94
51	3.6720	3.6578	3.6437	3.6299	3.6162	3.6027	3.5895	3.5763
52	3.6910	3.6767	3.6626	3.6488	3.6351	3.6216	3.6083	3.5952
53	3.7095	3.6953	3.6812	3.6674	3.6537	3.6402	3.6269	3.6138
54	3.7278	3.7135	3.6995	3.6856	3.6719	3.6584	3.6451	3.6320
55	3.7457	3.7314	3.7174	3.7035	3.6898	3.6763	3.6630	3.6498
56	3.7633	3.7490	3.7350	3.7211	3.7074	3.6939	3.6806	3.6674
57	3.7806	3.7663	3.7522	3.7384	3.7247	3.7111	3.6978	3.6847
58	3.7976	3.7833	3.7692	3.7553	3.7416	3.7281	3.7148	3.7016
59	3.8144	3.8000	3.7859	3.7720	3.7583	3.7448	3.7315	3.7183
60	3.8308	3.8165	3.8024	3.7885	3.7748	3.7612	3.7479	3.7347
61	3.8470	3.8327	3.8186	3.8046	3.7909	3.7774	3.7640	3.7509
62	3.8629	3.8486	3.8345	3.8206	3.8068	3.7933	3.7799	3.7668
63	3.8786	3.8643	3.8501	3.8362	3.8225	3.8089	3.7956	3.7824
64	3.8940	3.8797	3.8656	3.8516	3.8379	3.8243	3.8110	3.7978
65	3.9092	3.8949	3.8807	3.8668	3.8531	3.8395	3.8262	3.8130
66	3.9242	3.9098	3.8957	3.8818	3.8680	3.8545	3.8411	3.8279
67	3.9389	3.9246	3.9104	3.8965	3.8828	3.8692	3.8558	3.8426
68	3.9535	3.9391	3.9250	3.9110	3.8973	3.8837	3.8703	3.8571
69	3.9678	3.9534	3.9393	3.9253	3.9116	3.8980	3.8846	3.8714
70	3.9819	3.9676	3.9534	3.9395	3.9257	3.9121	3.8987	3.8855
71	3.9958	3.9815	3.9673	3.9534	3.9396	3.9260	3.9126	3.8994
72	4.0096	3.9952	3.9811	3.9671	3.9533	3.9397	3.9264	3.9131
73	4.0231	4.0088	3.9946	3.9806	3.9669	3.9533	3.9399	3.9267
74	4.0365	4.0221	4.0080	3.9940	3.9802	3.9666	3.9532	3.9400
75	4.0497	4.0353	4.0211	4.0072	3.9934	3.9798	3.9664	3.9532
76	4.0627	4.0483	4.0342	4.0202	4.0064	3.9928	3.9794	3.9662
77	4.0756	4.0612	4.0470	4.0330	4.0192	4.0056	3.9922	3.9790
78	4.0883	4.0739	4.0597	4.0457	4.0319	4.0183	4.0049	3.9917
79	4.1008	4.0864	4.0722	4.0582	4.0444	4.0308	4.0174	4.0042
80	4.1132	4.0988	4.0846	4.0706	4.0568	4.0432	4.0298	4.0165
81	4.1254	4.1110	4.0968	4.0828	4.0690	4.0554	4.0420	4.0287
82	4.1375	4.1231	4.1089	4.0949	4.0811	4.0675	4.0540	4.0408
83	4.1494	4.1350	4.1208	4.1068	4.0930	4.0794	4.0660	4.0527
84	4.1612	4.1468	4.1326	4.1186	4.1048	4.0912	4.0777	4.0645
85	4.1728	4.1584	4.1442	4.1302	4.1164	4.1028	4.0894	4.0761
86	4.1844	4.1700	4.1558	4.1418	4.1279	4.1143	4.1009	4.0876
87	4.1958	4.1813	4.1671	4.1531	4.1393	4.1257	4.1123	4.0990
88	4.2070	4.1926	4.1784	4.1644	4.1506	4.1369	4.1235	4.1102
89	4.2182	4.2037	4.1895	4.1755	4.1617	4.1481	4.1346	4.1213
90	4.2292	4.2147	4.2005	4.1865	4.1727	4.1591	4.1456	4.1323
91	4.2401	4.2256	4.2114	4.1974	4.1836	4.1699	4.1565	4.1432
92	4.2508	4.2364	4.2222	4.2082	4.1943	4.1807	4.1673	4.1540
93	4.2615	4.2471	4.2329	4.2188	4.2050	4.1914	4.1779	4.1646
94	4.2720	4.2576	4.2434	4.2294	4.2155	4.2019	4.1884	4.1752
95	4.2825	4.2681	4.2538	4.2398	4.2260	4.2123	4.1989	4.1856
96	4.2928	4.2784	4.2642	4.2501	4.2363	4.2226	4.2092	4.1959
97	4.3030	4.2886	4.2744	4.2603	4.2465	4.2329	4.2194	4.2061
98	4.3132	4.2987	4.2845	4.2705	4.2566	4.2430	4.2295	4.2162
99	4.3232	4.3087	4.2945	4.2805	4.2666	4.2530	4.2395	4.2262
100	4.3331	4.3187	4.3044	4.2904	4.2765	4.2629	4.2494	4.2361

$\zeta^1_N(1,A)$

N \ A	0.96	0.98	1.00
1	0.5102	0.5051	0.5000
2	0.8480	0.8406	0.8333
3	1.1006	1.0919	1.0833
4	1.3022	1.2927	1.2833
5	1.4700	1.4599	1.4500
6	1.6136	1.6032	1.5929
7	1.7393	1.7285	1.7179
8	1.8509	1.8398	1.8290
9	1.9513	1.9400	1.9290
10	2.0425	2.0311	2.0199
11	2.1261	2.1146	2.1032
12	2.2033	2.1916	2.1801
13	2.2749	2.2632	2.2516
14	2.3418	2.3299	2.3182
15	2.4044	2.3925	2.3807
16	2.4634	2.4514	2.4396
17	2.5191	2.5070	2.4951
18	2.5718	2.5597	2.5477
19	2.6219	2.6097	2.5977
20	2.6696	2.6574	2.6454
21	2.7152	2.7029	2.6908
22	2.7587	2.7464	2.7343
23	2.8005	2.7881	2.7760
24	2.8405	2.8282	2.8160
25	2.8790	2.8666	2.8544
26	2.9161	2.9037	2.8915
27	2.9519	2.9394	2.9272
28	2.9864	2.9740	2.9617
29	3.0198	3.0073	2.9950
30	3.0521	3.0396	3.0272
31	3.0834	3.0709	3.0585
32	3.1137	3.1012	3.0888
33	3.1432	3.1306	3.1182
34	3.1718	3.1592	3.1468
35	3.1996	3.1870	3.1746
36	3.2266	3.2140	3.2016
37	3.2530	3.2404	3.2279
38	3.2787	3.2660	3.2535
39	3.3037	3.2910	3.2785
40	3.3281	3.3154	3.3029
41	3.3519	3.3393	3.3267
42	3.3752	3.3625	3.3500
43	3.3980	3.3853	3.3727
44	3.4202	3.4075	3.3949
45	3.4420	3.4292	3.4167
46	3.4632	3.4505	3.4380
47	3.4841	3.4714	3.4588
48	3.5045	3.4918	3.4792
49	3.5245	3.5118	3.4992
50	3.5442	3.5314	3.5188

$\zeta_N^1(1,A)$

N \ A	0.96	0.98	1.00
51	3.5634	3.5506	3.5380
52	3.5823	3.5695	3.5569
53	3.6008	3.5880	3.5754
54	3.6190	3.6062	3.5936
55	3.6369	3.6241	3.6115
56	3.6544	3.6416	3.6290
57	3.6717	3.6589	3.6463
58	3.6887	3.6758	3.6632
59	3.7053	3.6925	3.6799
60	3.7217	3.7089	3.6963
61	3.7379	3.7251	3.7124
62	3.7538	3.7409	3.7283
63	3.7694	3.7566	3.7439
64	3.7848	3.7720	3.7593
65	3.8000	3.7871	3.7744
66	3.8149	3.8020	3.7894
67	3.8296	3.8167	3.8041
68	3.8441	3.8312	3.8186
69	3.8584	3.8455	3.8328
70	3.8725	3.8596	3.8469
71	3.8864	3.8735	3.8608
72	3.9001	3.8872	3.8745
73	3.9136	3.9007	3.8880
74	3.9270	3.9141	3.9014
75	3.9401	3.9272	3.9145
76	3.9531	3.9402	3.9275
77	3.9659	3.9530	3.9403
78	3.9786	3.9657	3.9530
79	3.9911	3.9782	3.9655
80	4.0035	3.9906	3.9778
81	4.0157	4.0028	3.9900
82	4.0277	4.0148	4.0021
83	4.0396	4.0267	4.0140
84	4.0514	4.0385	4.0257
85	4.0630	4.0501	4.0374
86	4.0745	4.0616	4.0489
87	4.0859	4.0730	4.0602
88	4.0971	4.0842	4.0715
89	4.1083	4.0953	4.0826
90	4.1192	4.1063	4.0936
91	4.1301	4.1172	4.1044
92	4.1409	4.1279	4.1152
93	4.1515	4.1386	4.1258
94	4.1621	4.1491	4.1363
95	4.1725	4.1595	4.1468
96	4.1828	4.1698	4.1571
97	4.1930	4.1801	4.1673
98	4.2031	4.1902	4.1774
99	4.2131	4.2002	4.1874
100	4.2230	4.2101	4.1973

$\zeta_N^1(2,A)$

N \ A	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08
1	0.9803	0.9612	0.9426	0.9246	0.9070	0.8900	0.8734	0.8573
2	1.2278	1.2062	1.1853	1.1648	1.1450	1.1256	1.1068	1.0885
3	1.3382	1.3159	1.2942	1.2731	1.2525	1.2324	1.2129	1.1939
4	1.4004	1.3778	1.3558	1.3343	1.3134	1.2931	1.2733	1.2540
5	1.4402	1.4174	1.3953	1.3737	1.3527	1.3322	1.3122	1.2927
6	1.4679	1.4450	1.4228	1.4011	1.3800	1.3594	1.3393	1.3198
7	1.4883	1.4653	1.4430	1.4213	1.4001	1.3795	1.3593	1.3397
8	1.5038	1.4809	1.4585	1.4367	1.4155	1.3949	1.3747	1.3550
9	1.5162	1.4932	1.4708	1.4490	1.4277	1.4070	1.3868	1.3672
10	1.5261	1.5031	1.4807	1.4589	1.4376	1.4169	1.3967	1.3770
11	1.5344	1.5114	1.4889	1.4671	1.4458	1.4251	1.4049	1.3851
12	1.5413	1.5183	1.4959	1.4740	1.4527	1.4320	1.4117	1.3920
13	1.5472	1.5242	1.5017	1.4799	1.4586	1.4378	1.4176	1.3978
14	1.5523	1.5293	1.5068	1.4850	1.4637	1.4429	1.4226	1.4029
15	1.5568	1.5337	1.5113	1.4894	1.4681	1.4473	1.4270	1.4073
16	1.5607	1.5376	1.5151	1.4933	1.4720	1.4512	1.4309	1.4112
17	1.5641	1.5411	1.5186	1.4967	1.4754	1.4546	1.4343	1.4146
18	1.5672	1.5441	1.5217	1.4998	1.4785	1.4577	1.4374	1.4176
19	1.5700	1.5469	1.5244	1.5025	1.4812	1.4604	1.4402	1.4204
20	1.5725	1.5494	1.5269	1.5050	1.4837	1.4629	1.4426	1.4229
21	1.5747	1.5517	1.5292	1.5073	1.4860	1.4652	1.4449	1.4251
22	1.5768	1.5537	1.5312	1.5094	1.4880	1.4672	1.4469	1.4272
23	1.5787	1.5556	1.5331	1.5112	1.4899	1.4691	1.4488	1.4290
24	1.5804	1.5573	1.5349	1.5130	1.4916	1.4708	1.4506	1.4308
25	1.5820	1.5589	1.5365	1.5146	1.4932	1.4724	1.4521	1.4324
26	1.5835	1.5604	1.5379	1.5160	1.4947	1.4739	1.4536	1.4338
27	1.5849	1.5618	1.5393	1.5174	1.4961	1.4753	1.4550	1.4352
28	1.5861	1.5631	1.5406	1.5187	1.4973	1.4765	1.4562	1.4365
29	1.5873	1.5642	1.5418	1.5199	1.4985	1.4777	1.4574	1.4376
30	1.5884	1.5654	1.5429	1.5210	1.4996	1.4788	1.4585	1.4388
31	1.5895	1.5664	1.5439	1.5220	1.5007	1.4799	1.4596	1.4398
32	1.5905	1.5674	1.5449	1.5230	1.5016	1.4808	1.4605	1.4408
33	1.5914	1.5683	1.5458	1.5239	1.5026	1.4817	1.4615	1.4417
34	1.5922	1.5692	1.5467	1.5248	1.5034	1.4826	1.4623	1.4425
35	1.5931	1.5700	1.5475	1.5256	1.5042	1.4834	1.4631	1.4433
36	1.5938	1.5707	1.5483	1.5263	1.5050	1.4842	1.4639	1.4441
37	1.5946	1.5715	1.5490	1.5271	1.5057	1.4849	1.4646	1.4448
38	1.5952	1.5722	1.5497	1.5278	1.5064	1.4856	1.4653	1.4455
39	1.5959	1.5728	1.5503	1.5284	1.5071	1.4863	1.4660	1.4462
40	1.5965	1.5734	1.5510	1.5290	1.5077	1.4869	1.4666	1.4468
41	1.5971	1.5740	1.5515	1.5296	1.5083	1.4875	1.4672	1.4474
42	1.5977	1.5746	1.5521	1.5302	1.5089	1.4880	1.4678	1.4480
43	1.5982	1.5751	1.5527	1.5307	1.5094	1.4886	1.4683	1.4485
44	1.5987	1.5757	1.5532	1.5313	1.5099	1.4891	1.4688	1.4490
45	1.5992	1.5762	1.5537	1.5318	1.5104	1.4896	1.4693	1.4495
46	1.5997	1.5766	1.5541	1.5322	1.5109	1.4901	1.4698	1.4500
47	1.6002	1.5771	1.5546	1.5327	1.5113	1.4905	1.4702	1.4504
48	1.6006	1.5775	1.5550	1.5331	1.5118	1.4909	1.4707	1.4509
49	1.6010	1.5779	1.5554	1.5335	1.5122	1.4914	1.4711	1.4513
50	1.6014	1.5783	1.5558	1.5339	1.5126	1.4918	1.4715	1.4517

$\zeta^{1}_{N}(2,A)$

N \ A	0.09	0.10	0.11	0.12	0.13	0.14	0.15	0.16
1	0.8417	0.8264	0.8116	0.7972	0.7831	0.7695	0.7561	0.7432
2	1.0706	1.0532	1.0362	1.0197	1.0036	0.9878	0.9725	0.9575
3	1.1753	1.1573	1.1396	1.1224	1.1056	1.0893	1.0733	1.0576
4	1.2351	1.2168	1.1988	1.1813	1.1643	1.1476	1.1313	1.1154
5	1.2737	1.2552	1.2371	1.2195	1.2023	1.1854	1.1690	1.1530
6	1.3007	1.2821	1.2639	1.2462	1.2289	1.2120	1.1955	1.1793
7	1.3206	1.3019	1.2837	1.2659	1.2485	1.2316	1.2150	1.1988
8	1.3359	1.3172	1.2989	1.2811	1.2637	1.2467	1.2301	1.2139
9	1.3480	1.3292	1.3109	1.2931	1.2757	1.2587	1.2420	1.2258
10	1.3578	1.3390	1.3207	1.3029	1.2854	1.2684	1.2517	1.2355
11	1.3659	1.3471	1.3288	1.3109	1.2935	1.2764	1.2598	1.2435
12	1.3728	1.3540	1.3356	1.3178	1.3003	1.2832	1.2665	1.2503
13	1.3786	1.3598	1.3415	1.3236	1.3061	1.2890	1.2723	1.2560
14	1.3836	1.3648	1.3465	1.3286	1.3111	1.2940	1.2773	1.2610
15	1.3880	1.3692	1.3509	1.3330	1.3155	1.2984	1.2817	1.2654
16	1.3919	1.3731	1.3547	1.3368	1.3193	1.3022	1.2855	1.2692
17	1.3953	1.3765	1.3581	1.3402	1.3227	1.3056	1.2889	1.2726
18	1.3984	1.3795	1.3612	1.3433	1.3258	1.3087	1.2920	1.2756
19	1.4011	1.3823	1.3639	1.3460	1.3285	1.3114	1.2947	1.2784
20	1.4036	1.3848	1.3664	1.3485	1.3310	1.3139	1.2971	1.2808
21	1.4058	1.3870	1.3686	1.3507	1.3332	1.3161	1.2994	1.2830
22	1.4079	1.3891	1.3707	1.3528	1.3352	1.3181	1.3014	1.2851
23	1.4098	1.3909	1.3726	1.3546	1.3371	1.3200	1.3033	1.2869
24	1.4115	1.3927	1.3743	1.3563	1.3388	1.3217	1.3050	1.2887
25	1.4131	1.3942	1.3759	1.3579	1.3404	1.3233	1.3066	1.2902
26	1.4145	1.3957	1.3773	1.3594	1.3419	1.3248	1.3080	1.2917
27	1.4159	1.3971	1.3787	1.3608	1.3432	1.3261	1.3094	1.2931
28	1.4172	1.3983	1.3800	1.3620	1.3445	1.3274	1.3107	1.2943
29	1.4184	1.3995	1.3811	1.3632	1.3457	1.3286	1.3118	1.2955
30	1.4195	1.4006	1.3822	1.3643	1.3468	1.3297	1.3129	1.2966
31	1.4205	1.4017	1.3833	1.3653	1.3478	1.3307	1.3140	1.2976
32	1.4215	1.4026	1.3842	1.3663	1.3488	1.3317	1.3149	1.2986
33	1.4224	1.4035	1.3852	1.3672	1.3497	1.3326	1.3158	1.2995
34	1.4232	1.4044	1.3860	1.3681	1.3505	1.3334	1.3167	1.3004
35	1.4240	1.4052	1.3868	1.3689	1.3514	1.3342	1.3175	1.3012
36	1.4248	1.4060	1.3876	1.3696	1.3521	1.3350	1.3183	1.3019
37	1.4255	1.4067	1.3883	1.3704	1.3528	1.3357	1.3190	1.3027
38	1.4262	1.4074	1.3890	1.3711	1.3535	1.3364	1.3197	1.3033
39	1.4269	1.4080	1.3897	1.3717	1.3542	1.3371	1.3203	1.3040
40	1.4275	1.4087	1.3903	1.3723	1.3548	1.3377	1.3210	1.3046
41	1.4281	1.4093	1.3909	1.3729	1.3554	1.3383	1.3216	1.3052
42	1.4287	1.4098	1.3914	1.3735	1.3560	1.3388	1.3221	1.3058
43	1.4292	1.4104	1.3920	1.3740	1.3565	1.3394	1.3227	1.3063
44	1.4297	1.4109	1.3925	1.3745	1.3570	1.3399	1.3232	1.3068
45	1.4302	1.4114	1.3930	1.3750	1.3575	1.3404	1.3237	1.3073
46	1.4307	1.4118	1.3935	1.3755	1.3580	1.3409	1.3241	1.3078
47	1.4311	1.4123	1.3939	1.3760	1.3584	1.3413	1.3246	1.3082
48	1.4316	1.4127	1.3943	1.3764	1.3589	1.3417	1.3250	1.3087
49	1.4320	1.4131	1.3948	1.3768	1.3593	1.3421	1.3254	1.3091
50	1.4324	1.4135	1.3951	1.3772	1.3597	1.3425	1.3258	1.3095

$\zeta^1_N(2,A)$

N \ A	0.17	0.18	0.19	0.20	0.21	0.22	0.23	0.24
1	0.7305	0.7182	0.7062	0.6944	0.6830	0.6719	0.6610	0.6504
2	0.9429	0.9286	0.9147	0.9011	0.8878	0.8748	0.8621	0.8497
3	1.0424	1.0275	1.0129	0.9987	0.9848	0.9712	0.9579	0.9449
4	1.0999	1.0847	1.0699	1.0554	1.0412	1.0274	1.0138	1.0005
5	1.1373	1.1220	1.1070	1.0924	1.0781	1.0641	1.0504	1.0370
6	1.1636	1.1482	1.1331	1.1184	1.1040	1.0899	1.0761	1.0626
7	1.1830	1.1676	1.1525	1.1377	1.1232	1.1091	1.0953	1.0817
8	1.1980	1.1825	1.1674	1.1526	1.1381	1.1239	1.1100	1.0965
9	1.2099	1.1944	1.1792	1.1644	1.1499	1.1357	1.1218	1.1082
10	1.2196	1.2040	1.1888	1.1740	1.1595	1.1452	1.1313	1.1177
11	1.2276	1.2120	1.1968	1.1820	1.1674	1.1532	1.1393	1.1256
12	1.2343	1.2188	1.2036	1.1887	1.1741	1.1599	1.1459	1.1323
13	1.2401	1.2245	1.2093	1.1944	1.1799	1.1656	1.1517	1.1380
14	1.2451	1.2295	1.2143	1.1994	1.1848	1.1705	1.1566	1.1429
15	1.2494	1.2338	1.2186	1.2037	1.1891	1.1749	1.1609	1.1472
16	1.2533	1.2377	1.2224	1.2075	1.1929	1.1787	1.1647	1.1510
17	1.2566	1.2411	1.2258	1.2109	1.1963	1.1820	1.1681	1.1544
18	1.2597	1.2441	1.2288	1.2139	1.1993	1.1850	1.1711	1.1574
19	1.2624	1.2468	1.2315	1.2166	1.2020	1.1878	1.1738	1.1601
20	1.2649	1.2493	1.2340	1.2191	1.2045	1.1902	1.1762	1.1625
21	1.2671	1.2515	1.2362	1.2213	1.2067	1.1924	1.1784	1.1648
22	1.2691	1.2535	1.2383	1.2233	1.2087	1.1944	1.1805	1.1668
23	1.2710	1.2554	1.2401	1.2252	1.2106	1.1963	1.1823	1.1686
24	1.2727	1.2571	1.2418	1.2269	1.2123	1.1980	1.1840	1.1703
25	1.2743	1.2587	1.2434	1.2285	1.2139	1.1996	1.1856	1.1719
26	1.2757	1.2601	1.2449	1.2299	1.2153	1.2010	1.1870	1.1734
27	1.2771	1.2615	1.2462	1.2313	1.2167	1.2024	1.1884	1.1747
28	1.2783	1.2627	1.2475	1.2325	1.2179	1.2036	1.1896	1.1760
29	1.2795	1.2639	1.2486	1.2337	1.2191	1.2048	1.1908	1.1771
30	1.2806	1.2650	1.2497	1.2348	1.2202	1.2059	1.1919	1.1782
31	1.2817	1.2660	1.2508	1.2358	1.2212	1.2069	1.1929	1.1792
32	1.2826	1.2670	1.2517	1.2368	1.2222	1.2079	1.1939	1.1802
33	1.2835	1.2679	1.2526	1.2377	1.2231	1.2088	1.1948	1.1811
34	1.2844	1.2688	1.2535	1.2386	1.2239	1.2097	1.1957	1.1820
35	1.2852	1.2696	1.2543	1.2394	1.2248	1.2105	1.1965	1.1828
36	1.2860	1.2703	1.2551	1.2401	1.2255	1.2112	1.1972	1.1835
37	1.2867	1.2711	1.2558	1.2409	1.2262	1.2119	1.1979	1.1843
38	1.2874	1.2717	1.2565	1.2415	1.2269	1.2126	1.1986	1.1849
39	1.2880	1.2724	1.2571	1.2422	1.2276	1.2133	1.1993	1.1856
40	1.2886	1.2730	1.2577	1.2428	1.2282	1.2139	1.1999	1.1862
41	1.2892	1.2736	1.2583	1.2434	1.2288	1.2145	1.2005	1.1868
42	1.2898	1.2742	1.2589	1.2440	1.2293	1.2150	1.2011	1.1874
43	1.2903	1.2747	1.2594	1.2445	1.2299	1.2156	1.2016	1.1879
44	1.2908	1.2752	1.2599	1.2450	1.2304	1.2161	1.2021	1.1884
45	1.2913	1.2757	1.2604	1.2455	1.2309	1.2166	1.2026	1.1889
46	1.2918	1.2762	1.2609	1.2460	1.2313	1.2170	1.2031	1.1894
47	1.2922	1.2766	1.2614	1.2464	1.2318	1.2175	1.2035	1.1898
48	1.2927	1.2771	1.2618	1.2468	1.2322	1.2179	1.2039	1.1902
49	1.2931	1.2775	1.2622	1.2473	1.2326	1.2183	1.2043	1.1906
50	1.2935	1.2779	1.2626	1.2477	1.2330	1.2187	1.2047	1.1910

$\zeta_N^1(2,A)$

N \ A	0.25	0.26	0.27	0.28	0.29	0.30	0.31	0.32
1	0.6400	0.6299	0.6200	0.6104	0.6009	0.5917	0.5827	0.5739
2	0.8375	0.8257	0.8141	0.8027	0.7916	0.7808	0.7701	0.7597
3	0.9322	0.9198	0.9076	0.8957	0.8840	0.8726	0.8614	0.8504
4	0.9876	0.9749	0.9624	0.9503	0.9383	0.9267	0.9152	0.9040
5	1.0238	1.0110	0.9984	0.9861	0.9741	0.9623	0.9507	0.9394
6	1.0494	1.0365	1.0239	1.0115	0.9993	0.9875	0.9758	0.9644
7	1.0685	1.0555	1.0428	1.0304	1.0182	1.0062	0.9945	0.9831
8	1.0832	1.0702	1.0574	1.0449	1.0327	1.0207	1.0090	0.9975
9	1.0949	1.0818	1.0691	1.0566	1.0443	1.0323	1.0205	1.0090
10	1.1044	1.0913	1.0785	1.0660	1.0537	1.0417	1.0299	1.0184
11	1.1123	1.0992	1.0864	1.0739	1.0616	1.0496	1.0378	1.0262
12	1.1189	1.1059	1.0931	1.0805	1.0682	1.0562	1.0444	1.0328
13	1.1246	1.1115	1.0987	1.0862	1.0739	1.0618	1.0500	1.0384
14	1.1296	1.1165	1.1036	1.0911	1.0788	1.0667	1.0549	1.0433
15	1.1339	1.1208	1.1079	1.0954	1.0830	1.0710	1.0592	1.0476
16	1.1376	1.1245	1.1117	1.0991	1.0868	1.0747	1.0629	1.0513
17	1.1410	1.1279	1.1151	1.1025	1.0902	1.0781	1.0663	1.0547
18	1.1440	1.1309	1.1181	1.1055	1.0932	1.0811	1.0692	1.0576
19	1.1467	1.1336	1.1207	1.1082	1.0958	1.0838	1.0719	1.0603
20	1.1491	1.1360	1.1232	1.1106	1.0983	1.0862	1.0743	1.0627
21	1.1514	1.1382	1.1254	1.1128	1.1005	1.0884	1.0765	1.0649
22	1.1534	1.1403	1.1274	1.1148	1.1025	1.0904	1.0786	1.0669
23	1.1552	1.1421	1.1293	1.1167	1.1043	1.0922	1.0804	1.0688
24	1.1569	1.1438	1.1310	1.1184	1.1060	1.0939	1.0821	1.0705
25	1.1585	1.1454	1.1325	1.1199	1.1076	1.0955	1.0836	1.0720
26	1.1600	1.1468	1.1340	1.1214	1.1090	1.0969	1.0851	1.0735
27	1.1613	1.1482	1.1353	1.1227	1.1104	1.0983	1.0864	1.0748
28	1.1626	1.1494	1.1366	1.1240	1.1116	1.0995	1.0877	1.0761
29	1.1637	1.1506	1.1377	1.1251	1.1128	1.1007	1.0888	1.0772
30	1.1648	1.1517	1.1388	1.1262	1.1139	1.1018	1.0899	1.0783
31	1.1658	1.1527	1.1398	1.1272	1.1149	1.1028	1.0910	1.0793
32	1.1668	1.1537	1.1408	1.1282	1.1159	1.1038	1.0919	1.0803
33	1.1677	1.1546	1.1417	1.1291	1.1168	1.1047	1.0928	1.0812
34	1.1686	1.1554	1.1426	1.1300	1.1176	1.1055	1.0937	1.0820
35	1.1694	1.1562	1.1434	1.1308	1.1184	1.1063	1.0945	1.0828
36	1.1701	1.1570	1.1441	1.1315	1.1192	1.1071	1.0952	1.0836
37	1.1708	1.1577	1.1448	1.1322	1.1199	1.1078	1.0959	1.0843
38	1.1715	1.1584	1.1455	1.1329	1.1206	1.1085	1.0966	1.0850
39	1.1722	1.1590	1.1462	1.1336	1.1212	1.1091	1.0973	1.0856
40	1.1728	1.1597	1.1468	1.1342	1.1218	1.1097	1.0979	1.0863
41	1.1734	1.1602	1.1474	1.1348	1.1224	1.1103	1.0985	1.0868
42	1.1739	1.1608	1.1479	1.1353	1.1230	1.1109	1.0990	1.0874
43	1.1745	1.1613	1.1485	1.1359	1.1235	1.1114	1.0996	1.0879
44	1.1750	1.1618	1.1490	1.1364	1.1240	1.1119	1.1001	1.0884
45	1.1755	1.1623	1.1495	1.1369	1.1245	1.1124	1.1006	1.0889
46	1.1759	1.1628	1.1499	1.1373	1.1250	1.1129	1.1010	1.0894
47	1.1764	1.1633	1.1504	1.1378	1.1254	1.1133	1.1015	1.0898
48	1.1768	1.1637	1.1508	1.1382	1.1259	1.1138	1.1019	1.0903
49	1.1772	1.1641	1.1512	1.1386	1.1263	1.1142	1.1023	1.0907
50	1.1776	1.1645	1.1516	1.1390	1.1267	1.1146	1.1027	1.0911

$\zeta_N^1(2,A)$

N \ A	0.33	0.34	0.35	0.36	0.37	0.38	0.39	0.40
1	0.5653	0.5569	0.5487	0.5407	0.5328	0.5251	0.5176	0.5102
2	0.7495	0.7395	0.7298	0.7202	0.7108	0.7016	0.6926	0.6838
3	0.8397	0.8292	0.8189	0.8088	0.7989	0.7892	0.7797	0.7703
4	0.8930	0.8823	0.8717	0.8614	0.8512	0.8413	0.8315	0.8220
5	0.9282	0.9173	0.9067	0.8962	0.8859	0.8758	0.8660	0.8563
6	0.9532	0.9422	0.9315	0.9209	0.9106	0.9004	0.8905	0.8807
7	0.9718	0.9608	0.9500	0.9394	0.9290	0.9188	0.9088	0.8989
8	0.9862	0.9752	0.9643	0.9537	0.9433	0.9330	0.9230	0.9131
9	0.9977	0.9866	0.9758	0.9651	0.9546	0.9444	0.9343	0.9244
10	1.0071	0.9960	0.9851	0.9744	0.9639	0.9537	0.9436	0.9337
11	1.0149	1.0038	0.9929	0.9822	0.9717	0.9614	0.9513	0.9414
12	1.0214	1.0103	0.9994	0.9887	0.9782	0.9679	0.9578	0.9479
13	1.0271	1.0159	1.0050	0.9943	0.9838	0.9735	0.9634	0.9534
14	1.0319	1.0208	1.0099	0.9992	0.9886	0.9783	0.9682	0.9583
15	1.0362	1.0251	1.0141	1.0034	0.9929	0.9826	0.9724	0.9625
16	1.0399	1.0288	1.0179	1.0071	0.9966	0.9863	0.9762	0.9662
17	1.0433	1.0321	1.0212	1.0105	0.9999	0.9896	0.9795	0.9695
18	1.0463	1.0351	1.0242	1.0134	1.0029	0.9926	0.9824	0.9725
19	1.0489	1.0378	1.0268	1.0161	1.0056	0.9952	0.9851	0.9751
20	1.0514	1.0402	1.0292	1.0185	1.0080	0.9976	0.9875	0.9775
21	1.0535	1.0424	1.0314	1.0207	1.0102	0.9998	0.9897	0.9797
22	1.0556	1.0444	1.0334	1.0227	1.0122	1.0018	0.9917	0.9817
23	1.0574	1.0462	1.0353	1.0245	1.0140	1.0036	0.9935	0.9835
24	1.0591	1.0479	1.0370	1.0262	1.0157	1.0053	0.9952	0.9852
25	1.0606	1.0495	1.0385	1.0278	1.0172	1.0069	0.9967	0.9868
26	1.0621	1.0509	1.0400	1.0292	1.0187	1.0083	0.9982	0.9882
27	1.0634	1.0522	1.0413	1.0305	1.0200	1.0096	0.9995	0.9895
28	1.0647	1.0535	1.0425	1.0318	1.0212	1.0109	1.0007	0.9908
29	1.0658	1.0547	1.0437	1.0329	1.0224	1.0120	1.0019	0.9919
30	1.0669	1.0557	1.0448	1.0340	1.0235	1.0131	1.0030	0.9930
31	1.0679	1.0568	1.0458	1.0350	1.0245	1.0141	1.0040	0.9940
32	1.0689	1.0577	1.0468	1.0360	1.0255	1.0151	1.0049	0.9950
33	1.0698	1.0586	1.0477	1.0369	1.0263	1.0160	1.0058	0.9959
34	1.0706	1.0595	1.0485	1.0377	1.0272	1.0168	1.0067	0.9967
35	1.0714	1.0603	1.0493	1.0385	1.0280	1.0176	1.0075	0.9975
36	1.0722	1.0610	1.0501	1.0393	1.0288	1.0184	1.0082	0.9983
37	1.0729	1.0617	1.0508	1.0400	1.0295	1.0191	1.0089	0.9990
38	1.0736	1.0624	1.0515	1.0407	1.0301	1.0198	1.0096	0.9997
39	1.0742	1.0631	1.0521	1.0413	1.0308	1.0204	1.0103	1.0003
40	1.0749	1.0637	1.0527	1.0420	1.0314	1.0210	1.0109	1.0009
41	1.0754	1.0643	1.0533	1.0425	1.0320	1.0216	1.0115	1.0015
42	1.0760	1.0648	1.0539	1.0431	1.0325	1.0222	1.0120	1.0020
43	1.0765	1.0654	1.0544	1.0436	1.0331	1.0227	1.0126	1.0026
44	1.0770	1.0659	1.0549	1.0441	1.0336	1.0232	1.0131	1.0031
45	1.0775	1.0664	1.0554	1.0446	1.0341	1.0237	1.0135	1.0036
46	1.0780	1.0668	1.0558	1.0451	1.0345	1.0242	1.0140	1.0040
47	1.0784	1.0673	1.0563	1.0455	1.0350	1.0246	1.0145	1.0045
48	1.0789	1.0677	1.0567	1.0460	1.0354	1.0251	1.0149	1.0049
49	1.0793	1.0681	1.0571	1.0464	1.0358	1.0255	1.0153	1.0053
50	1.0797	1.0685	1.0575	1.0468	1.0362	1.0259	1.0157	1.0057

$\zeta_N^1(2,A)$

N \ A	0.41	0.42	0.43	0.44	0.45	0.46	0.47	0.48
1	0.5030	0.4959	0.4890	0.4823	0.4756	0.4691	0.4628	0.4565
2	0.6752	0.6667	0.6584	0.6502	0.6422	0.6344	0.6267	0.6191
3	0.7612	0.7522	0.7434	0.7347	0.7262	0.7179	0.7097	0.7017
4	0.8126	0.8034	0.7943	0.7855	0.7767	0.7682	0.7598	0.7515
5	0.8468	0.8374	0.8282	0.8192	0.8104	0.8017	0.7932	0.7848
6	0.8711	0.8617	0.8524	0.8434	0.8344	0.8257	0.8171	0.8086
7	0.8893	0.8798	0.8705	0.8614	0.8525	0.8437	0.8350	0.8265
8	0.9034	0.8939	0.8846	0.8755	0.8665	0.8576	0.8489	0.8404
9	0.9147	0.9052	0.8959	0.8867	0.8777	0.8688	0.8601	0.8515
10	0.9240	0.9144	0.9051	0.8959	0.8868	0.8779	0.8692	0.8607
11	0.9316	0.9221	0.9127	0.9035	0.8944	0.8856	0.8768	0.8682
12	0.9381	0.9286	0.9192	0.9100	0.9009	0.8920	0.8833	0.8747
13	0.9437	0.9341	0.9247	0.9155	0.9064	0.8975	0.8888	0.8802
14	0.9485	0.9389	0.9295	0.9203	0.9112	0.9023	0.8935	0.8849
15	0.9527	0.9431	0.9337	0.9245	0.9154	0.9065	0.8977	0.8891
16	0.9564	0.9468	0.9374	0.9282	0.9191	0.9102	0.9014	0.8928
17	0.9597	0.9501	0.9407	0.9315	0.9224	0.9135	0.9047	0.8961
18	0.9627	0.9531	0.9437	0.9344	0.9253	0.9164	0.9076	0.8990
19	0.9653	0.9557	0.9463	0.9371	0.9280	0.9190	0.9103	0.9016
20	0.9677	0.9581	0.9487	0.9395	0.9304	0.9214	0.9126	0.9040
21	0.9699	0.9603	0.9509	0.9416	0.9325	0.9236	0.9148	0.9062
22	0.9719	0.9623	0.9529	0.9436	0.9345	0.9256	0.9168	0.9082
23	0.9737	0.9641	0.9547	0.9454	0.9363	0.9274	0.9186	0.9100
24	0.9754	0.9658	0.9564	0.9471	0.9380	0.9291	0.9203	0.9116
25	0.9770	0.9674	0.9579	0.9487	0.9395	0.9306	0.9218	0.9132
26	0.9784	0.9688	0.9594	0.9501	0.9410	0.9320	0.9232	0.9146
27	0.9797	0.9701	0.9607	0.9514	0.9423	0.9334	0.9246	0.9159
28	0.9810	0.9714	0.9619	0.9526	0.9435	0.9346	0.9258	0.9172
29	0.9821	0.9725	0.9631	0.9538	0.9447	0.9357	0.9270	0.9183
30	0.9832	0.9736	0.9642	0.9549	0.9458	0.9368	0.9280	0.9194
31	0.9842	0.9746	0.9652	0.9559	0.9468	0.9378	0.9290	0.9204
32	0.9852	0.9756	0.9661	0.9568	0.9477	0.9388	0.9300	0.9213
33	0.9861	0.9765	0.9670	0.9577	0.9486	0.9397	0.9309	0.9222
34	0.9869	0.9773	0.9679	0.9586	0.9495	0.9405	0.9317	0.9231
35	0.9877	0.9781	0.9687	0.9594	0.9503	0.9413	0.9325	0.9239
36	0.9885	0.9788	0.9694	0.9601	0.9510	0.9421	0.9333	0.9246
37	0.9892	0.9796	0.9701	0.9608	0.9517	0.9428	0.9340	0.9253
38	0.9899	0.9802	0.9708	0.9615	0.9524	0.9435	0.9347	0.9260
39	0.9905	0.9809	0.9714	0.9622	0.9530	0.9441	0.9353	0.9267
40	0.9911	0.9815	0.9720	0.9628	0.9537	0.9447	0.9359	0.9273
41	0.9917	0.9821	0.9726	0.9634	0.9542	0.9453	0.9365	0.9278
42	0.9923	0.9826	0.9732	0.9639	0.9548	0.9458	0.9370	0.9284
43	0.9928	0.9832	0.9737	0.9644	0.9553	0.9464	0.9376	0.9289
44	0.9933	0.9837	0.9742	0.9649	0.9558	0.9469	0.9381	0.9294
45	0.9938	0.9842	0.9747	0.9654	0.9563	0.9474	0.9386	0.9299
46	0.9942	0.9846	0.9752	0.9659	0.9568	0.9478	0.9390	0.9304
47	0.9947	0.9851	0.9756	0.9663	0.9572	0.9483	0.9395	0.9308
48	0.9951	0.9855	0.9760	0.9668	0.9577	0.9487	0.9399	0.9312
49	0.9955	0.9859	0.9765	0.9672	0.9581	0.9491	0.9403	0.9317
50	0.9959	0.9863	0.9768	0.9676	0.9585	0.9495	0.9407	0.9320

$\zeta_N^1(2,A)$

N \ A	0.49	0.50	0.52	0.54	0.56	0.58	0.60	0.62
1	0.4504	0.4444	0.4328	0.4217	0.4109	0.4006	0.3906	0.3810
2	0.6117	0.6044	0.5903	0.5767	0.5635	0.5508	0.5386	0.5267
3	0.6938	0.6861	0.6710	0.6565	0.6424	0.6288	0.6157	0.6030
4	0.7434	0.7355	0.7200	0.7050	0.6905	0.6765	0.6630	0.6499
5	0.7766	0.7685	0.7528	0.7376	0.7228	0.7086	0.6949	0.6815
6	0.8003	0.7922	0.7763	0.7609	0.7461	0.7317	0.7178	0.7044
7	0.8182	0.8100	0.7940	0.7785	0.7636	0.7491	0.7351	0.7216
8	0.8320	0.8238	0.8078	0.7922	0.7772	0.7627	0.7487	0.7350
9	0.8431	0.8349	0.8188	0.8032	0.7882	0.7736	0.7595	0.7458
10	0.8522	0.8440	0.8278	0.8122	0.7971	0.7825	0.7684	0.7547
11	0.8598	0.8515	0.8354	0.8197	0.8046	0.7900	0.7758	0.7621
12	0.8662	0.8579	0.8417	0.8261	0.8110	0.7963	0.7821	0.7684
13	0.8717	0.8634	0.8472	0.8315	0.8164	0.8017	0.7875	0.7738
14	0.8765	0.8682	0.8520	0.8363	0.8211	0.8064	0.7922	0.7785
15	0.8806	0.8723	0.8561	0.8404	0.8252	0.8106	0.7963	0.7826
16	0.8843	0.8760	0.8598	0.8441	0.8289	0.8142	0.8000	0.7862
17	0.8876	0.8793	0.8630	0.8473	0.8321	0.8174	0.8032	0.7894
18	0.8905	0.8822	0.8659	0.8502	0.8350	0.8203	0.8061	0.7923
19	0.8931	0.8848	0.8686	0.8529	0.8377	0.8229	0.8087	0.7949
20	0.8955	0.8872	0.8709	0.8552	0.8400	0.8253	0.8110	0.7972
21	0.8977	0.8894	0.8731	0.8574	0.8422	0.8274	0.8132	0.7994
22	0.8997	0.8913	0.8751	0.8593	0.8441	0.8294	0.8151	0.8013
23	0.9015	0.8931	0.8769	0.8612	0.8459	0.8312	0.8169	0.8031
24	0.9032	0.8948	0.8785	0.8628	0.8476	0.8329	0.8186	0.8048
25	0.9047	0.8963	0.8801	0.8643	0.8491	0.8344	0.8201	0.8063
26	0.9061	0.8978	0.8815	0.8658	0.8505	0.8358	0.8215	0.8077
27	0.9074	0.8991	0.8828	0.8671	0.8519	0.8371	0.8228	0.8090
28	0.9087	0.9003	0.8840	0.8683	0.8531	0.8383	0.8241	0.8102
29	0.9098	0.9015	0.8852	0.8695	0.8542	0.8395	0.8252	0.8114
30	0.9109	0.9025	0.8863	0.8705	0.8553	0.8406	0.8263	0.8124
31	0.9119	0.9036	0.8873	0.8715	0.8563	0.8416	0.8273	0.8134
32	0.9129	0.9045	0.8882	0.8725	0.8572	0.8425	0.8282	0.8144
33	0.9137	0.9054	0.8891	0.8734	0.8581	0.8434	0.8291	0.8153
34	0.9146	0.9062	0.8900	0.8742	0.8590	0.8442	0.8299	0.8161
35	0.9154	0.9070	0.8907	0.8750	0.8598	0.8450	0.8307	0.8169
36	0.9161	0.9078	0.8915	0.8757	0.8605	0.8458	0.8315	0.8176
37	0.9168	0.9085	0.8922	0.8765	0.8612	0.8465	0.8322	0.8183
38	0.9175	0.9092	0.8929	0.8771	0.8619	0.8471	0.8329	0.8190
39	0.9182	0.9098	0.8935	0.8778	0.8625	0.8478	0.8335	0.8197
40	0.9188	0.9104	0.8941	0.8784	0.8631	0.8484	0.8341	0.8203
41	0.9193	0.9110	0.8947	0.8790	0.8637	0.8490	0.8347	0.8208
42	0.9199	0.9115	0.8953	0.8795	0.8643	0.8495	0.8352	0.8214
43	0.9204	0.9121	0.8958	0.8800	0.8648	0.8500	0.8358	0.8219
44	0.9209	0.9126	0.8963	0.8805	0.8653	0.8505	0.8363	0.8224
45	0.9214	0.9131	0.8968	0.8810	0.8658	0.8510	0.8367	0.8229
46	0.9219	0.9135	0.8972	0.8815	0.8662	0.8515	0.8372	0.8234
47	0.9223	0.9140	0.8977	0.8819	0.8667	0.8519	0.8376	0.8238
48	0.9227	0.9144	0.8981	0.8824	0.8671	0.8524	0.8381	0.8242
49	0.9232	0.9148	0.8985	0.8828	0.8675	0.8528	0.8385	0.8246
50	0.9236	0.9152	0.8989	0.8831	0.8679	0.8532	0.8389	0.8250

$\zeta_N^1(2,A)$

N \ A	0.64	0.66	0.68	0.70	0.72	0.74	0.76	0.78
1	0.3718	0.3629	0.3543	0.3460	0.3380	0.3303	0.3228	0.3156
2	0.5153	0.5042	0.4935	0.4832	0.4732	0.4635	0.4541	0.4450
3	0.5908	0.5789	0.5674	0.5562	0.5454	0.5350	0.5248	0.5150
4	0.6372	0.6249	0.6130	0.6015	0.5903	0.5795	0.5690	0.5588
5	0.6686	0.6561	0.6440	0.6323	0.6209	0.6098	0.5991	0.5887
6	0.6913	0.6787	0.6664	0.6546	0.6430	0.6319	0.6210	0.6104
7	0.7085	0.6957	0.6834	0.6714	0.6598	0.6486	0.6376	0.6270
8	0.7219	0.7091	0.6967	0.6846	0.6730	0.6616	0.6506	0.6399
9	0.7326	0.7198	0.7073	0.6953	0.6836	0.6722	0.6611	0.6504
10	0.7414	0.7286	0.7161	0.7040	0.6923	0.6809	0.6698	0.6590
11	0.7488	0.7359	0.7234	0.7113	0.6995	0.6881	0.6770	0.6662
12	0.7551	0.7422	0.7297	0.7175	0.7057	0.6943	0.6831	0.6723
13	0.7605	0.7475	0.7350	0.7228	0.7110	0.6996	0.6884	0.6776
14	0.7651	0.7522	0.7396	0.7275	0.7156	0.7042	0.6930	0.6822
15	0.7692	0.7563	0.7437	0.7315	0.7197	0.7082	0.6970	0.6862
16	0.7728	0.7599	0.7473	0.7351	0.7233	0.7118	0.7006	0.6897
17	0.7760	0.7631	0.7505	0.7383	0.7265	0.7150	0.7038	0.6929
18	0.7789	0.7659	0.7534	0.7412	0.7293	0.7178	0.7066	0.6957
19	0.7815	0.7685	0.7560	0.7437	0.7319	0.7204	0.7092	0.6983
20	0.7839	0.7709	0.7583	0.7461	0.7342	0.7227	0.7115	0.7006
21	0.7860	0.7730	0.7604	0.7482	0.7363	0.7248	0.7136	0.7027
22	0.7879	0.7750	0.7624	0.7501	0.7383	0.7267	0.7155	0.7046
23	0.7897	0.7767	0.7641	0.7519	0.7400	0.7285	0.7173	0.7064
24	0.7914	0.7784	0.7658	0.7536	0.7417	0.7301	0.7189	0.7080
25	0.7929	0.7799	0.7673	0.7551	0.7432	0.7317	0.7204	0.7096
26	0.7943	0.7813	0.7687	0.7565	0.7446	0.7331	0.7218	0.7109
27	0.7956	0.7826	0.7700	0.7578	0.7459	0.7344	0.7231	0.7122
28	0.7968	0.7838	0.7712	0.7590	0.7471	0.7356	0.7243	0.7134
29	0.7980	0.7850	0.7724	0.7601	0.7482	0.7367	0.7255	0.7146
30	0.7990	0.7860	0.7734	0.7612	0.7493	0.7378	0.7265	0.7156
31	0.8000	0.7870	0.7744	0.7622	0.7503	0.7387	0.7275	0.7166
32	0.8010	0.7880	0.7754	0.7631	0.7512	0.7397	0.7285	0.7176
33	0.8019	0.7889	0.7762	0.7640	0.7521	0.7406	0.7293	0.7184
34	0.8027	0.7897	0.7771	0.7648	0.7529	0.7414	0.7302	0.7193
35	0.8035	0.7905	0.7779	0.7656	0.7537	0.7422	0.7309	0.7200
36	0.8042	0.7912	0.7786	0.7664	0.7545	0.7429	0.7317	0.7208
37	0.8049	0.7919	0.7793	0.7671	0.7552	0.7436	0.7324	0.7215
38	0.8056	0.7926	0.7800	0.7677	0.7558	0.7443	0.7331	0.7221
39	0.8062	0.7932	0.7806	0.7684	0.7565	0.7449	0.7337	0.7228
40	0.8068	0.7938	0.7812	0.7690	0.7571	0.7455	0.7343	0.7234
41	0.8074	0.7944	0.7818	0.7695	0.7576	0.7461	0.7349	0.7239
42	0.8080	0.7950	0.7823	0.7701	0.7582	0.7466	0.7354	0.7245
43	0.8085	0.7955	0.7829	0.7706	0.7587	0.7472	0.7359	0.7250
44	0.8090	0.7960	0.7834	0.7711	0.7592	0.7477	0.7364	0.7255
45	0.8095	0.7965	0.7838	0.7716	0.7597	0.7481	0.7369	0.7260
46	0.8099	0.7969	0.7843	0.7720	0.7601	0.7486	0.7374	0.7264
47	0.8104	0.7974	0.7847	0.7725	0.7606	0.7490	0.7378	0.7269
48	0.8108	0.7978	0.7852	0.7729	0.7610	0.7495	0.7382	0.7273
49	0.8112	0.7982	0.7856	0.7733	0.7614	0.7499	0.7386	0.7277
50	0.8116	0.7986	0.7860	0.7737	0.7618	0.7502	0.7390	0.7281

$\zeta^1_N(2,A)$

N	A 0.80	0.82	0.84	0.86	0.88	0.90	0.92	0.94
1	0.3086	0.3019	0.2954	0.2891	0.2829	0.2770	0.2713	0.2657
2	0.4362	0.4276	0.4194	0.4113	0.4035	0.3959	0.3886	0.3814
3	0.5054	0.4962	0.4872	0.4784	0.4699	0.4617	0.4536	0.4458
4	0.5488	0.5392	0.5299	0.5208	0.5119	0.5033	0.4949	0.4868
5	0.5786	0.5687	0.5592	0.5499	0.5408	0.5320	0.5235	0.5151
6	0.6002	0.5902	0.5806	0.5711	0.5620	0.5530	0.5444	0.5359
7	0.6166	0.6066	0.5968	0.5873	0.5781	0.5691	0.5603	0.5518
8	0.6296	0.6194	0.6096	0.6001	0.5907	0.5817	0.5729	0.5643
9	0.6400	0.6298	0.6199	0.6103	0.6010	0.5919	0.5830	0.5744
10	0.6485	0.6384	0.6285	0.6188	0.6094	0.6003	0.5914	0.5827
11	0.6557	0.6455	0.6356	0.6259	0.6165	0.6074	0.5985	0.5898
12	0.6618	0.6516	0.6417	0.6320	0.6226	0.6134	0.6044	0.5957
13	0.6671	0.6568	0.6469	0.6372	0.6277	0.6186	0.6096	0.6009
14	0.6716	0.6614	0.6514	0.6417	0.6323	0.6231	0.6141	0.6054
15	0.6756	0.6654	0.6554	0.6457	0.6362	0.6270	0.6180	0.6093
16	0.6792	0.6689	0.6589	0.6492	0.6397	0.6305	0.6215	0.6128
17	0.6823	0.6721	0.6621	0.6523	0.6429	0.6336	0.6246	0.6159
18	0.6852	0.6749	0.6649	0.6552	0.6457	0.6364	0.6274	0.6187
19	0.6877	0.6774	0.6674	0.6577	0.6482	0.6390	0.6300	0.6212
20	0.6900	0.6797	0.6697	0.6600	0.6505	0.6413	0.6322	0.6235
21	0.6921	0.6818	0.6718	0.6621	0.6526	0.6433	0.6343	0.6255
22	0.6941	0.6838	0.6737	0.6640	0.6545	0.6452	0.6362	0.6274
23	0.6958	0.6855	0.6755	0.6657	0.6562	0.6470	0.6380	0.6292
24	0.6975	0.6872	0.6771	0.6674	0.6579	0.6486	0.6396	0.6308
25	0.6990	0.6887	0.6786	0.6689	0.6594	0.6501	0.6411	0.6323
26	0.7003	0.6900	0.6800	0.6702	0.6607	0.6515	0.6425	0.6337
27	0.7016	0.6913	0.6813	0.6715	0.6620	0.6528	0.6437	0.6349
28	0.7028	0.6925	0.6825	0.6727	0.6632	0.6540	0.6449	0.6361
29	0.7040	0.6937	0.6836	0.6739	0.6643	0.6551	0.6461	0.6373
30	0.7050	0.6947	0.6847	0.6749	0.6654	0.6561	0.6471	0.6383
31	0.7060	0.6957	0.6857	0.6759	0.6664	0.6571	0.6481	0.6393
32	0.7069	0.6966	0.6866	0.6768	0.6673	0.6580	0.6490	0.6402
33	0.7078	0.6975	0.6875	0.6777	0.6682	0.6589	0.6499	0.6411
34	0.7086	0.6983	0.6883	0.6785	0.6690	0.6597	0.6507	0.6419
35	0.7094	0.6991	0.6891	0.6793	0.6698	0.6605	0.6515	0.6427
36	0.7102	0.6998	0.6898	0.6800	0.6705	0.6612	0.6522	0.6434
37	0.7109	0.7005	0.6905	0.6807	0.6712	0.6619	0.6529	0.6441
38	0.7115	0.7012	0.6912	0.6814	0.6719	0.6626	0.6536	0.6447
39	0.7122	0.7018	0.6918	0.6820	0.6725	0.6632	0.6542	0.6454
40	0.7128	0.7024	0.6924	0.6826	0.6731	0.6638	0.6548	0.6460
41	0.7133	0.7030	0.6930	0.6832	0.6737	0.6644	0.6554	0.6465
42	0.7139	0.7036	0.6935	0.6837	0.6742	0.6649	0.6559	0.6471
43	0.7144	0.7041	0.6940	0.6843	0.6747	0.6655	0.6564	0.6476
44	0.7149	0.7046	0.6945	0.6847	0.6752	0.6659	0.6569	0.6481
45	0.7154	0.7051	0.6950	0.6852	0.6757	0.6664	0.6574	0.6486
46	0.7158	0.7055	0.6955	0.6857	0.6762	0.6669	0.6578	0.6490
47	0.7163	0.7059	0.6959	0.6861	0.6766	0.6673	0.6583	0.6495
48	0.7167	0.7064	0.6963	0.6865	0.6770	0.6677	0.6587	0.6499
49	0.7171	0.7068	0.6967	0.6869	0.6774	0.6681	0.6591	0.6503
50	0.7175	0.7072	0.6971	0.6873	0.6778	0.6685	0.6595	0.6507

$\zeta^{1}_{N}(2,A)$

N \ A	0.96	0.98	1.00
1	0.2603	0.2551	0.2500
2	0.3744	0.3677	0.3611
3	0.4382	0.4308	0.4236
4	0.4789	0.4711	0.4636
5	0.5070	0.4991	0.4914
6	0.5277	0.5196	0.5118
7	0.5434	0.5353	0.5274
8	0.5559	0.5477	0.5398
9	0.5660	0.5578	0.5498
10	0.5743	0.5661	0.5580
11	0.5813	0.5730	0.5650
12	0.5872	0.5790	0.5709
13	0.5924	0.5841	0.5760
14	0.5968	0.5885	0.5804
15	0.6008	0.5925	0.5843
16	0.6042	0.5959	0.5878
17	0.6073	0.5990	0.5909
18	0.6101	0.6018	0.5937
19	0.6126	0.6043	0.5962
20	0.6149	0.6066	0.5984
21	0.6170	0.6086	0.6005
22	0.6189	0.6105	0.6024
23	0.6206	0.6123	0.6041
24	0.6222	0.6139	0.6057
25	0.6237	0.6154	0.6072
26	0.6251	0.6167	0.6086
27	0.6264	0.6180	0.6098
28	0.6276	0.6192	0.6110
29	0.6287	0.6203	0.6122
30	0.6297	0.6214	0.6132
31	0.6307	0.6223	0.6142
32	0.6316	0.6232	0.6151
33	0.6325	0.6241	0.6160
34	0.6333	0.6249	0.6168
35	0.6341	0.6257	0.6175
36	0.6348	0.6264	0.6183
37	0.6355	0.6271	0.6190
38	0.6362	0.6278	0.6196
39	0.6368	0.6284	0.6202
40	0.6374	0.6290	0.6208
41	0.6380	0.6296	0.6214
42	0.6385	0.6301	0.6219
43	0.6390	0.6306	0.6225
44	0.6395	0.6311	0.6230
45	0.6400	0.6316	0.6234
46	0.6404	0.6321	0.6239
47	0.6409	0.6325	0.6243
48	0.6413	0.6329	0.6247
49	0.6417	0.6333	0.6251
50	0.6421	0.6337	0.6255

Table 2

COMPUTER PROGRAM AND NUMERICAL VALUES FOR $\zeta(2,A)$

```
FTN4.10                                                          01/05/65
      PROGRAM C114
      DIMENSION ZETA(1961), A(1981), B(7)
      B(1) = 1.
      B(2) = -.5
      B(3) = 1./6.
      B(4) = 0.0
      B(5) = -1./30.
      B(6) = 0.0
      B(7) = 1./42.
      I10 = 11
   99 DO 1 I = 1,1481
      I2 = I - 1
      IF (I2 - 980)4111,4111,4112
 4111 A(I) = .01 + I2*.0005
      GO TO 4113
 4112 I22 = I2 - 980
      A(I) = .5 + I22 * .001
 4113 SUM = 0.0
      DO 2 I1 = 1,I10
      I11 = I1 - 1
    2 SUM = SUM + 1./(A(I) + I11)**2
      SUM1 = 0.0
      DO 3 I4 = 1,7
    3 SUM1 = SUM1 + B(I4)/(A(I) + I10 - 1)**I4
    1 ZETA(I) = SUM + SUM1
      IDOWN = 1
      IUP = 58
      DO 25 J = 1,8
      WRITE OUTPUT TAPE 61, 1000
   35 WRITE OUTPUT TAPE 61, 2000
 1000 FORMAT(1H1)
 2000 FORMAT(10X,18HTABLE OF ZETA(2,A))
   38 WRITE OUTPUT TAPE 61, 3000
 3000 FORMAT(1H )
      WRITE OUTPUT TAPE 61, 3001
 3001 FORMAT(6X,3(1HA,9X,4HZETA,11X))
      DO 225 J1 = IDOWN,IUP
  225 WRITE OUTPUT TAPE 61, 4000, A(J1),ZETA(J1),A(J1+58),ZETA(J1+58),
     XA(J1+116),ZETA(J1+116)
 4000 FORMAT(2X,3(F7.4,F12.4,6X))
      IDOWN = IDOWN + 174
   25 IUP = IDOWN + 57
      IUP = 1421
      J = 9
      WRITE OUTPUT TAPE 61, 1000
   52 WRITE OUTPUT TAPE 61, 2000
   55 WRITE OUTPUT TAPE 61, 3000
      WRITE OUTPUT TAPE 61, 3001
      DO 60 J1 = IDOWN, IUP
   60 WRITE OUTPUT TAPE 61, 4000, A(J1), ZETA(J1),A(J1+29),
     XZETA(J1+29),A(J1+58),ZETA(J1+58)
      WRITE OUTPUT TAPE 61, 4000, A(1480),ZETA(1480),A(1481),ZETA(1481)
   80 WRITE OUTPUT TAPE 61, 1000
      END
```

TABLE OF ZETA(2,A)

A	ZETA	A	ZETA	A	ZETA
0.0100	10001.6212	0.0390	659.0181	0.0680	217.7582
0.0105	9071.9148	0.0395	642.4777	0.0685	214.6116
0.0110	8266.0817	0.0400	626.5537	0.0690	211.5332
0.0115	7563.0544	0.0405	611.2158	0.0695	208.5209
0.0120	6946.0610	0.0410	596.4355	0.0700	205.5729
0.0125	6401.6154	0.0415	582.1863	0.0705	202.6874
0.0130	5918.7740	0.0420	568.4428	0.0710	199.8626
0.0135	5488.5815	0.0425	555.1815	0.0715	197.0968
0.0140	5103.6527	0.0430	542.3801	0.0720	194.3885
0.0145	4757.8533	0.0435	530.0176	0.0725	191.7360
0.0150	4446.0540	0.0440	518.0740	0.0730	189.1377
0.0155	4163.9393	0.0445	506.5308	0.0735	186.5923
0.0160	3907.8573	0.0450	495.3701	0.0740	184.0983
0.0165	3674.7007	0.0455	484.5753	0.0745	181.6543
0.0170	3461.8126	0.0460	474.1306	0.0750	179.2591
0.0175	3266.9100	0.0465	464.0210	0.0755	176.9112
0.0180	3088.0224	0.0470	454.2322	0.0760	174.6095
0.0185	2923.4423	0.0475	444.7509	0.0765	172.3528
0.0190	2771.6835	0.0480	435.5644	0.0770	170.1398
0.0195	2631.4480	0.0485	426.6604	0.0775	167.9696
0.0200	2501.5981	0.0490	418.0276	0.0780	165.8409
0.0205	2381.1330	0.0495	409.6550	0.0785	163.7528
0.0210	2269.1695	0.0500	401.5324	0.0790	161.7041
0.0215	2164.9262	0.0505	393.6497	0.0795	159.6940
0.0220	2067.7093	0.0510	385.9978	0.0800	157.7215
0.0225	1976.9011	0.0515	378.5676	0.0805	155.7855
0.0230	1891.9505	0.0520	371.3506	0.0810	153.8853
0.0235	1812.3643	0.0525	364.3389	0.0815	152.0199
0.0240	1737.7002	0.0530	357.5246	0.0820	150.1886
0.0245	1667.5604	0.0535	350.9005	0.0825	148.3904
0.0250	1601.5868	0.0540	344.4595	0.0830	146.6246
0.0255	1539.4557	0.0545	338.1949	0.0835	144.8904
0.0260	1480.8745	0.0550	332.1004	0.0840	143.1870
0.0265	1425.5777	0.0555	326.1698	0.0845	141.5138
0.0270	1373.3244	0.0560	320.3974	0.0850	139.8700
0.0275	1323.8952	0.0565	314.7774	0.0855	138.2550
0.0280	1277.0903	0.0570	309.3047	0.0860	136.6680
0.0285	1232.7270	0.0575	303.9742	0.0865	135.1085
0.0290	1190.6385	0.0580	298.7808	0.0870	133.5757
0.0295	1150.6718	0.0585	293.7201	0.0875	132.0692
0.0300	1112.6867	0.0590	288.7874	0.0880	130.5882
0.0305	1076.5544	0.0595	283.9785	0.0885	129.1322
0.0310	1042.1561	0.0600	279.2893	0.0890	127.7007
0.0315	1009.3828	0.0605	274.7159	0.0895	126.2931
0.0320	978.1337	0.0610	270.2545	0.0900	124.9089
0.0325	948.3157	0.0615	265.9014	0.0905	123.5476
0.0330	919.8426	0.0620	261.6531	0.0910	122.2086
0.0335	892.6349	0.0625	257.5064	0.0915	120.8915
0.0340	866.6187	0.0630	253.4580	0.0920	119.5958
0.0345	841.7253	0.0635	249.5049	0.0925	118.3210
0.0350	817.8911	0.0640	245.6440	0.0930	117.0667
0.0355	795.0569	0.0645	241.8725	0.0935	115.8325
0.0360	773.1673	0.0650	238.1877	0.0940	114.6179
0.0365	752.1712	0.0655	234.5870	0.0945	113.4226
0.0370	732.0204	0.0660	231.0677	0.0950	112.2460
0.0375	712.6702	0.0665	227.6275	0.0955	111.0878
0.0380	694.0788	0.0670	224.2640	0.0960	109.9477
0.0385	676.2070	0.0675	220.9750	0.0965	108.8253

TABLE OF ZETA(2,A)

A	ZETA	A	ZETA	A	ZETA
0.0970	107.7201	0.1260	64.3745	0.1550	42.9606
0.0975	106.6319	0.1265	63.8767	0.1555	42.6926
0.0980	105.5603	0.1270	63.3848	0.1560	42.4271
0.0985	104.5050	0.1275	62.8986	0.1565	42.1641
0.0990	103.4656	0.1280	62.4180	0.1570	41.9037
0.0995	102.4418	0.1285	61.9431	0.1575	41.6457
0.1000	101.4333	0.1290	61.4737	0.1580	41.3901
0.1005	100.4398	0.1295	61.0097	0.1585	41.1370
0.1010	99.4610	0.1300	60.5510	0.1590	40.8862
0.1015	98.4967	0.1305	60.0976	0.1595	40.6378
0.1020	97.5465	0.1310	59.6493	0.1600	40.3917
0.1025	96.6101	0.1315	59.2062	0.1605	40.1479
0.1030	95.6873	0.1320	58.7681	0.1610	39.9064
0.1035	94.7779	0.1325	58.3349	0.1615	39.6670
0.1040	93.8815	0.1330	57.9065	0.1620	39.4299
0.1045	92.9980	0.1335	57.4830	0.1625	39.1950
0.1050	92.1270	0.1340	57.0642	0.1630	38.9622
0.1055	91.2684	0.1345	56.6501	0.1635	38.7316
0.1060	90.4219	0.1350	56.2405	0.1640	38.5030
0.1065	89.5872	0.1355	55.8354	0.1645	38.2765
0.1070	88.7643	0.1360	55.4348	0.1650	38.0521
0.1075	87.9527	0.1365	55.0386	0.1655	37.8297
0.1080	87.1524	0.1370	54.6467	0.1660	37.6093
0.1085	86.3632	0.1375	54.2591	0.1665	37.3909
0.1090	85.5847	0.1380	53.8757	0.1670	37.1744
0.1095	84.8169	0.1385	53.4964	0.1675	36.9599
0.1100	84.0595	0.1390	53.1211	0.1680	36.7472
0.1105	83.3124	0.1395	52.7499	0.1685	36.5365
0.1110	82.5753	0.1400	52.3827	0.1690	36.3276
0.1115	81.8481	0.1405	52.0194	0.1695	36.1205
0.1120	81.1307	0.1410	51.6599	0.1700	35.9153
0.1125	80.4227	0.1415	51.3042	0.1705	35.7119
0.1130	79.7241	0.1420	50.9522	0.1710	35.5102
0.1135	79.0348	0.1425	50.6040	0.1715	35.3103
0.1140	78.3544	0.1430	50.2594	0.1720	35.1121
0.1145	77.6830	0.1435	49.9184	0.1725	34.9157
0.1150	77.0202	0.1440	49.5809	0.1730	34.7209
0.1155	76.3661	0.1445	49.2469	0.1735	34.5278
0.1160	75.7204	0.1450	48.9163	0.1740	34.3364
0.1165	75.0829	0.1455	48.5891	0.1745	34.1466
0.1170	74.4536	0.1460	48.2653	0.1750	33.9584
0.1175	73.8324	0.1465	47.9448	0.1755	33.7719
0.1180	73.2190	0.1470	47.6276	0.1760	33.5869
0.1185	72.6133	0.1475	47.3135	0.1765	33.4034
0.1190	72.0152	0.1480	47.0026	0.1770	33.2216
0.1195	71.4246	0.1485	46.6949	0.1775	33.0412
0.1200	70.8414	0.1490	46.3902	0.1780	32.8624
0.1205	70.2654	0.1495	46.0886	0.1785	32.6850
0.1210	69.6965	0.1500	45.7900	0.1790	32.5092
0.1215	69.1346	0.1505	45.4944	0.1795	32.3348
0.1220	68.5797	0.1510	45.2016	0.1800	32.1618
0.1225	68.0314	0.1515	44.9118	0.1805	31.9903
0.1230	67.4899	0.1520	44.6248	0.1810	31.8202
0.1235	66.9549	0.1525	44.3406	0.1815	31.6514
0.1240	66.4263	0.1530	44.0592	0.1820	31.4841
0.1245	65.9041	0.1535	43.7806	0.1825	31.3181
0.1250	65.3881	0.1540	43.5046	0.1830	31.1535
0.1255	64.8783	0.1545	43.2313	0.1835	30.9903

TABLE OF ZETA(2,A)

A	ZETA	A	ZETA	A	ZETA
0.1840	30.8283	0.2130	23.2899	0.2420	18.2834
0.1845	30.6677	0.2135	23.1861	0.2425	18.2124
0.1850	30.5083	0.2140	23.0830	0.2430	18.1418
0.1855	30.3503	0.2145	22.9806	0.2435	18.0716
0.1860	30.1935	0.2150	22.8789	0.2440	18.0019
0.1865	30.0379	0.2155	22.7779	0.2445	17.9326
0.1870	29.8836	0.2160	22.6776	0.2450	17.8637
0.1875	29.7306	0.2165	22.5780	0.2455	17.7953
0.1880	29.5787	0.2170	22.4791	0.2460	17.7272
0.1885	29.4280	0.2175	22.3809	0.2465	17.6596
0.1890	29.2786	0.2180	22.2833	0.2470	17.5923
0.1895	29.1303	0.2185	22.1864	0.2475	17.5255
0.1900	28.9832	0.2190	22.0901	0.2480	17.4591
0.1905	28.8372	0.2195	21.9946	0.2485	17.3931
0.1910	28.6923	0.2200	21.8996	0.2490	17.3274
0.1915	28.5486	0.2205	21.8053	0.2495	17.2622
0.1920	28.4060	0.2210	21.7116	0.2500	17.1973
0.1925	28.2646	0.2215	21.6186	0.2505	17.1329
0.1930	28.1242	0.2220	21.5262	0.2510	17.0688
0.1935	27.9849	0.2225	21.4344	0.2515	17.0051
0.1940	27.8466	0.2230	21.3432	0.2520	16.9417
0.1945	27.7094	0.2235	21.2526	0.2525	16.8788
0.1950	27.5733	0.2240	21.1627	0.2530	16.8162
0.1955	27.4382	0.2245	21.0733	0.2535	16.7539
0.1960	27.3041	0.2250	20.9845	0.2540	16.6921
0.1965	27.1711	0.2255	20.8963	0.2545	16.6306
0.1970	27.0390	0.2260	20.8087	0.2550	16.5694
0.1975	26.9080	0.2265	20.7216	0.2555	16.5086
0.1980	26.7779	0.2270	20.6352	0.2560	16.4482
0.1985	26.6489	0.2275	20.5493	0.2565	16.3881
0.1990	26.5207	0.2280	20.4639	0.2570	16.3284
0.1995	26.3936	0.2285	20.3791	0.2575	16.2690
0.2000	26.2674	0.2290	20.2949	0.2580	16.2099
0.2005	26.1421	0.2295	20.2112	0.2585	16.1512
0.2010	26.0178	0.2300	20.1280	0.2590	16.0928
0.2015	25.8943	0.2305	20.0454	0.2595	16.0348
0.2020	25.7718	0.2310	19.9633	0.2600	15.9771
0.2025	25.6502	0.2315	19.8818	0.2605	15.9197
0.2030	25.5295	0.2320	19.8008	0.2610	15.8627
0.2035	25.4097	0.2325	19.7202	0.2615	15.8059
0.2040	25.2907	0.2330	19.6402	0.2620	15.7495
0.2045	25.1726	0.2335	19.5608	0.2625	15.6934
0.2050	25.0554	0.2340	19.4818	0.2630	15.6376
0.2055	24.9390	0.2345	19.4033	0.2635	15.5822
0.2060	24.8235	0.2350	19.3253	0.2640	15.5270
0.2065	24.7088	0.2355	19.2478	0.2645	15.4722
0.2070	24.5949	0.2360	19.1708	0.2650	15.4177
0.2075	24.4818	0.2365	19.0943	0.2655	15.3634
0.2080	24.3696	0.2370	19.0182	0.2660	15.3095
0.2085	24.2581	0.2375	18.9427	0.2665	15.2559
0.2090	24.1475	0.2380	18.8676	0.2670	15.2026
0.2095	24.0376	0.2385	18.7930	0.2675	15.1495
0.2100	23.9285	0.2390	18.7188	0.2680	15.0968
0.2105	23.8202	0.2395	18.6451	0.2685	15.0443
0.2110	23.7126	0.2400	18.5719	0.2690	14.9922
0.2115	23.6058	0.2405	18.4991	0.2695	14.9403
0.2120	23.4998	0.2410	18.4267	0.2700	14.8887
0.2125	23.3945	0.2415	18.3548	0.2705	14.8374

TABLE OF ZETA(2,A)

A	ZETA	A	ZETA	A	ZETA
0.2710	14.7864	0.3000	12.2454	0.3290	10.3391
0.2715	14.7357	0.3005	12.2078	0.3295	10.3105
0.2720	14.6852	0.3010	12.1705	0.3300	10.2821
0.2725	14.6350	0.3015	12.1333	0.3305	10.2538
0.2730	14.5851	0.3020	12.0963	0.3310	10.2256
0.2735	14.5355	0.3025	12.0595	0.3315	10.1975
0.2740	14.4861	0.3030	12.0228	0.3320	10.1695
0.2745	14.4370	0.3035	11.9864	0.3325	10.1417
0.2750	14.3881	0.3040	11.9501	0.3330	10.1140
0.2755	14.3395	0.3045	11.9140	0.3335	10.0864
0.2760	14.2912	0.3050	11.8781	0.3340	10.0590
0.2765	14.2432	0.3055	11.8423	0.3345	10.0316
0.2770	14.1953	0.3060	11.8068	0.3350	10.0044
0.2775	14.1478	0.3065	11.7714	0.3355	9.9773
0.2780	14.1005	0.3070	11.7361	0.3360	9.9503
0.2785	14.0535	0.3075	11.7010	0.3365	9.9235
0.2790	14.0067	0.3080	11.6661	0.3370	9.8967
0.2795	13.9601	0.3085	11.6314	0.3375	9.8701
0.2800	13.9138	0.3090	11.5969	0.3380	9.8436
0.2805	13.8678	0.3095	11.5625	0.3385	9.8172
0.2810	13.8219	0.3100	11.5282	0.3390	9.7909
0.2815	13.7764	0.3105	11.4941	0.3395	9.7647
0.2820	13.7310	0.3110	11.4602	0.3400	9.7387
0.2825	13.6859	0.3115	11.4265	0.3405	9.7127
0.2830	13.6411	0.3120	11.3929	0.3410	9.6869
0.2835	13.5965	0.3125	11.3595	0.3415	9.6612
0.2840	13.5521	0.3130	11.3262	0.3420	9.6356
0.2845	13.5079	0.3135	11.2931	0.3425	9.6101
0.2850	13.4640	0.3140	11.2601	0.3430	9.5847
0.2855	13.4203	0.3145	11.2273	0.3435	9.5594
0.2860	13.3768	0.3150	11.1946	0.3440	9.5343
0.2865	13.3336	0.3155	11.1621	0.3445	9.5092
0.2870	13.2905	0.3160	11.1298	0.3450	9.4842
0.2875	13.2477	0.3165	11.0976	0.3455	9.4594
0.2880	13.2051	0.3170	11.0656	0.3460	9.4347
0.2885	13.1628	0.3175	11.0337	0.3465	9.4100
0.2890	13.1206	0.3180	11.0019	0.3470	9.3855
0.2895	13.0787	0.3185	10.9703	0.3475	9.3611
0.2900	13.0370	0.3190	10.9389	0.3480	9.3367
0.2905	12.9955	0.3195	10.9075	0.3485	9.3125
0.2910	12.9542	0.3200	10.8764	0.3490	9.2884
0.2915	12.9131	0.3205	10.8454	0.3495	9.2644
0.2920	12.8722	0.3210	10.8145	0.3500	9.2405
0.2925	12.8315	0.3215	10.7837	0.3505	9.2166
0.2930	12.7911	0.3220	10.7531	0.3510	9.1929
0.2935	12.7508	0.3225	10.7227	0.3515	9.1693
0.2940	12.7107	0.3230	10.6924	0.3520	9.1458
0.2945	12.6709	0.3235	10.6622	0.3525	9.1224
0.2950	12.6312	0.3240	10.6322	0.3530	9.0990
0.2955	12.5918	0.3245	10.6022	0.3535	9.0758
0.2960	12.5525	0.3250	10.5725	0.3540	9.0527
0.2965	12.5134	0.3255	10.5428	0.3545	9.0297
0.2970	12.4746	0.3260	10.5133	0.3550	9.0067
0.2975	12.4359	0.3265	10.4840	0.3555	8.9839
0.2980	12.3974	0.3270	10.4547	0.3560	8.9611
0.2985	12.3591	0.3275	10.4256	0.3565	8.9385
0.2990	12.3210	0.3280	10.3967	0.3570	8.9159
0.2995	12.2831	0.3285	10.3678	0.3575	8.8934

TABLE OF ZETA(2,A)

A	ZETA	A	ZETA	A	ZETA
0.3580	8.8711	0.3870	7.7153	0.4160	6.7882
0.3585	8.8488	0.3875	7.6976	0.4165	6.7739
0.3590	8.8266	0.3880	7.6799	0.4170	6.7596
0.3595	8.8045	0.3885	7.6623	0.4175	6.7454
0.3600	8.7825	0.3890	7.6448	0.4180	6.7312
0.3605	8.7606	0.3895	7.6274	0.4185	6.7170
0.3610	8.7387	0.3900	7.6100	0.4190	6.7029
0.3615	8.7170	0.3905	7.5926	0.4195	6.6889
0.3620	8.6953	0.3910	7.5754	0.4200	6.6749
0.3625	8.6738	0.3915	7.5582	0.4205	6.6609
0.3630	8.6523	0.3920	7.5410	0.4210	6.6470
0.3635	8.6309	0.3925	7.5240	0.4215	6.6332
0.3640	8.6096	0.3930	7.5070	0.4220	6.6194
0.3645	8.5884	0.3935	7.4900	0.4225	6.6056
0.3650	8.5672	0.3940	7.4731	0.4230	6.5919
0.3655	8.5462	0.3945	7.4563	0.4235	6.5782
0.3660	8.5252	0.3950	7.4396	0.4240	6.5646
0.3665	8.5043	0.3955	7.4229	0.4245	6.5510
0.3670	8.4835	0.3960	7.4062	0.4250	6.5375
0.3675	8.4628	0.3965	7.3897	0.4255	6.5240
0.3680	8.4422	0.3970	7.3731	0.4260	6.5106
0.3685	8.4216	0.3975	7.3567	0.4265	6.4972
0.3690	8.4012	0.3980	7.3403	0.4270	6.4839
0.3695	8.3808	0.3985	7.3240	0.4275	6.4706
0.3700	8.3605	0.3990	7.3077	0.4280	6.4573
0.3705	8.3402	0.3995	7.2915	0.4285	6.4441
0.3710	8.3201	0.4000	7.2754	0.4290	6.4310
0.3715	8.3000	0.4005	7.2593	0.4295	6.4179
0.3720	8.2801	0.4010	7.2432	0.4300	6.4048
0.3725	8.2601	0.4015	7.2273	0.4305	6.3918
0.3730	8.2403	0.4020	7.2113	0.4310	6.3788
0.3735	8.2206	0.4025	7.1955	0.4315	6.3659
0.3740	8.2009	0.4030	7.1797	0.4320	6.3530
0.3745	8.1813	0.4035	7.1639	0.4325	6.3401
0.3750	8.1618	0.4040	7.1483	0.4330	6.3273
0.3755	8.1423	0.4045	7.1326	0.4335	6.3146
0.3760	8.1230	0.4050	7.1171	0.4340	6.3018
0.3765	8.1037	0.4055	7.1015	0.4345	6.2892
0.3770	8.0845	0.4060	7.0861	0.4350	6.2765
0.3775	8.0653	0.4065	7.0707	0.4355	6.2639
0.3780	8.0463	0.4070	7.0553	0.4360	6.2514
0.3785	8.0273	0.4075	7.0400	0.4365	6.2389
0.3790	8.0083	0.4080	7.0248	0.4370	6.2264
0.3795	7.9895	0.4085	7.0096	0.4375	6.2140
0.3800	7.9707	0.4090	6.9945	0.4380	6.2016
0.3805	7.9520	0.4095	6.9794	0.4385	6.1893
0.3810	7.9334	0.4100	6.9644	0.4390	6.1770
0.3815	7.9148	0.4105	6.9494	0.4395	6.1647
0.3820	7.8963	0.4110	6.9345	0.4400	6.1525
0.3825	7.8779	0.4115	6.9197	0.4405	6.1403
0.3830	7.8596	0.4120	6.9048	0.4410	6.1282
0.3835	7.8413	0.4125	6.8901	0.4415	6.1161
0.3840	7.8231	0.4130	6.8754	0.4420	6.1040
0.3845	7.8050	0.4135	6.8607	0.4425	6.0920
0.3850	7.7869	0.4140	6.8461	0.4430	6.0800
0.3855	7.7689	0.4145	6.8316	0.4435	6.0681
0.3860	7.7510	0.4150	6.8171	0.4440	6.0562
0.3865	7.7331	0.4155	6.8026	0.4445	6.0443

TABLE OF ZETA(2,A)

A	ZETA	A	ZETA	A	ZETA
0.4450	6.0325	0.4740	5.4077	0.5060	4.8356
0.4455	6.0207	0.4745	5.3979	0.5070	4.8193
0.4460	6.0090	0.4750	5.3881	0.5080	4.8032
0.4465	5.9972	0.4755	5.3784	0.5090	4.7872
0.4470	5.9856	0.4760	5.3686	0.5100	4.7713
0.4475	5.9739	0.4765	5.3589	0.5110	4.7554
0.4480	5.9624	0.4770	5.3493	0.5120	4.7397
0.4485	5.9508	0.4775	5.3397	0.5130	4.7240
0.4490	5.9393	0.4780	5.3301	0.5140	4.7084
0.4495	5.9278	0.4785	5.3205	0.5150	4.6929
0.4500	5.9164	0.4790	5.3109	0.5160	4.6775
0.4505	5.9049	0.4795	5.3014	0.5170	4.6622
0.4510	5.8936	0.4800	5.2919	0.5180	4.6469
0.4515	5.8822	0.4805	5.2825	0.5190	4.6318
0.4520	5.8709	0.4810	5.2731	0.5200	4.6167
0.4525	5.8597	0.4815	5.2637	0.5210	4.6017
0.4530	5.8485	0.4820	5.2543	0.5220	4.5868
0.4535	5.8373	0.4825	5.2449	0.5230	4.5720
0.4540	5.8261	0.4830	5.2356	0.5240	4.5573
0.4545	5.8150	0.4835	5.2263	0.5250	4.5426
0.4550	5.8039	0.4840	5.2171	0.5260	4.5281
0.4555	5.7929	0.4845	5.2078	0.5270	4.5136
0.4560	5.7819	0.4850	5.1986	0.5280	4.4991
0.4565	5.7709	0.4855	5.1895	0.5290	4.4848
0.4570	5.7599	0.4860	5.1803	0.5300	4.4705
0.4575	5.7490	0.4865	5.1712	0.5310	4.4564
0.4580	5.7382	0.4870	5.1621	0.5320	4.4423
0.4585	5.7273	0.4875	5.1530	0.5330	4.4282
0.4590	5.7165	0.4880	5.1440	0.5340	4.4143
0.4595	5.7058	0.4885	5.1350	0.5350	4.4004
0.4600	5.6950	0.4890	5.1260	0.5360	4.3866
0.4605	5.6843	0.4895	5.1170	0.5370	4.3729
0.4610	5.6736	0.4900	5.1081	0.5380	4.3592
0.4615	5.6630	0.4905	5.0992	0.5390	4.3456
0.4620	5.6524	0.4910	5.0903	0.5400	4.3321
0.4625	5.6418	0.4915	5.0814	0.5410	4.3187
0.4630	5.6313	0.4920	5.0726	0.5420	4.3053
0.4635	5.6208	0.4925	5.0638	0.5430	4.2920
0.4640	5.6103	0.4930	5.0550	0.5440	4.2788
0.4645	5.5999	0.4935	5.0463	0.5450	4.2656
0.4650	5.5895	0.4940	5.0376	0.5460	4.2525
0.4655	5.5791	0.4945	5.0289	0.5470	4.2395
0.4660	5.5688	0.4950	5.0202	0.5480	4.2265
0.4665	5.5585	0.4955	5.0115	0.5490	4.2137
0.4670	5.5482	0.4960	5.0029	0.5500	4.2008
0.4675	5.5380	0.4965	4.9943	0.5510	4.1881
0.4680	5.5278	0.4970	4.9857	0.5520	4.1754
0.4685	5.5176	0.4975	4.9772	0.5530	4.1628
0.4690	5.5075	0.4980	4.9687	0.5540	4.1502
0.4695	5.4973	0.4985	4.9602	0.5550	4.1377
0.4700	5.4873	0.4990	4.9517	0.5560	4.1253
0.4705	5.4772	0.4995	4.9432	0.5570	4.1130
0.4710	5.4672	0.5000	4.9348	0.5580	4.1007
0.4715	5.4572	0.5010	4.9180	0.5590	4.0884
0.4720	5.4472	0.5020	4.9013	0.5600	4.0763
0.4725	5.4373	0.5030	4.8848	0.5610	4.0642
0.4730	5.4274	0.5040	4.8683	0.5620	4.0521
0.4735	5.4175	0.5050	4.8519	0.5630	4.0401

TABLE OF ZETA(2,A)

A	ZETA	A	ZETA	A	ZETA
0.5640	4.0282	0.6220	3.4280	0.6800	2.9681
0.5650	4.0163	0.6230	3.4190	0.6810	2.9612
0.5660	4.0045	0.6240	3.4101	0.6820	2.9542
0.5670	3.9928	0.6250	3.4012	0.6830	2.9473
0.5680	3.9811	0.6260	3.3923	0.6840	2.9404
0.5690	3.9695	0.6270	3.3835	0.6850	2.9336
0.5700	3.9579	0.6280	3.3748	0.6860	2.9267
0.5710	3.9464	0.6290	3.3660	0.6870	2.9199
0.5720	3.9350	0.6300	3.3573	0.6880	2.9132
0.5730	3.9236	0.6310	3.3487	0.6890	2.9064
0.5740	3.9122	0.6320	3.3401	0.6900	2.8997
0.5750	3.9009	0.6330	3.3315	0.6910	2.8930
0.5760	3.8897	0.6340	3.3230	0.6920	2.8864
0.5770	3.8786	0.6350	3.3145	0.6930	2.8797
0.5780	3.8674	0.6360	3.3060	0.6940	2.8731
0.5790	3.8564	0.6370	3.2976	0.6950	2.8666
0.5800	3.8454	0.6380	3.2892	0.6960	2.8600
0.5810	3.8344	0.6390	3.2809	0.6970	2.8535
0.5820	3.8235	0.6400	3.2726	0.6980	2.8470
0.5830	3.8127	0.6410	3.2643	0.6990	2.8405
0.5840	3.8019	0.6420	3.2560	0.7000	2.8340
0.5850	3.7912	0.6430	3.2479	0.7010	2.8276
0.5860	3.7805	0.6440	3.2397	0.7020	2.8212
0.5870	3.7698	0.6450	3.2316	0.7030	2.8149
0.5880	3.7593	0.6460	3.2235	0.7040	2.8085
0.5890	3.7487	0.6470	3.2154	0.7050	2.8022
0.5900	3.7383	0.6480	3.2074	0.7060	2.7959
0.5910	3.7278	0.6490	3.1994	0.7070	2.7896
0.5920	3.7175	0.6500	3.1915	0.7080	2.7834
0.5930	3.7071	0.6510	3.1835	0.7090	2.7772
0.5940	3.6969	0.6520	3.1757	0.7100	2.7710
0.5950	3.6866	0.6530	3.1678	0.7110	2.7648
0.5960	3.6764	0.6540	3.1600	0.7120	2.7587
0.5970	3.6663	0.6550	3.1522	0.7130	2.7525
0.5980	3.6562	0.6560	3.1445	0.7140	2.7464
0.5990	3.6462	0.6570	3.1368	0.7150	2.7404
0.6000	3.6362	0.6580	3.1291	0.7160	2.7343
0.6010	3.6263	0.6590	3.1214	0.7170	2.7283
0.6020	3.6164	0.6600	3.1138	0.7180	2.7223
0.6030	3.6065	0.6610	3.1062	0.7190	2.7163
0.6040	3.5967	0.6620	3.0987	0.7200	2.7103
0.6050	3.5870	0.6630	3.0912	0.7210	2.7044
0.6060	3.5773	0.6640	3.0837	0.7220	2.6985
0.6070	3.5676	0.6650	3.0762	0.7230	2.6926
0.6080	3.5580	0.6660	3.0688	0.7240	2.6867
0.6090	3.5484	0.6670	3.0614	0.7250	2.6809
0.6100	3.5389	0.6680	3.0541	0.7260	2.6751
0.6110	3.5294	0.6690	3.0467	0.7270	2.6693
0.6120	3.5200	0.6700	3.0394	0.7280	2.6635
0.6130	3.5106	0.6710	3.0322	0.7290	2.6578
0.6140	3.5012	0.6720	3.0249	0.7300	2.6520
0.6150	3.4919	0.6730	3.0177	0.7310	2.6463
0.6160	3.4827	0.6740	3.0106	0.7320	2.6406
0.6170	3.4734	0.6750	3.0034	0.7330	2.6350
0.6180	3.4643	0.6760	2.9963	0.7340	2.6293
0.6190	3.4551	0.6770	2.9892	0.7350	2.6237
0.6200	3.4460	0.6780	2.9821	0.7360	2.6181
0.6210	3.4370	0.6790	2.9751	0.7370	2.6125

TABLE OF ZETA(2,A)

A	ZETA	A	ZETA	A	ZETA
0.7380	2.6070	0.7960	2.3173	0.8540	2.0808
0.7390	2.6014	0.7970	2.3128	0.8550	2.0772
0.7400	2.5959	0.7980	2.3084	0.8560	2.0735
0.7410	2.5904	0.7990	2.3039	0.8570	2.0698
0.7420	2.5849	0.8000	2.2995	0.8580	2.0662
0.7430	2.5795	0.8010	2.2951	0.8590	2.0625
0.7440	2.5741	0.8020	2.2906	0.8600	2.0589
0.7450	2.5686	0.8030	2.2863	0.8610	2.0553
0.7460	2.5632	0.8040	2.2819	0.8620	2.0516
0.7470	2.5579	0.8050	2.2775	0.8630	2.0480
0.7480	2.5525	0.8060	2.2732	0.8640	2.0445
0.7490	2.5472	0.8070	2.2688	0.8650	2.0409
0.7500	2.5419	0.8080	2.2645	0.8660	2.0373
0.7510	2.5366	0.8090	2.2602	0.8670	2.0338
0.7520	2.5313	0.8100	2.2559	0.8680	2.0302
0.7530	2.5261	0.8110	2.2517	0.8690	2.0267
0.7540	2.5208	0.8120	2.2474	0.8700	2.0232
0.7550	2.5156	0.8130	2.2432	0.8710	2.0197
0.7560	2.5104	0.8140	2.2389	0.8720	2.0162
0.7570	2.5052	0.8150	2.2347	0.8730	2.0127
0.7580	2.5001	0.8160	2.2305	0.8740	2.0092
0.7590	2.4949	0.8170	2.2263	0.8750	2.0057
0.7600	2.4898	0.8180	2.2222	0.8760	2.0023
0.7610	2.4847	0.8190	2.2180	0.8770	1.9988
0.7620	2.4796	0.8200	2.2138	0.8780	1.9954
0.7630	2.4746	0.8210	2.2097	0.8790	1.9920
0.7640	2.4695	0.8220	2.2056	0.8800	1.9886
0.7650	2.4645	0.8230	2.2015	0.8810	1.9852
0.7660	2.4595	0.8240	2.1974	0.8820	1.9818
0.7670	2.4545	0.8250	2.1933	0.8830	1.9784
0.7680	2.4495	0.8260	2.1893	0.8840	1.9750
0.7690	2.4446	0.8270	2.1852	0.8850	1.9717
0.7700	2.4396	0.8280	2.1812	0.8860	1.9683
0.7710	2.4347	0.8290	2.1772	0.8870	1.9650
0.7720	2.4298	0.8300	2.1732	0.8880	1.9617
0.7730	2.4249	0.8310	2.1692	0.8890	1.9584
0.7740	2.4201	0.8320	2.1652	0.8900	1.9551
0.7750	2.4152	0.8330	2.1612	0.8910	1.9518
0.7760	2.4104	0.8340	2.1573	0.8920	1.9485
0.7770	2.4056	0.8350	2.1533	0.8930	1.9452
0.7780	2.4008	0.8360	2.1494	0.8940	1.9419
0.7790	2.3960	0.8370	2.1455	0.8950	1.9387
0.7800	2.3913	0.8380	2.1416	0.8960	1.9354
0.7810	2.3865	0.8390	2.1377	0.8970	1.9322
0.7820	2.3818	0.8400	2.1338	0.8980	1.9290
0.7830	2.3771	0.8410	2.1300	0.8990	1.9257
0.7840	2.3724	0.8420	2.1261	0.9000	1.9225
0.7850	2.3677	0.8430	2.1223	0.9010	1.9193
0.7860	2.3630	0.8440	2.1184	0.9020	1.9162
0.7870	2.3584	0.8450	2.1146	0.9030	1.9130
0.7880	2.3538	0.8460	2.1108	0.9040	1.9098
0.7890	2.3492	0.8470	2.1070	0.9050	1.9067
0.7900	2.3446	0.8480	2.1033	0.9060	1.9035
0.7910	2.3400	0.8490	2.0995	0.9070	1.9004
0.7920	2.3354	0.8500	2.0957	0.9080	1.8972
0.7930	2.3309	0.8510	2.0920	0.9090	1.8941
0.7940	2.3263	0.8520	2.0883	0.9100	1.8910
0.7950	2.3218	0.8530	2.0846	0.9110	1.8879

TABLE OF ZETA(2,A)

A	ZETA	A	ZETA	A	ZETA
0.9120	1.8848	0.9410	1.7990	0.9700	1.7201
0.9130	1.8817	0.9420	1.7962	0.9710	1.7175
0.9140	1.8787	0.9430	1.7933	0.9720	1.7149
0.9150	1.8756	0.9440	1.7905	0.9730	1.7123
0.9160	1.8725	0.9450	1.7877	0.9740	1.7097
0.9170	1.8695	0.9460	1.7849	0.9750	1.7071
0.9180	1.8664	0.9470	1.7821	0.9760	1.7046
0.9190	1.8634	0.9480	1.7794	0.9770	1.7020
0.9200	1.8604	0.9490	1.7766	0.9780	1.6994
0.9210	1.8574	0.9500	1.7738	0.9790	1.6969
0.9220	1.8544	0.9510	1.7711	0.9800	1.6943
0.9230	1.8514	0.9520	1.7683	0.9810	1.6918
0.9240	1.8484	0.9530	1.7656	0.9820	1.6893
0.9250	1.8454	0.9540	1.7628	0.9830	1.6868
0.9260	1.8425	0.9550	1.7601	0.9840	1.6842
0.9270	1.8395	0.9560	1.7574	0.9850	1.6817
0.9280	1.8366	0.9570	1.7547	0.9860	1.6792
0.9290	1.8336	0.9580	1.7520	0.9870	1.6767
0.9300	1.8307	0.9590	1.7493	0.9880	1.6743
0.9310	1.8278	0.9600	1.7466	0.9890	1.6718
0.9320	1.8249	0.9610	1.7439	0.9900	1.6693
0.9330	1.8219	0.9620	1.7412	0.9910	1.6668
0.9340	1.8190	0.9630	1.7386	0.9920	1.6644
0.9350	1.8162	0.9640	1.7359	0.9930	1.6619
0.9360	1.8133	0.9650	1.7332	0.9940	1.6595
0.9370	1.8104	0.9660	1.7306	0.9950	1.6570
0.9380	1.8075	0.9670	1.7280	0.9960	1.6546
0.9390	1.8047	0.9680	1.7253	0.9970	1.6522
0.9400	1.8018	0.9690	1.7227	0.9980	1.6498
0.9990	1.6473	1.0000	1.6449		

IV. APPLICATIONS

The numerical results given in Tables 1 and 2 have been employed to evaluate the unmeasured resonance-level contribution in calculations of the neutron cross section and amplitude.[1] If the total resonance width is much smaller than the level spacing, the radiative neutron capture cross section is expressed in terms of the single-level Breit-Wigner formula:[9]

$$\sigma_c = \frac{6.509 \times 10^{-19}}{\sqrt{E}} \sum_{\text{level}} \frac{g\Gamma_n^0 \Gamma_\nu}{(E - E_\lambda)^2 + (\Gamma^2/4)} \text{ (in cm}^2\text{)}, \tag{20}$$

where g is the statistical weighing factor; Γ_n^0 the reduced neutron width, equal to $\sqrt{1\text{ eV}/|E_\lambda|}\ \Gamma_n$, with Γ_n being the neutron width at the exact resonance; E and E_λ are the neutron energy and the resonance energy, respectively; Γ is the total width, expressed as $\Gamma = \Gamma_\nu + \sqrt{E/1\text{ eV}}\ \Gamma_n^0$ with the radiation width Γ_ν. The energy parameters are all in eV. The summation should be taken for all positive and negative levels. In the region where $|E_\lambda| \gg E$, the $\Gamma^2/4$ term can be ignored. Therefore, for E = 0.0253 eV, we have

$$\sigma_c(\text{distant}) = 4.0911 \times 10^{-18} \sum_{\text{level}}' \frac{g\Gamma_n^0 \Gamma_\nu}{E_\lambda^2}. \tag{21}$$

The contribution of the unmeasured distant positive levels σ_c^u is calculated as follows:

$$\sigma_c^u(\text{distant}) = 4.0911 \times 10^{-18} \frac{\langle g\Gamma_n^0\rangle\langle\Gamma_\nu\rangle}{\langle D\rangle^2} \sum_{n=1}^{\infty} \frac{1}{(a_1 + n)^2}, \tag{22}$$

where

$$a_1 = E_\lambda^{(1)}/\langle D\rangle. \tag{23}$$

Here, the average resonance parameters obtained from the measured positive-level resonances are used; $\langle D\rangle$ is the mean level spacing; $E_\lambda^{(1)}$ is the highest measured positive level. The negative-level contribution $\Delta\sigma_c$ is then obtained from

$$\Delta\sigma_c = \sigma_c(\text{observed}) - \sigma_c(\text{all positive levels}). \tag{24}$$

Statistical equivalence in the positive and negative level distributions near the binding energy is an established fact.[4,7] Therefore, we may use the approximation

$$\Delta\sigma_c = 4.0911 \times 10^{-18} \frac{\langle g\Gamma_n^0\rangle\langle\Gamma_\gamma\rangle}{\langle D\rangle^2} \sum_{n=0}^{\infty} \frac{1}{(a_2+n)^2}, \tag{25}$$

where

$$a_2 = |E_\lambda^{(2)}|/\langle D\rangle,$$

and $E_\lambda^{(2)}$ is the highest negative level.

If the resultant $E_\lambda^{(2)}$ value does not satisfy the condition $0.0253 + |E_\lambda^{(2)}| \gg \langle\Gamma\rangle/2$, the first several terms may be computed by means of Equation (20); a few iterative refinements then lead to the final $E_\lambda^{(2)}$ value. In most cases, Equations (22) to (25) give a satisfactory result, unless σ_c(obs) is abnormally large. The value of a_1 is usually larger than unity, and hence the summation in Equation (22) is evaluated by use of Equation (5) and Tables 1 and 2. The negative-level parameter thus obtained is far from unique, but is meaningful from a statistical view of point. The most orthodox method for obtaining the negative-level parameters is a least-square analysis using all of available cross-section data; including the resonance-integral values.

The thermal-neutron coherent scattering amplitude b of an isotope is expressed as

$$b = a' + f' + if'', \tag{26}$$

where a' is the potential scattering amplitude. For the resonance amplitudes f' and f'', we have

$$f' = 227.6 \sum_{\text{level}} \frac{g\Gamma_n^0(E - E_\lambda)}{(E - E_\lambda)^2 + (\Gamma^2/4)}, \tag{27}$$

and

$$f'' = -113.8 \sum_{\text{level}} \frac{g\Gamma_n^0\Gamma}{(E - E_\lambda)^2 + (\Gamma^2/4)} \text{ (in } 10^{-12} \text{ cm).} \tag{28}$$

The imaginary component of the amplitude is usually negligibly small, except when the neutron energy is in the vicinity of a resonance level. In other words, the distant-level contribution to f'' is in general too small to be significant. However, when high accuracy is required, one may evaluate the distant-level contribution by formulae similar to those previously derived for the capture cross section and $E_\lambda^{(2)}$.

The thermal-neutron value of f' for the unmeasured distant levels is obtained from the equation

$$f'_u(\text{distant}) = -227.6 \times 10^{12} \langle g\Gamma_n^0 \rangle \sum_{\text{level}}{}' \frac{1}{E_\lambda}, \tag{29}$$

where

$$\sum_{\text{level}}{}' \frac{1}{E_\lambda} = \frac{1}{\langle D \rangle} \left\{ \sum_{n=1}^{m_1} \frac{1}{a_1 + n} - \sum_{n=0}^{m_2} \frac{1}{a_2 + n} \right\}. \tag{30}$$

The values of m_1 and m_2 should be chosen so that $a_1 + m_1 \approx a_2 + m_2$ and $m_2 \gg a_2$. The sum values for Equation (30) are obtained from Table 1.

$$\sum_{\text{level}}{}' \frac{1}{E_\lambda^2} \approx \frac{1}{\langle D \rangle} \int_{E_1}^{\infty} \frac{1}{E^2}\, dE = \frac{1}{\langle D \rangle E_1}. \tag{31}$$

Equation (22) then becomes

$$\sigma_c^u(\text{distant}) = 4.0911 \times 10^{-18} \frac{\langle g\Gamma_n^0 \rangle \langle \Gamma_\nu \rangle}{\langle D \rangle E_1}. \tag{32}$$

A similar equation can be derived for f" as expressed in (28).

The distant-level contribution in the reduced R function[5,14] is calculated similarly, using Table 1. The analytical form of the neutron resonance is analogous to the formula for anomalous optical dispersion. Hence, our tables are also useful in the interpretation of anomalous scattering and dispersion of X rays, mechanical resonance, resonating electric circuit, etc.

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