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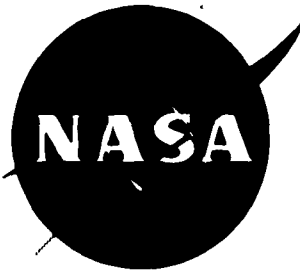
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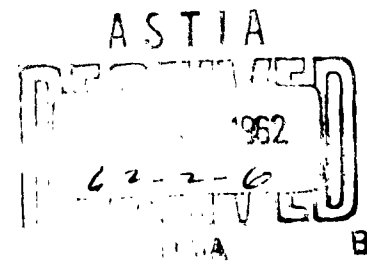
TECHNICAL NOTE

D-1290

AN ADDITION TO THE YALE TABLES FOR THE DEVELOPMENT OF THE DISTURBING FUNCTION

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
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G-214

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by
Lloyd Carpenter
Goddard Space Flight Center

SUMMARY

The tables for the development of the disturbing function, published by Brown and Brouwer in 1933, are extended for use in investigating sharp commensurabilities and in computing long period effects in the motions of minor planets with large orbital semi-major axes. The logarithms of the coefficients of $\cos iS$ in the expansions of Δ^{-1} and Δ^{-2} are tabulated for $i = 12$ through 24.

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INTRODUCTION

Despite well developed techniques for the numerical integration of perturbations, the development of perturbations into series (general perturbations) is still of great interest and importance for the study of celestial bodies with peculiar orbital elements. In addition, stability problems preferably should be solved in an analytical way. This report is an initial step in the analytical development of perturbations of some planets with peculiar elements.

For investigations of sharp commensurabilities such as those of Orlov (Reference 1) and long period effects in the motions of minor planets, it is desirable to have an extension of the tables for the development of the disturbing function which were published by Brown and Brouwer (Reference 2). These tables give the logarithms of the coefficients of $\cos iS$ in the expansions of Δ^{-1} , Δ^{-3} , Δ^{-5} , and Δ^{-7} for $i = 0$ through 11 and $p = 0$ through 2.5 with p in steps of .01. For first order general perturbations of celestial bodies with large orbital semi-major axes, the coefficients in the expansions of Δ^{-1} and Δ^{-3} are needed for larger values of the index, i , than are given in the existing tables. The logarithms of these coefficients, together with their second differences, are tabulated here for $i = 12$ through 24 and $p = 0$ through 2.5. The coefficients presented here were computed by the method given by Brown and Brouwer in 1933 (Reference 2). However, some of the equations were taken from Brown's earlier article (Reference 3).

DERIVATION OF TABLES

The basic equation to be solved for $G_i^{(1)}$ is

$$(1 - 2a \cos S + a^2)^{-1/2} = (1 - a^2)^{-1/2} \left(\frac{1}{2} G_i^{(0)} + \sum G_i^{(1)} a^i \cos iS \right), \quad (1)$$

where

$$G_i^{(1)} = C_i^{(1)} g_i^{(1)}, \quad (2)$$

$$C_i^{(0)} = 2,$$

$$C_i^{(1)} = 2 \frac{s(s+1)\cdots(s+i-1)}{i!} \quad (3)$$

$$g_i^{(1)} = 1 - \frac{s}{1} \cdot \frac{1-s}{i+1} p + \frac{s(s+1)}{1 \cdot 2} \cdot \frac{(1-s)(2-s)}{(i+1)(i+2)} p^2 + \cdots, \quad (4)$$

$$p = \frac{\alpha^2}{1 - \alpha^2}. \quad (5)$$

The series (Equation 4) for $g_{\frac{1}{2}}^{(24)}$ and the corresponding series for $\frac{dg}{dp}$ were evaluated by summing the first three terms and then applying a form of the Euler summability process to the next twenty-two terms. Taking N differences in the Euler transformation,

$$\sum_{k=m}^{\infty} (-1)^k f_k = \frac{1}{2} (-1)^m \left[f_m - \frac{1}{2} \Delta f_m + \frac{1}{4} \Delta^2 f_m + \cdots + (-1)^N 2^{-N} \Delta^N f_m \right], \quad (6)$$

is equivalent to writing

$$\sum_{k=m}^{\infty} (-1)^k f_k = \sum_{k=m}^{m+N} (-1)^k A_k f_k, \quad (7)$$

where

$$A_k = \sum_{j=k-m}^N \frac{1}{2^{j+1}} \binom{j}{k-m}. \quad (8)$$

Thus the coefficients in terms 4 thru 25 of the series (Equation 4) were multiplied by the coefficients A_k determined from Equation 8 with $m = 4$ and $N = 21$. An accuracy

test was made by evaluating the corresponding series for $\frac{d}{dp} \left(g_{\frac{1}{2}}^{(24)} \right)$, $\frac{d^2}{dp^2} \left(g_{\frac{1}{2}}^{(24)} \right)$ and $\int_0^p \left(g_{\frac{1}{2}}^{(24)} \right) dp$, for $p = 0.5, 1.0, \dots, 2.5$. The left hand sides of the test equations

$$(p + p^2) \frac{d^2}{dp^2} \left(g_s^{(i)} \right) + (2p + 1 + i) \frac{d}{dp} \left(g_s^{(i)} \right) + \frac{1}{4} g_s^{(i)} = 0 \quad (9)$$

and

$$(p + p^2) \frac{d}{dp} \left(g_s^{(i)} \right) + i \left(g_s^{(i)} - 1 \right) + \frac{1}{4} \int_0^p g_s^{(i)} dp = 0 \quad (10)$$

were evaluated and found to be less than 10^{-10} in all cases.

After $g_{\frac{1}{2}}^{(24)}$ and $\frac{d}{dp} \left(g_{\frac{1}{2}}^{(24)} \right)$ were evaluated from Equation 4, $g_{\frac{1}{2}}^{(23)}$ was computed from the equation

$$g_s^{(i-1)} = g_s^{(i)} + \frac{p}{i} \frac{d}{dp} \left(g_s^{(i)} \right) \quad (11)$$

The values of $g_{\frac{1}{2}}^{(i)}$ for $i = 22, 21, \dots, 0$ were computed from the recurrence relation

$$g_s^{(i)} = g_s^{(i+1)} + \frac{p}{1+p} \left[g_s^{(i+1)} - g_s^{(i+2)} + \frac{s(s-1)}{(i+1)(i+2)} g_s^{(i+2)} \right] \quad (12)$$

As a check, the values for $i = 0, 1, \dots, 11$ were computed for comparison with the tables of Brown and Brouwer.

After the coefficients were evaluated for $s = \frac{1}{2}$, the recurrence relation

$$g_{s+1}^{(i)} = g_s^{(i)} + 2pH_s^{(i)}, \quad (13)$$

where

$$H_s^{(i)} = g_s^{(i)} - g_s^{(i+1)} + \frac{s}{i+1} g_s^{(i+1)}, \quad (14)$$

was used to compute $g_{\frac{3}{2}}^{(i)}$ for $i = 0, 1, \dots, 23$. The relation

$$g_{i+1}^{(i+1)} = \frac{i+1}{i+n+1} (g_{i+1}^{(i)} + H_i^{(i)}) \quad (15)$$

was used to compute $g_{\frac{3}{2}}^{(24)}$.

CONCLUSIONS

The values of $\log G_p^{(i)}$ and the second differences for $i = 12$ through 24 are given in Appendix A. The differences between the values of $\log G_p^{(i)}$ given by Brown and Brouwer and the values computed here are given in Appendix B. The differences are sufficiently small to be of no consequence, yet they are somewhat larger than would be expected from Reference 2 - especially for p between 1.5 and 2. Consequently, some further checks were made. First, the method of analytic continuation given by Brown (Reference 3) was applied for values of p greater than one. The test equations yield errors less than 10^{-12} when this method is used. The results agree with those obtained above by the author.

The second test was a numerical evaluation of the integral

$$G_p^{(i)} = \frac{2}{\pi} \left[\frac{(1-a^2)^p}{a^i} \right] \int_0^\pi (1 - 2a \cos S + a^2)^{-p} \cos iS \, dS. \quad (16)$$

This test was made for $p = 1.5, 1.55, 1.6, \dots, 2.0$. Again the results agree with those obtained herein. The results given in Appendix A are accurate except for possible round-off error of one unit in the eighth place.

For purposes of machine - rather than hand - computation of general perturbations, it is planned that these coefficients will be computed as needed in the program.

ACKNOWLEDGMENT

The author wishes to express his gratitude to Dr. Peter Musen, Goddard Space Flight Center, for suggesting the work on general perturbations.

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APPENDIX A

Values of $\log G_i^{(1)}$ and their Second Differences
for $i = 12$ through 15

LOG (G) FOR S=0.5

G-214

P	I=12	I=13	I=14	I=15
0.	-.49165816 0	-.50869150 0	-.52448576 0	-.53920902 0
0.01	-.49174162 12	-.50876900 10	-.52455810 9	-.53927684 8
0.02	-.49182496 12	-.50884640 10	-.52463035 9	-.53934458 8
0.03	-.49190818 11	-.50892370 11	-.52470251 9	-.53941224 8
0.04	-.49199129 12	-.50900089 9	-.52477458 9	-.53947982 7
0.05	-.49207428 11	-.50907799 11	-.52484656 8	-.53954733 8
0.06	-.49215716 12	-.50915498 9	-.52491846 10	-.53961476 8
0.07	-.49223992 12	-.50923188 11	-.52499026 8	-.53968211 8
0.08	-.49232256 11	-.50930867 9	-.52506198 9	-.53974938 8
0.09	-.49240509 11	-.50938537 11	-.52513361 8	-.53981657 7
0.10	-.49248751 11	-.50946196 9	-.52520516 10	-.53988369 8
0.11	-.49256982 12	-.50953846 10	-.52527661 7	-.53995073 7
0.12	-.49265201 12	-.50961486 10	-.52534799 10	-.54001770 8
0.13	-.49273408 10	-.50969116 9	-.52541927 8	-.54008459 8
0.14	-.49281605 12	-.50976737 11	-.52549047 8	-.54015140 7
0.15	-.49289790 10	-.50984347 9	-.52556159 9	-.54021814 8
0.16	-.49297965 12	-.50991948 9	-.52563262 9	-.54028480 7
0.17	-.49306128 11	-.50999540 10	-.52570356 8	-.54035139 8
0.18	-.49314280 11	-.51007122 10	-.52577442 8	-.54041790 7
0.19	-.49322421 10	-.51014694 10	-.52584520 9	-.54048434 8
0.20	-.49330552 12	-.51022256 8	-.52591589 8	-.54055070 7
0.21	-.49338671 11	-.51029810 11	-.52598650 9	-.54061699 7
0.22	-.49346779 10	-.51037353 9	-.52605702 7	-.54068321 8
0.23	-.49354877 11	-.51044887 9	-.52612747 9	-.54074935 7
0.24	-.49362964 11	-.51052412 9	-.52619783 9	-.54081542 8
0.25	-.49371040 11	-.51059928 10	-.52626810 7	-.54088141 6
0.26	-.49379105 10	-.51067434 9	-.52633830 9	-.54094734 8
0.27	-.49387160 11	-.51074931 10	-.52640841 8	-.54101319 7
0.28	-.49395204 10	-.51082418 9	-.52647844 8	-.54107897 8
0.29	-.49403238 11	-.51089896 9	-.52654839 8	-.54114467 7
0.30	-.49411261 11	-.51097365 9	-.52661826 8	-.54121030 6
0.31	-.49419273 10	-.51104825 9	-.52668805 8	-.54127587 8
0.32	-.49427275 10	-.51112276 9	-.52675776 8	-.54134136 7
0.33	-.49435267 11	-.51119718 10	-.52682739 9	-.54140678 8
0.34	-.49443248 10	-.51127150 8	-.52689693 7	-.54147212 6
0.35	-.49451219 11	-.51134574 10	-.52696640 8	-.54153740 7
0.36	-.49459179 9	-.51141988 8	-.52703579 8	-.54160261 8
0.37	-.49467130 11	-.51149394 10	-.52710510 8	-.54166774 6
0.38	-.49475070 11	-.51156790 8	-.52717433 8	-.54173281 8
0.39	-.49482999 9	-.51164178 9	-.52724348 8	-.54179780 6
0.40	-.49490919 10	-.51171557 9	-.52731255 7	-.54186273 7
0.41	-.49498829 11	-.51178927 9	-.52738155 9	-.54192759 8
0.42	-.49506728 10	-.51186288 9	-.52745046 7	-.54199237 6
0.43	-.49514617 9	-.51193640 8	-.52751930 8	-.54205709 7
0.44	-.49522497 11	-.51200984 10	-.52758806 7	-.54212174 7
0.45	-.49530366 9	-.51208318 8	-.52765675 9	-.54218632 7
0.46	-.49538226 11	-.51215644 8	-.52772535 6	-.54225083 8
0.47	-.49546075 9	-.51222962 10	-.52779389 9	-.54231528 6
0.48	-.49553915 10	-.51230270 8	-.52786234 7	-.54237965 6
0.49	-.49561745 10	-.51237570 8	-.52793072 8	-.54244396 7
0.50	-.49569565 10	-.51244862 9	-.52799902 8	-.54250820 7

LOG (G) FOR $\delta=0.5$

P	l=12	l=13	l=14	l=15
0.50	-.49569565 10	-.51244862 9	-.52799902 8	-.54250820 7
0.51	-.49577375 9	-.51252145 9	-.52806724 6	-.54257237 6
0.52	-.49585176 11	-.51259419 8	-.52813540 9	-.54263648 7
0.53	-.49592966 9	-.51266685 9	-.52820347 7	-.54270052 7
0.54	-.49600747 9	-.51273942 8	-.52827147 7	-.54276449 7
0.55	-.49608519 10	-.51281191 8	-.52833940 8	-.54282839 6
0.56	-.49616281 10	-.51288432 9	-.52840725 8	-.54289223 7
0.57	-.49624033 9	-.51295664 8	-.52847502 6	-.54295600 6
0.58	-.49631776 10	-.51302888 9	-.52854273 9	-.54301971 7
0.59	-.49639509 9	-.51310103 8	-.52861035 6	-.54308335 6
0.60	-.49647233 9	-.51317310 8	-.52867791 8	-.54314693 8
0.61	-.49654948 10	-.51324509 9	-.52874539 7	-.54321043 5
0.62	-.49662653 10	-.51331699 7	-.52881280 8	-.54327388 7
0.63	-.49670348 9	-.51338882 9	-.52888013 6	-.54333726 7
0.64	-.49678034 9	-.51346056 8	-.52894740 8	-.54340057 6
0.65	-.49685711 9	-.51353222 9	-.52901459 8	-.54346382 7
0.66	-.49693379 9	-.51360379 7	-.52908170 6	-.54352700 6
0.67	-.49701038 10	-.51367529 9	-.52914875 8	-.54359012 6
0.68	-.49708687 9	-.51374670 7	-.52921572 6	-.54365318 7
0.69	-.49716327 9	-.51381804 9	-.52928263 8	-.54371617 6
0.70	-.49723958 10	-.51388929 8	-.52934946 7	-.54377910 7
0.71	-.49731579 8	-.51396046 7	-.52941622 8	-.54384196 6
0.72	-.49739192 9	-.51403156 9	-.52948290 6	-.54390476 6
0.73	-.49746796 10	-.51410257 8	-.52954952 7	-.54396750 6
0.74	-.49754390 8	-.51417350 7	-.52961607 8	-.54403018 7
0.75	-.49761976 10	-.51424436 9	-.52968254 6	-.54409279 6
0.76	-.49769552 8	-.51431513 7	-.52974895 7	-.54415534 7
0.77	-.49777120 9	-.51438583 8	-.52981529 8	-.54421782 5
0.78	-.49784679 9	-.51445645 8	-.52988155 6	-.54428025 7
0.79	-.49792229 9	-.51452699 8	-.52994775 7	-.54434261 6
0.80	-.49799770 9	-.51459745 8	-.53001388 7	-.54440491 6
0.81	-.49807302 9	-.51466783 7	-.53007994 7	-.54446715 7
0.82	-.49814825 8	-.51473814 8	-.53014593 7	-.54452932 5
0.83	-.49822340 10	-.51480837 8	-.53021185 7	-.54459144 7
0.84	-.49829845 8	-.51487852 8	-.53027770 7	-.54465349 6
0.85	-.49837342 8	-.51494859 7	-.53034348 6	-.54471548 6
0.86	-.49844831 9	-.51501859 8	-.53040920 7	-.54477741 6
0.87	-.49852311 9	-.51508851 7	-.53047485 7	-.54483928 6
0.88	-.49859782 9	-.51515836 8	-.53054043 7	-.54490109 6
0.89	-.49867244 8	-.51522813 8	-.53060594 7	-.54496284 6
0.90	-.49874698 8	-.51529782 7	-.53067138 6	-.54502453 6
0.91	-.49882144 10	-.51536744 8	-.53073676 7	-.54508616 6
0.92	-.49889580 7	-.51543698 7	-.53080207 6	-.54514773 6
0.93	-.49897009 9	-.51550645 8	-.53086732 8	-.54520924 6
0.94	-.49904429 9	-.51557584 7	-.53093249 6	-.54527069 7
0.95	-.49911840 8	-.51564516 8	-.53099760 6	-.54533207 5
0.96	-.49919243 8	-.51571440 7	-.53106265 7	-.54539340 5
0.97	-.49926638 9	-.51578357 7	-.53112763 7	-.54545468 7
0.98	-.49934024 8	-.51585267 8	-.53119254 6	-.54551589 6
0.99	-.49941402 9	-.51592169 7	-.53125739 7	-.54557704 6
1.00	-.49948771 7	-.51599064 8	-.53132217 7	-.54563813 5

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LOG (G) FOR S=0.5

G-214

P	I=12	I=13	I=14	I=15
1.00	-.49948771 7	-.51599064 8	-.53132217 7	-.54563813 5
1.01	-.49956133 9	-.51605951 6	-.53138688 5	-.54569917 6
1.02	-.49963486 9	-.51612832 8	-.53145154 8	-.54576015 6
1.03	-.49970830 7	-.51619705 8	-.53151612 6	-.54582107 6
1.04	-.49978167 9	-.51626570 6	-.53158064 6	-.54588193 6
1.05	-.49985495 7	-.51633429 8	-.53164510 7	-.54594273 5
1.06	-.49992816 9	-.51640280 7	-.53170949 6	-.54600348 7
1.07	-.50000128 8	-.51647124 8	-.53177382 7	-.54606416 5
1.08	-.50007432 8	-.51653960 6	-.53183808 6	-.54612479 5
1.09	-.50014728 9	-.51660790 7	-.53190228 6	-.54618537 7
1.10	-.50022015 7	-.51667613 8	-.53196642 7	-.54624588 5
1.11	-.50029295 8	-.51674428 7	-.53203049 6	-.54630634 6
1.12	-.50036567 8	-.51681236 7	-.53209450 6	-.54636674 5
1.13	-.50043831 9	-.51688037 7	-.53215845 7	-.54642709 7
1.14	-.50051086 7	-.51694831 7	-.53222233 6	-.54648737 4
1.15	-.50058334 8	-.51701618 7	-.53228615 6	-.54654761 7
1.16	-.50065574 8	-.51708398 6	-.53234991 6	-.54660778 5
1.17	-.50072806 8	-.51715172 8	-.53241361 7	-.54666790 6
1.18	-.50080030 7	-.51721938 7	-.53247724 6	-.54672796 5
1.19	-.50087247 9	-.51728697 7	-.53254081 6	-.54678797 6
1.20	-.50094455 7	-.51735449 7	-.53260432 6	-.54684792 5
1.21	-.50101656 8	-.51742194 7	-.53266777 7	-.54690782 6
1.22	-.50108849 8	-.51748932 6	-.53273115 6	-.54696766 6
1.23	-.50116034 8	-.51755664 8	-.53279447 5	-.54702744 5
1.24	-.50123211 7	-.51762388 6	-.53285774 7	-.54708717 5
1.25	-.50130381 8	-.51769106 7	-.53292094 6	-.54714685 6
1.26	-.50137543 8	-.51775817 7	-.53298408 6	-.54720647 6
1.27	-.50144697 7	-.51782521 7	-.53304716 6	-.54726603 5
1.28	-.50151844 8	-.51789218 6	-.53311018 7	-.54732554 5
1.29	-.50158983 8	-.51795909 7	-.53317313 5	-.54738500 6
1.30	-.50166114 7	-.51802593 7	-.53323603 6	-.54744440 5
1.31	-.50173238 8	-.51809270 7	-.53329887 6	-.54750375 6
1.32	-.50180354 7	-.51815940 6	-.53336165 7	-.54756304 5
1.33	-.50187463 8	-.51822604 7	-.53342436 5	-.54762228 5
1.34	-.50194564 7	-.51829261 7	-.53348702 6	-.54768147 6
1.35	-.50201658 8	-.51835911 7	-.53354962 6	-.54774060 5
1.36	-.50208744 7	-.51842554 6	-.53361216 6	-.54779968 5
1.37	-.50215823 8	-.51849191 6	-.53367464 6	-.54785871 6
1.38	-.50222894 7	-.51855822 7	-.53373706 6	-.54791768 5
1.39	-.50229958 7	-.51862446 7	-.53379942 6	-.54797660 6
1.40	-.50237015 8	-.51869063 6	-.53386172 6	-.54803546 5
1.41	-.50244064 7	-.51875674 7	-.53392396 5	-.54809427 4
1.42	-.50251106 8	-.51882278 7	-.53398615 6	-.54815304 7
1.43	-.50258140 7	-.51888875 6	-.53404828 7	-.54821174 4
1.44	-.50265167 7	-.51895466 6	-.53411034 5	-.54827040 6
1.45	-.50272187 7	-.51902051 7	-.53417235 5	-.54832900 5
1.46	-.50279200 8	-.51908629 6	-.53423431 7	-.54838755 5
1.47	-.50286205 7	-.51915201 7	-.53429620 5	-.54844605 5
1.48	-.50293203 7	-.51921766 6	-.53435804 6	-.54850450 6
1.49	-.50300194 7	-.51928325 6	-.53441982 6	-.54856289 5
1.50	-.50307178 7	-.51934878 7	-.53448154 6	-.54862123 5

LOG (G) FOR S=0.5

P	I=12	I=13	I=14	I=15
1.50	-.50307178 7	-.51934878 7	-.53448154 6	-.54862123 5
1.51	-.50314155 8	-.51941424 7	-.53454320 5	-.54867952 5
1.52	-.50321124 7	-.51947963 5	-.53460481 6	-.54873776 5
1.53	-.50328086 6	-.51954497 7	-.53466636 5	-.54879595 5
1.54	-.50335042 8	-.51961024 7	-.53472786 7	-.54885409 5
1.55	-.50341990 7	-.51967544 5	-.53478929 5	-.54891218 6
1.56	-.50348931 7	-.51974059 7	-.53485067 5	-.54897021 4
1.57	-.50355865 7	-.51980567 6	-.53491200 6	-.54902820 6
1.58	-.50362792 8	-.51987069 6	-.53497327 6	-.54908613 5
1.59	-.50369711 6	-.51993565 7	-.53503448 5	-.54914401 5
1.60	-.50376624 7	-.52000054 6	-.53509564 6	-.54920184 4
1.61	-.50383530 7	-.52006537 6	-.53515674 6	-.54925963 6
1.62	-.50390429 7	-.52013014 6	-.53521778 5	-.54931736 5
1.63	-.50397321 6	-.52019485 7	-.53527877 6	-.54937504 5
1.64	-.50404207 8	-.52025949 5	-.53533970 5	-.54943267 5
1.65	-.50411085 7	-.52032408 7	-.53540058 5	-.54949025 5
1.66	-.50417956 6	-.52038860 6	-.53546141 7	-.54954778 4
1.67	-.50424821 8	-.52045306 6	-.53552217 4	-.54960527 6
1.68	-.50431678 6	-.52051746 6	-.53558289 6	-.54966270 5
1.69	-.50438529 7	-.52058180 6	-.53564355 6	-.54972008 4
1.70	-.50445373 7	-.52064608 6	-.53570415 5	-.54977742 6
1.71	-.50452210 6	-.52071030 6	-.53576470 6	-.54983470 4
1.72	-.50459041 7	-.52077446 6	-.53582519 4	-.54989194 6
1.73	-.50465865 8	-.52083856 7	-.53588564 7	-.54994912 4
1.74	-.50472681 5	-.52090259 5	-.53594602 4	-.55000626 5
1.75	-.50479492 8	-.52096657 6	-.53600636 6	-.55006335 5
1.76	-.50486295 6	-.52103049 6	-.53606664 6	-.55012039 5
1.77	-.50493092 7	-.52109435 7	-.53612686 5	-.55017738 5
1.78	-.50499882 6	-.52115814 5	-.53618703 5	-.55023432 4
1.79	-.50506666 7	-.52122188 6	-.53624715 5	-.55029122 5
1.80	-.50513443 7	-.52128556 6	-.53630722 6	-.55034807 6
1.81	-.50520213 6	-.52134918 6	-.53636723 5	-.55040486 3
1.82	-.50526977 7	-.52141274 5	-.53642719 6	-.55046162 6
1.83	-.50533734 7	-.52147625 7	-.53648709 4	-.55051832 5
1.84	-.50540484 6	-.52153969 5	-.53654695 6	-.55057497 4
1.85	-.50547228 7	-.52160308 7	-.53660675 5	-.55063158 5
1.86	-.50553965 6	-.52166640 5	-.53666650 6	-.55068814 5
1.87	-.50560696 6	-.52172967 6	-.53672619 4	-.55074465 4
1.88	-.50567421 7	-.52179288 5	-.53678584 6	-.55080112 5
1.89	-.50574139 7	-.52185604 7	-.53684543 5	-.55085754 5
1.90	-.50580850 6	-.52191913 5	-.53690497 6	-.55091391 5
1.91	-.50587555 6	-.52198217 6	-.53696445 4	-.55097023 4
1.92	-.50594254 7	-.52204515 6	-.53702389 6	-.55102651 5
1.93	-.50600946 6	-.52210807 6	-.53708327 5	-.55108274 5
1.94	-.50607632 7	-.52217093 5	-.53714260 4	-.55113892 4
1.95	-.50614311 6	-.52223374 6	-.53720189 7	-.55119506 5
1.96	-.50620984 6	-.52229649 5	-.53726111 4	-.55125115 5
1.97	-.50627651 7	-.52235919 7	-.53732029 5	-.55130719 4
1.98	-.50634311 6	-.52242182 5	-.53737942 5	-.55136319 5
1.99	-.50640965 6	-.52248440 5	-.53743850 6	-.55141914 5
2.00	-.50647613 7	-.52254693 7	-.53749752 4	-.55147504 4

LOG (G) FOR S=0.5

	P	I=12	I=13	I=14	I=15
G-214	2.00	-.50647613 7	-.52254693 7	-.53749752 4	-.55147504 4
	2.01	-.50654254 6	-.52260934 4	-.53755650 6	-.55153090 4
	2.02	-.50660889 6	-.52267181 7	-.53761542 5	-.55158672 6
	2.03	-.50667518 6	-.52273416 5	-.53767429 4	-.55164248 3
	2.04	-.50674141 7	-.52279646 6	-.53773312 6	-.55169821 6
	2.05	-.50680757 6	-.52285870 5	-.53779189 5	-.55175388 4
	2.06	-.50687367 6	-.52292089 5	-.53785061 5	-.55180951 4
	2.07	-.50693971 6	-.52298303 7	-.53790928 4	-.55186510 5
	2.08	-.50700569 6	-.52304510 5	-.53796791 6	-.55192064 5
	2.09	-.50707161 7	-.52310712 5	-.53802648 5	-.55197613 4
	2.10	-.50713746 5	-.52316909 6	-.53808500 5	-.55203158 4
	2.11	-.50720326 7	-.52323100 5	-.53814347 4	-.55208699 5
	2.12	-.50726899 6	-.52329286 6	-.53820190 6	-.55214235 5
	2.13	-.50733466 6	-.52335466 5	-.53826027 4	-.55219766 4
	2.14	-.50740027 6	-.52341641 6	-.53831860 6	-.55225293 4
	2.15	-.50746582 6	-.52347810 5	-.53837687 4	-.55230816 5
	2.16	-.50753131 6	-.52353974 5	-.53843510 5	-.55236334 4
	2.17	-.50759674 6	-.52360133 6	-.53849328 5	-.55241848 5
	2.18	-.50766211 7	-.52366286 6	-.53855141 5	-.55247357 4
	2.19	-.50772741 5	-.52372433 5	-.53860949 5	-.55252862 5
2.20	-.50779266 6	-.52378575 5	-.53866752 5	-.55258362 4	
2.21	-.50785785 6	-.52384712 5	-.53872550 4	-.55263858 4	
2.22	-.50792298 6	-.52390844 6	-.53878344 6	-.55269350 5	
2.23	-.50798805 6	-.52396970 5	-.53884132 4	-.55274837 4	
2.24	-.50805306 6	-.52403091 6	-.53889916 5	-.55280320 5	
2.25	-.50811801 6	-.52409206 4	-.53895695 5	-.55285798 4	
2.26	-.50818290 6	-.52415317 7	-.53901469 4	-.55291272 4	
2.27	-.50824773 6	-.52421421 4	-.53907239 6	-.55296742 4	
2.28	-.50831250 5	-.52427521 6	-.53913003 4	-.55302208 5	
2.29	-.50837722 7	-.52433615 5	-.53918763 4	-.55307669 4	
2.30	-.50844187 5	-.52439704 5	-.53924519 6	-.55313126 5	
2.31	-.50850647 6	-.52445788 5	-.53930269 4	-.55318578 4	
2.32	-.50857101 6	-.52451867 6	-.53936015 6	-.55324026 4	
2.33	-.50863549 6	-.52457940 5	-.53941755 3	-.55329470 4	
2.34	-.50869991 5	-.52464008 5	-.53947492 6	-.55334910 5	
2.35	-.50876428 7	-.52470071 5	-.53953223 4	-.55340345 4	
2.36	-.50882858 5	-.52476129 6	-.53958950 5	-.55345776 4	
2.37	-.50889283 6	-.52482181 4	-.53964672 4	-.55351203 4	
2.38	-.50895702 5	-.52488229 6	-.53970390 6	-.55356626 5	
2.39	-.50902116 7	-.52494271 5	-.53976102 3	-.55362044 4	
2.40	-.50908523 5	-.52500308 5	-.53981811 6	-.55367458 4	
2.41	-.50914925 5	-.52506340 5	-.53987514 4	-.55372868 4	
2.42	-.50921322 7	-.52512367 6	-.53993213 5	-.55378274 5	
2.43	-.50927712 5	-.52518388 4	-.53998907 4	-.55383675 4	
2.44	-.50934097 6	-.52524405 5	-.54004597 5	-.55389072 4	
2.45	-.50940476 5	-.52530417 6	-.54010282 5	-.55394465 4	
2.46	-.50946850 6	-.52536423 5	-.54015962 4	-.55399854 4	
2.47	-.50953218 6	-.52542424 4	-.54021638 5	-.55405239 4	
2.48	-.50959580 5	-.52548421 6	-.54027309 4	-.55410620 5	
2.49	-.50965937 6	-.52554412 5	-.54032976 5	-.55415996 4	
2.50	-.50972288 0	-.52560398 0	-.54038638 0	-.55421368 0	

LOG (G) FOR S=0.5

P	I=16	I=17	I=18	I=19
0.	-.55299731 0	-.56596228 0	-.57819674 0	-.58977861 0
0.01	-.55306114 7	-.56602257 7	-.57825386 7	-.58983287 5
0.02	-.55312490 7	-.56608279 5	-.57831091 4	-.58988708 5
0.03	-.55318859 7	-.56614296 7	-.57836792 7	-.58994124 5
0.04	-.55325221 7	-.56620306 7	-.57842486 5	-.58999535 5
0.05	-.55331576 6	-.56626309 5	-.57848175 5	-.59004941 6
0.06	-.55337925 8	-.56632307 7	-.57853859 6	-.59010341 4
0.07	-.55344266 6	-.56638298 6	-.57859537 6	-.59015737 6
0.08	-.55350601 8	-.56644283 6	-.57865209 5	-.59021127 4
0.09	-.55356928 6	-.56650262 6	-.57870876 6	-.59026513 5
0.10	-.55363249 7	-.56656235 6	-.57876537 5	-.59031894 6
0.11	-.55369563 7	-.56662202 7	-.57882193 6	-.59037269 4
0.12	-.55375870 8	-.56668162 5	-.57887843 5	-.59042640 6
0.13	-.55382171 8	-.56674117 7	-.57893488 6	-.59048005 4
0.14	-.55388464 6	-.56680065 5	-.57899127 5	-.59053366 6
0.15	-.55394751 7	-.56686008 7	-.57904761 6	-.59058721 4
0.16	-.55401031 6	-.56691944 5	-.57910389 5	-.59064072 5
0.17	-.55407305 7	-.56697875 7	-.57916012 6	-.59069418 5
0.18	-.55413572 7	-.56703799 6	-.57921629 4	-.59074759 5
0.19	-.55419832 7	-.56709717 5	-.57927242 7	-.59080095 5
0.20	-.55426085 6	-.56715630 6	-.57932848 4	-.59085426 5
0.21	-.55432332 7	-.56721537 7	-.57938450 6	-.59090752 4
0.22	-.55438572 6	-.56727437 5	-.57944046 5	-.59096074 6
0.23	-.55444806 7	-.56733332 6	-.57949637 6	-.59101390 4
0.24	-.55451033 6	-.56739221 6	-.57955222 5	-.59106702 5
0.25	-.55457254 7	-.56745104 6	-.57960802 5	-.59112009 5
0.26	-.55463468 6	-.56750981 6	-.57966377 5	-.59117311 4
0.27	-.55469676 7	-.56756852 5	-.57971947 6	-.59122609 6
0.28	-.55475877 6	-.56762718 7	-.57977511 5	-.59127901 4
0.29	-.55482072 7	-.56768577 5	-.57983070 5	-.59133189 4
0.30	-.55488260 6	-.56774431 5	-.57988624 5	-.59138472 4
0.31	-.55494442 6	-.56780280 7	-.57994173 6	-.59143751 6
0.32	-.55500618 7	-.56786122 5	-.57999716 5	-.59149024 4
0.33	-.55506787 6	-.56791959 6	-.58005254 5	-.59154293 4
0.34	-.55512950 7	-.56797790 6	-.58010787 5	-.59159558 6
0.35	-.55519106 6	-.56803615 6	-.58016315 5	-.59164817 4
0.36	-.55525256 6	-.56809434 5	-.58021838 5	-.59170072 5
0.37	-.55531400 6	-.56815248 5	-.58027356 6	-.59175322 4
0.38	-.55537538 7	-.56821057 7	-.58032868 4	-.59180568 5
0.39	-.55543669 6	-.56826859 5	-.58038376 6	-.59185809 5
0.40	-.55549794 6	-.56832656 5	-.58043878 4	-.59191045 4
0.41	-.55555913 7	-.56838448 7	-.58049376 6	-.59196277 5
0.42	-.55562025 5	-.56844233 4	-.58054868 5	-.59201504 5
0.43	-.55568132 7	-.56850014 7	-.58060355 5	-.59206726 4
0.44	-.55574232 6	-.56855788 5	-.58065837 5	-.59211944 4
0.45	-.55580326 6	-.56861557 5	-.58071314 5	-.59217158 5
0.46	-.55586414 6	-.56867321 6	-.58076786 4	-.59222367 5
0.47	-.55592496 6	-.56873079 5	-.58082254 6	-.59227571 4
0.48	-.55598572 6	-.56878832 6	-.58087716 5	-.59232771 5
0.49	-.55604642 7	-.56884579 6	-.58093173 5	-.59237966 5
0.50	-.55610705 5	-.56890320 4	-.58098625 5	-.59243156 3

1-10

LOG (G) FOR $\delta=0.5$

G-214	P	LOG (G) FOR $\delta=0.5$			
		I=16	I=17	I=18	I=19
	0.50	-.555610703 5	-.56890320 4	-.58098625 5	-.59243156 3
	0.51	-.555616763 5	-.568960957 4	-.58104072 4	-.59248343 6
	0.52	-.555622814 5	-.56901787 4	-.58109915 6	-.59253524 3
	0.53	-.555628860 5	-.56907513 6	-.58114952 4	-.59258702 6
	0.54	-.555634899 5	-.56913233 6	-.58120385 5	-.59263874 3
	0.55	-.555640933 7	-.56918947 5	-.58125813 6	-.59269043 5
	0.56	-.555646960 5	-.56924656 5	-.58131235 4	-.59274207 5
	0.57	-.555652982 6	-.56930360 5	-.58136653 5	-.59279366 4
	0.58	-.555658998 6	-.56936059 6	-.58142066 4	-.59284521 4
	0.59	-.555665008 6	-.56941752 6	-.58147475 6	-.59289672 5
	0.60	-.555671012 6	-.56947439 4	-.58152878 4	-.59294818 4
	0.61	-.555677010 6	-.56953122 6	-.58158277 6	-.59299960 5
	0.62	-.555683002 6	-.56958799 6	-.58163670 4	-.59305097 4
	0.63	-.555688988 5	-.56964471 5	-.58169059 4	-.59310230 4
	0.64	-.555694969 7	-.56970138 6	-.58174444 6	-.59315359 5
	0.65	-.555700943 5	-.56975799 5	-.58179823 4	-.59320483 4
	0.66	-.555706912 6	-.56981455 5	-.58185198 5	-.59325603 4
	0.67	-.555712875 5	-.56987106 5	-.58190568 5	-.59330719 4
	0.68	-.555718833 7	-.56992752 6	-.58195935 4	-.59335831 5
	0.69	-.555724784 5	-.56998392 4	-.58201294 6	-.59340938 4
	0.70	-.555730730 6	-.57004028 6	-.58206649 4	-.59346041 5
	0.71	-.555736670 6	-.57009658 5	-.58212000 4	-.59351139 4
	0.72	-.555742604 5	-.57015283 5	-.58217347 5	-.59356233 4
	0.73	-.555748533 6	-.57020903 5	-.58222689 5	-.59361325 4
	0.74	-.555754456 5	-.57026518 6	-.58228026 5	-.59366409 4
	0.75	-.555760374 7	-.57032127 4	-.58233358 4	-.59371491 5
	0.76	-.555766285 4	-.57037732 6	-.58238686 5	-.59376568 4
	0.77	-.555772192 7	-.57043331 4	-.58244009 4	-.59381641 4
	0.78	-.555778092 5	-.57048926 6	-.58249328 5	-.59386710 5
	0.79	-.555783987 6	-.57054515 5	-.58254642 5	-.59391774 3
	0.80	-.555789876 5	-.57060099 5	-.58259951 4	-.59396835 5
	0.81	-.555795760 6	-.57065678 4	-.58265256 5	-.59401891 4
	0.82	-.555801638 5	-.57071253 6	-.58270556 4	-.59406943 4
	0.83	-.555807511 6	-.57076822 5	-.58275852 5	-.59411991 4
	0.84	-.555813378 5	-.57082386 5	-.58281143 4	-.59417035 4
	0.85	-.555819240 6	-.57087945 5	-.58286430 5	-.59422075 5
	0.86	-.555825096 5	-.57093499 4	-.58291712 5	-.59427110 3
	0.87	-.555830947 6	-.57099049 6	-.58296989 3	-.59432142 5
	0.88	-.555836792 5	-.57104593 5	-.58302263 6	-.59437169 4
	0.89	-.555842632 6	-.57110132 4	-.58307531 4	-.59442192 4
	0.90	-.555848466 5	-.57115667 6	-.58312795 4	-.59447211 4
	0.91	-.555854295 5	-.57121196 4	-.58318055 5	-.59452226 4
	0.92	-.555860119 6	-.57126721 5	-.58323310 4	-.59457237 4
	0.93	-.555865937 6	-.57132241 5	-.58328561 5	-.59462244 4
	0.94	-.555871749 4	-.57137756 5	-.58333807 4	-.59467247 5
	0.95	-.555877557 6	-.57143266 5	-.58339049 5	-.59472245 3
	0.96	-.555883359 5	-.57148771 5	-.58344286 4	-.59477240 4
	0.97	-.555889156 6	-.57154271 4	-.58349519 4	-.59482231 5
	0.98	-.555894947 5	-.57159767 5	-.58354748 5	-.59487217 3
	0.99	-.555900733 5	-.57165258 5	-.58359972 4	-.59492200 4
	1.00	-.555906514 6	-.57170744 5	-.58365192 4	-.59497179 5

LOG (G) FOR S=0.5

P	l=16	l=17	l=18	l=19
1.00	-.55906514 6	-.57170744 5	-.58365192 4	-.59497179 5
1.01	-.55912289 5	-.57176225 5	-.58370408 5	-.59502153 3
1.02	-.55918059 5	-.57181701 4	-.58375619 4	-.59507124 4
1.03	-.55923824 5	-.57187173 6	-.58380826 5	-.59512091 5
1.04	-.55929584 5	-.57192639 4	-.58386028 4	-.59517053 3
1.05	-.55935339 6	-.57198101 4	-.58391226 4	-.59522012 4
1.06	-.55941088 5	-.57203559 6	-.58396420 4	-.59526967 4
1.07	-.55946832 5	-.57209011 4	-.58401610 5	-.59531918 4
1.08	-.55952571 6	-.57214459 5	-.58406795 4	-.59536865 4
1.09	-.55958304 4	-.57219902 4	-.58411976 4	-.59541808 4
1.10	-.55964033 6	-.57225341 5	-.58417153 5	-.59546747 4
1.11	-.55969756 5	-.57230775 5	-.58422325 4	-.59551682 3
1.12	-.55975474 4	-.57236204 4	-.58427493 4	-.59556614 5
1.13	-.55981188 6	-.57241629 6	-.58432657 4	-.59561541 3
1.14	-.55986896 6	-.57247048 3	-.58437817 4	-.59566465 5
1.15	-.55992598 4	-.57252464 6	-.58442973 5	-.59571384 3
1.16	-.55998296 5	-.57257874 4	-.58448124 4	-.59576300 4
1.17	-.56003989 5	-.57263280 4	-.58453271 4	-.59581212 4
1.18	-.56009677 6	-.57268682 5	-.58458414 5	-.59586120 4
1.19	-.56015359 4	-.57274079 5	-.58463552 3	-.59591024 3
1.20	-.56021037 6	-.57279471 4	-.58468687 5	-.59595925 4
1.21	-.56026709 4	-.57284859 5	-.58473817 4	-.59600822 5
1.22	-.56032377 6	-.57290242 5	-.58478943 4	-.59605714 3
1.23	-.56038039 4	-.57295620 4	-.58484065 4	-.59610603 3
1.24	-.56043697 5	-.57300994 4	-.58489183 4	-.59615489 5
1.25	-.56049350 6	-.57306364 5	-.58494297 4	-.59620370 3
1.26	-.56054997 4	-.57311729 4	-.58499407 5	-.59625248 4
1.27	-.56060640 6	-.57317090 5	-.58504512 3	-.59630122 4
1.28	-.56066277 4	-.57322446 5	-.58509614 5	-.59634992 4
1.29	-.56071910 5	-.57327797 4	-.58514711 4	-.59639858 3
1.30	-.56077538 5	-.57333144 4	-.58519804 3	-.59644721 4
1.31	-.56083161 5	-.57338487 5	-.58524894 5	-.59649580 4
1.32	-.56088779 5	-.57343825 4	-.58529979 4	-.59654435 4
1.33	-.56094392 4	-.57349159 5	-.58535060 4	-.59659286 3
1.34	-.56100001 6	-.57354488 4	-.58540137 4	-.59664134 4
1.35	-.56105604 4	-.57359813 5	-.58545210 4	-.59668978 3
1.36	-.56111203 5	-.57365133 4	-.58550279 4	-.59673819 5
1.37	-.56116797 6	-.57370449 4	-.58555344 5	-.59678655 3
1.38	-.56122385 3	-.57375761 5	-.58560404 3	-.59683488 3
1.39	-.56127970 6	-.57381068 4	-.58565461 4	-.59688318 5
1.40	-.56133549 5	-.57386371 4	-.58570514 4	-.59693143 3
1.41	-.56139123 4	-.57391670 5	-.58575563 4	-.59697965 4
1.42	-.56144693 5	-.57396964 4	-.58580608 4	-.59702783 3
1.43	-.56150258 4	-.57402254 4	-.58585649 4	-.59707598 4
1.44	-.56155819 6	-.57407540 5	-.58590686 4	-.59712409 3
1.45	-.56161374 4	-.57412821 4	-.58595719 4	-.59717217 5
1.46	-.56166925 5	-.57418098 5	-.58600748 3	-.59722020 2
1.47	-.56172471 5	-.57423370 3	-.58605774 5	-.59726821 5
1.48	-.56178012 4	-.57428639 5	-.58610795 4	-.59731617 3
1.49	-.56183549 5	-.57433903 4	-.58615812 3	-.59736410 3
1.50	-.56189081 5	-.57439163 5	-.58620826 5	-.59741200 5

LOG (G) FOR S=0.5

	P	l=16	l=17	l=18	l=19
G-214	1.50	-.56189081 5	-.57439163 5	-.58620826 5	-.59741200 5
	1.51	-.56194608 4	-.57444418 4	-.58625835 3	-.59745985 2
	1.52	-.56200131 5	-.57449669 4	-.58630841 4	-.59750768 5
	1.53	-.56205649 5	-.57454916 4	-.58635843 4	-.59755546 3
	1.54	-.56211162 4	-.57460159 4	-.58640841 4	-.59760321 3
	1.55	-.56216671 5	-.57465398 5	-.58645835 4	-.59765093 4
	1.56	-.56222175 5	-.57470632 4	-.58650825 4	-.59769861 3
	1.57	-.56227674 4	-.57475862 4	-.58655811 3	-.59774626 5
	1.58	-.56233169 5	-.57481088 4	-.58660794 5	-.59779386 2
	1.59	-.56238659 4	-.57486310 4	-.58665772 3	-.59784144 4
	1.60	-.56244145 5	-.57491528 5	-.58670747 4	-.59788898 4
	1.61	-.56249626 5	-.57496741 4	-.58675718 4	-.59793648 3
	1.62	-.56255102 4	-.57501950 4	-.58680685 3	-.59798395 4
	1.63	-.56260574 4	-.57507155 4	-.58685649 5	-.59803138 3
	1.64	-.56266042 5	-.57512356 4	-.58690608 3	-.59807878 3
	1.65	-.56271505 5	-.57517553 4	-.58695564 4	-.59812615 4
	1.66	-.56276963 4	-.57522746 5	-.58700516 4	-.59817348 4
	1.67	-.56282417 5	-.57527934 3	-.58705464 3	-.59822077 3
	1.68	-.56287866 4	-.57533114 5	-.58710409 4	-.59826803 3
1.69	-.56293311 5	-.57538299 3	-.58715350 4	-.59831526 4	
1.70	-.56298751 4	-.57543476 5	-.58720287 4	-.59836245 3	
1.71	-.56304187 4	-.57548648 4	-.58725220 4	-.59840961 4	
1.72	-.56309619 5	-.57553816 4	-.58730149 3	-.59845673 3	
1.73	-.56315046 5	-.57558980 4	-.58735075 4	-.59850382 4	
1.74	-.56320468 4	-.57564140 4	-.58739997 3	-.59855087 3	
1.75	-.56325886 4	-.57569296 4	-.58744916 5	-.59859789 3	
1.76	-.56331300 5	-.57574448 4	-.58749830 3	-.59864488 4	
1.77	-.56336709 4	-.57579596 4	-.58754741 3	-.59869183 3	
1.78	-.56342114 4	-.57584740 4	-.58759649 5	-.59873875 4	
1.79	-.56347515 5	-.57589880 4	-.58764552 3	-.59878563 3	
1.80	-.56352911 4	-.57595016 4	-.58769452 3	-.59883248 3	
1.81	-.56358303 5	-.57600148 5	-.58774349 5	-.59887930 4	
1.82	-.56363690 4	-.57605275 3	-.58779241 3	-.59892608 3	
1.83	-.56369073 4	-.57610399 4	-.58784130 3	-.59897283 3	
1.84	-.56374452 5	-.57615519 4	-.58789016 5	-.59901955 4	
1.85	-.56379826 4	-.57620635 4	-.58793897 3	-.59906623 3	
1.86	-.56385196 4	-.57625747 3	-.58798775 3	-.59911288 3	
1.87	-.56390562 5	-.57630856 5	-.58803650 4	-.59915950 4	
1.88	-.56395923 4	-.57635960 4	-.58808521 4	-.59920608 3	
1.89	-.56401280 4	-.57641060 4	-.58813388 3	-.59925263 4	
1.90	-.56406633 4	-.57646156 3	-.58818252 4	-.59929914 2	
1.91	-.56411982 5	-.57651249 5	-.58823112 4	-.59934563 4	
1.92	-.56417326 4	-.57656337 3	-.58827968 3	-.59939208 4	
1.93	-.56422666 4	-.57661422 4	-.58832821 3	-.59943849 2	
1.94	-.56428002 5	-.57666503 4	-.58837671 4	-.59948488 4	
1.95	-.56433333 3	-.57671580 4	-.58842517 4	-.59953123 3	
1.96	-.56438661 5	-.57676653 4	-.58847359 4	-.59957755 3	
1.97	-.56443984 4	-.57681722 4	-.58852197 2	-.59962384 4	
1.98	-.56449303 5	-.57686787 4	-.58857033 5	-.59967009 3	
1.99	-.56454617 3	-.57691848 3	-.58861864 3	-.59971631 3	
2.00	-.56459928 5	-.57696906 4	-.58866692 3	-.59976250 3	

LOG(G) FOR S=0.5

P	I=16	I=17	I=18	I=19
2.00	-.56459928 5	-.57696906 4	-.58866692 3	-.59976250 3
2.01	-.56465234 4	-.57701960 4	-.58871517 4	-.59980866 4
2.02	-.56470536 4	-.57707010 4	-.58876338 3	-.59985478 3
2.03	-.56475834 4	-.57712056 4	-.58881156 4	-.59990087 3
2.04	-.56481128 5	-.57717098 3	-.58885970 4	-.59994693 3
2.05	-.56486417 3	-.57722137 5	-.58890780 3	-.59999296 4
2.06	-.56491703 5	-.57727171 3	-.58895587 3	-.60003895 3
2.07	-.56496984 4	-.57732202 3	-.58900391 4	-.60008491 2
2.08	-.56502261 4	-.57737230 5	-.58905171 3	-.60013085 5
2.09	-.56507534 4	-.57742253 3	-.58909988 4	-.60017674 2
2.10	-.56512803 4	-.57747273 5	-.58914781 3	-.60022261 3
2.11	-.56518068 4	-.57752286 2	-.58919571 4	-.60026845 4
2.12	-.56523329 4	-.57757301 5	-.58924357 3	-.60031425 3
2.13	-.56528586 5	-.57762309 3	-.58929140 3	-.60036002 3
2.14	-.56533838 3	-.57767314 4	-.58933920 4	-.60040576 3
2.15	-.56539087 5	-.57772315 4	-.58938696 4	-.60045147 3
2.16	-.56544331 3	-.57777312 4	-.58943468 2	-.60049715 4
2.17	-.56549572 5	-.57782305 3	-.58948238 5	-.60054279 2
2.18	-.56554808 4	-.57787295 4	-.58953003 2	-.60058841 4
2.19	-.56560040 3	-.57792281 3	-.58957766 4	-.60063399 3
2.20	-.56565269 5	-.57797264 4	-.58962525 3	-.60067954 3
2.21	-.56570493 3	-.57802243 4	-.58967281 4	-.60072506 3
2.22	-.56575714 5	-.57807218 4	-.58972033 3	-.60077055 3
2.23	-.56580930 4	-.57812189 3	-.58976782 4	-.60081601 3
2.24	-.56586142 3	-.57817157 4	-.58981527 2	-.60086144 4
2.25	-.56591351 5	-.57822121 4	-.58986270 5	-.60090683 2
2.26	-.56596555 4	-.57827081 3	-.58991008 2	-.60095220 4
2.27	-.56601755 3	-.57832038 3	-.58995744 4	-.60099753 4
2.28	-.56606952 5	-.57836992 5	-.59000476 3	-.60104284 4
2.29	-.56612144 3	-.57841941 3	-.59005205 4	-.60108811 3
2.30	-.56617333 5	-.57846887 4	-.59009930 2	-.60113335 3
2.31	-.56622517 3	-.57851829 3	-.59014653 4	-.60117856 3
2.32	-.56627698 4	-.57856768 4	-.59019372 4	-.60122374 3
2.33	-.56632875 4	-.57861703 3	-.59024087 3	-.60126889 3
2.34	-.56638048 4	-.57866635 4	-.59028799 3	-.60131401 3
2.35	-.56643217 4	-.57871563 3	-.59033508 3	-.60135910 3
2.36	-.56648382 4	-.57876488 5	-.59038214 4	-.60140416 3
2.37	-.56653543 4	-.57881408 2	-.59042916 2	-.60144919 3
2.38	-.56658700 3	-.57886326 4	-.59047616 5	-.60149419 3
2.39	-.56663854 5	-.57891240 4	-.59052311 2	-.60153916 4
2.40	-.56669003 3	-.57896150 4	-.59057004 4	-.60158409 2
2.41	-.56674149 4	-.57901056 2	-.59061693 3	-.60162900 3
2.42	-.56679291 4	-.57905960 5	-.59066379 3	-.60167388 3
2.43	-.56684429 4	-.57910859 3	-.59071062 3	-.60171873 3
2.44	-.56689563 4	-.57915755 3	-.59075742 4	-.60176355 4
2.45	-.56694693 3	-.57920648 4	-.59080418 3	-.60180833 2
2.46	-.56699820 4	-.57925537 3	-.59085091 3	-.60185309 3
2.47	-.56704943 4	-.57930423 4	-.59089761 3	-.60189782 3
2.48	-.56710062 4	-.57935305 4	-.59094428 3	-.60194252 3
2.49	-.56715177 4	-.57940183 2	-.59099092 4	-.60198719 3
2.50	-.56720288 0	-.57945059 0	-.59103752 0	-.60203183 0

LOG(G) FOR S=0.5

G-214

P	I=20	I=21	I=22	I=23
0.	-.60077400 0	-.61123943 0	-.62122365 0	-.63076897 0
0.01	-.60082967 3	-.61128876 4	-.62134708 5	-.63081419 5
0.02	-.60087731 4	-.61133805 5	-.62147179 5	-.63085938 5
0.03	-.60092889 4	-.61138729 5	-.62159650 4	-.63090452 4
0.04	-.60098043 3	-.61143650 5	-.62172126 4	-.63094964 4
0.05	-.60103192 4	-.61148566 4	-.62184591 3	-.63099472 4
0.06	-.60108337 5	-.61153478 5	-.62197061 5	-.63103976 4
0.07	-.60113477 4	-.61158385 5	-.62209531 4	-.63108476 5
0.08	-.60118613 6	-.61163289 5	-.62222005 3	-.63112974 5
0.09	-.60123743 3	-.61168188 4	-.62234469 4	-.63117467 3
0.10	-.60128870 5	-.61173083 4	-.62246937 4	-.63121957 3
0.11	-.60133992 5	-.61177974 4	-.62259405 4	-.63126444 4
0.12	-.60139109 4	-.61182861 4	-.62271873 5	-.63130927 4
0.13	-.60144222 4	-.61187744 5	-.62284340 5	-.63135406 5
0.14	-.60149330 4	-.61192622 3	-.62296807 4	-.63139883 5
0.15	-.60154434 5	-.61197497 5	-.62309273 4	-.63144355 3
0.16	-.60159533 4	-.61202367 4	-.62321740 5	-.63148824 3
0.17	-.60164628 5	-.61207233 4	-.62334205 5	-.63153290 4
0.18	-.60169718 4	-.61212095 4	-.62346671 3	-.63157752 3
0.19	-.60174804 5	-.61216953 4	-.62359136 4	-.63162211 4
0.20	-.60179885 4	-.61221807 4	-.62371600 3	-.63166666 3
0.21	-.60184962 4	-.61226657 4	-.62384065 5	-.63171118 3
0.22	-.60190035 5	-.61231503 4	-.62396530 3	-.63175566 3
0.23	-.60195103 5	-.61236345 4	-.62408995 4	-.63180011 3
0.24	-.60200166 3	-.61241183 4	-.62421460 3	-.63184453 4
0.25	-.60205226 5	-.61246017 5	-.62433922 4	-.63188891 3
0.26	-.60210281 5	-.61250846 3	-.62446386 4	-.63193326 3
0.27	-.60215331 3	-.61255672 4	-.62458846 4	-.63197757 3
0.28	-.60220378 6	-.61260494 4	-.62471306 3	-.63202185 3
0.29	-.60225419 3	-.61265312 4	-.62483765 3	-.63206610 4
0.30	-.60230457 5	-.61270126 4	-.62496225 5	-.63211031 3
0.31	-.60235490 4	-.61274936 4	-.62508680 3	-.63215449 3
0.32	-.60240519 4	-.61279742 4	-.62521142 4	-.63219864 4
0.33	-.60245544 5	-.61284544 4	-.62533600 3	-.63224275 3
0.34	-.60250564 4	-.61289342 4	-.62546065 4	-.63228683 4
0.35	-.60255580 4	-.61294136 4	-.62558526 3	-.63233087 2
0.36	-.60260592 4	-.61298926 3	-.62570984 4	-.63237489 4
0.37	-.60265600 5	-.61303713 5	-.62583442 4	-.63241887 4
0.38	-.60270603 4	-.61308495 3	-.62595900 3	-.63246281 2
0.39	-.60275602 4	-.61313274 5	-.62608358 4	-.63250673 4
0.40	-.60280597 4	-.61318048 3	-.62620815 3	-.63255061 4
0.41	-.60285588 5	-.61322819 4	-.62633272 4	-.63259445 2
0.42	-.60290574 4	-.61327586 4	-.62645729 4	-.63263827 4
0.43	-.60295556 4	-.61332349 3	-.62658185 3	-.63268205 3
0.44	-.60300534 4	-.61337109 5	-.62670641 3	-.63272580 3
0.45	-.60305508 4	-.61341864 3	-.62683097 4	-.63276952 4
0.46	-.60310478 5	-.61346616 4	-.62695552 4	-.63281320 3
0.47	-.60315443 5	-.61351364 4	-.62708007 3	-.63285683 3
0.48	-.60320405 5	-.61356108 4	-.62720461 3	-.63290047 3
0.49	-.60325362 4	-.61360848 4	-.62732915 4	-.63294406 4
0.50	-.60330315 4	-.61365584 3	-.62745369 4	-.63298761 2

LOG(G) FOR S=0.5

P	I=20	I=21	I=22	I=23
0.50	-.60330315 4	-.61365584 3	-.62353696 4	-.63298761 2
0.51	-.60335264 4	-.61370317 4	-.62358230 3	-.63303114 4
0.52	-.60340209 4	-.61375046 4	-.62362761 3	-.63307463 3
0.53	-.60345150 4	-.61379771 3	-.62367289 4	-.63311809 4
0.54	-.60350087 4	-.61384493 5	-.62371813 3	-.63316151 2
0.55	-.60355020 5	-.61389210 3	-.62376334 4	-.63320491 4
0.56	-.60359948 3	-.61393924 3	-.62380851 3	-.63324827 3
0.57	-.60364873 5	-.61398635 5	-.62385365 4	-.63329160 3
0.58	-.60369793 3	-.61403341 3	-.62389875 3	-.63333490 3
0.59	-.60374710 5	-.61408044 4	-.62394382 3	-.63337817 3
0.60	-.60379622 3	-.61412743 4	-.62398886 4	-.63342141 4
0.61	-.60384531 5	-.61417438 3	-.62403386 4	-.63346461 2
0.62	-.60389435 3	-.61422130 4	-.62407882 2	-.63350779 4
0.63	-.60394336 5	-.61426818 3	-.62412376 4	-.63355093 3
0.64	-.60399232 3	-.61431503 5	-.62416866 4	-.63359404 3
0.65	-.60404125 5	-.61436183 3	-.62421352 2	-.63363712 3
0.66	-.60409013 3	-.61440860 3	-.62425836 4	-.63368017 3
0.67	-.60413898 5	-.61445534 4	-.62430316 4	-.63372319 3
0.68	-.60418778 3	-.61450204 4	-.62434792 3	-.63376618 4
0.69	-.60423655 4	-.61454870 3	-.62439265 3	-.63380913 2
0.70	-.60428528 4	-.61459533 4	-.62443735 3	-.63385206 4
0.71	-.60433397 4	-.61464192 4	-.62448202 4	-.63389495 3
0.72	-.60438262 4	-.61468847 3	-.62452665 3	-.63393781 2
0.73	-.60443123 4	-.61473499 4	-.62457125 3	-.63398065 4
0.74	-.60447980 4	-.61478147 3	-.62461582 4	-.63402345 3
0.75	-.60452833 4	-.61482792 4	-.62466035 3	-.63406622 3
0.76	-.60457682 3	-.61487433 4	-.62470485 3	-.63410896 3
0.77	-.60462528 5	-.61492070 3	-.62474932 4	-.63415167 3
0.78	-.60467369 3	-.61496704 3	-.62479375 3	-.63419435 3
0.79	-.60472207 4	-.61501335 5	-.62483815 3	-.63423700 3
0.80	-.60477041 4	-.61505961 2	-.62488252 3	-.63427962 3
0.81	-.60481871 4	-.61510585 4	-.62492686 4	-.63432221 3
0.82	-.60486697 3	-.61515205 4	-.62497116 3	-.63436477 3
0.83	-.60491520 5	-.61519821 3	-.62501543 3	-.63440730 3
0.84	-.60496338 3	-.61524434 4	-.62505967 3	-.63444980 3
0.85	-.60501153 4	-.61529043 3	-.62510388 4	-.63449227 3
0.86	-.60505964 3	-.61533649 4	-.62514805 2	-.63453471 3
0.87	-.60510772 5	-.61538251 3	-.62519220 4	-.63457712 3
0.88	-.60515575 3	-.61542850 4	-.62523631 3	-.63461950 3
0.89	-.60520375 4	-.61547445 3	-.62528039 4	-.63466185 3
0.90	-.60525171 4	-.61552037 3	-.62532443 2	-.63470417 3
0.91	-.60529963 4	-.61556626 4	-.62536845 4	-.63474646 2
0.92	-.60534751 3	-.61561211 4	-.62541243 3	-.63478873 4
0.93	-.60539536 4	-.61565792 2	-.62545638 3	-.63483096 3
0.94	-.60544317 3	-.61570371 5	-.62550030 3	-.63487316 2
0.95	-.60549095 5	-.61574945 2	-.62554419 4	-.63491534 4
0.96	-.60553868 3	-.61579517 4	-.62558804 2	-.63495748 3
0.97	-.60558638 4	-.61584085 4	-.62563187 4	-.63499959 2
0.98	-.60563404 3	-.61588649 3	-.62567566 3	-.63504168 3
0.99	-.60568167 4	-.61593210 3	-.62571942 3	-.63508374 3
1.00	-.60572926 4	-.61597768 4	-.62576315 3	-.63512577 4

LOG (G) FOR S=0.5

G-214

P	I=20	I=21	I=22	I=23
1.00	-.60572926 4	-.61597768 4	-.62576315 3	-.63512577 4
1.01	-.60577681 4	-.61602322 3	-.62580685 3	-.63516776 2
1.02	-.60582432 3	-.61606873 3	-.62585052 3	-.63520973 2
1.03	-.60587180 4	-.61611421 4	-.62589416 4	-.63525168 2
1.04	-.60591924 3	-.61615965 3	-.62593776 2	-.63529359 3
1.05	-.60596665 4	-.61620506 3	-.62598134 4	-.63533547 2
1.06	-.60601402 4	-.61625044 4	-.62602488 3	-.63537733 4
1.07	-.60606135 3	-.61629578 3	-.62606839 2	-.63541915 2
1.08	-.60610865 4	-.61634109 4	-.62611188 4	-.63546095 2
1.09	-.60615591 3	-.61638636 2	-.62615533 3	-.63550272 3
1.10	-.60620314 4	-.61643161 4	-.62619875 3	-.63554446 3
1.11	-.60625033 4	-.61647682 4	-.62624214 3	-.63558617 3
1.12	-.60629748 3	-.61652199 2	-.62628550 3	-.63562785 3
1.13	-.60634460 4	-.61656714 4	-.62632883 4	-.63566951 3
1.14	-.60639168 3	-.61661225 4	-.62637212 2	-.63571114 3
1.15	-.60643873 4	-.61665732 2	-.62641539 3	-.63575274 3
1.16	-.60648574 4	-.61670237 4	-.62645863 3	-.63579431 3
1.17	-.60653271 3	-.61674738 3	-.62650184 4	-.63583585 4
1.18	-.60657965 3	-.61679236 3	-.62654501 2	-.63587736 2
1.19	-.60662656 4	-.61683731 4	-.62658816 3	-.63591885 3
1.20	-.60667343 4	-.61688222 2	-.62663128 3	-.63596031 3
1.21	-.60672026 3	-.61692711 4	-.62667437 4	-.63600174 3
1.22	-.60676706 3	-.61697196 4	-.62671742 2	-.63604314 2
1.23	-.60681383 4	-.61701677 2	-.62676045 3	-.63608452 3
1.24	-.60686056 4	-.61706156 4	-.62680345 3	-.63612587 3
1.25	-.60690725 3	-.61710631 3	-.62684642 4	-.63616719 3
1.26	-.60695391 3	-.61715103 3	-.62688935 2	-.63620848 3
1.27	-.60700054 4	-.61719572 3	-.62693226 3	-.63624974 2
1.28	-.60704713 3	-.61724038 4	-.62697514 3	-.63629098 3
1.29	-.60709369 4	-.61728500 2	-.62701799 3	-.63633219 3
1.30	-.60714021 3	-.61732960 4	-.62706081 3	-.63637337 2
1.31	-.60718670 4	-.61737416 3	-.62710360 3	-.63641453 4
1.32	-.60723315 3	-.61741869 3	-.62714636 3	-.63645565 2
1.33	-.60727957 4	-.61746314 4	-.62718909 3	-.63649675 2
1.34	-.60732595 3	-.61750765 2	-.62723179 3	-.63653783 4
1.35	-.60737230 3	-.61755209 4	-.62727446 2	-.63657887 2
1.36	-.60741862 4	-.61759649 2	-.62731711 4	-.63661989 3
1.37	-.60746490 3	-.61764087 4	-.62735972 2	-.63666088 2
1.38	-.60751115 3	-.61768521 3	-.62740231 3	-.63670185 3
1.39	-.60755737 4	-.61772952 4	-.62744487 4	-.63674279 3
1.40	-.60760355 4	-.61777379 2	-.62748739 2	-.63678370 3
1.41	-.60764969 2	-.61781804 3	-.62752989 3	-.63682458 2
1.42	-.60769581 4	-.61786226 4	-.62757236 3	-.63686544 3
1.43	-.60774189 4	-.61790644 2	-.62761480 3	-.63690627 3
1.44	-.60778793 2	-.61795060 4	-.62765721 2	-.63694707 2
1.45	-.60783395 4	-.61799472 3	-.62769960 4	-.63698785 3
1.46	-.60787993 4	-.61803881 3	-.62774195 2	-.63702860 4
1.47	-.60792587 2	-.61808287 2	-.62778428 3	-.63706933 4
1.48	-.60797179 4	-.61812691 4	-.62782658 3	-.63711002 2
1.49	-.60801767 4	-.61817091 3	-.62786885 3	-.63715069 2
1.50	-.60806351 2	-.61821488 4	-.62791109 3	-.63719134 3

LOG(G) FOR S=0.5

P	I=20	I=21	I=22	I=23
1.50	-.60806351 2	-.61821488 4	-.62791109 3	-.63719134 3
1.51	-.60810933 4	-.61825881 2	-.62795330 2	-.63723196 3
1.52	-.60815511 3	-.61830272 3	-.62799549 4	-.63727255 3
1.53	-.60820086 4	-.61834660 3	-.62803764 2	-.63731311 3
1.54	-.60824657 2	-.61839045 3	-.62807977 3	-.63735365 2
1.55	-.60829226 4	-.61843427 4	-.62812187 3	-.63739417 4
1.56	-.60833791 4	-.61847805 2	-.62816394 2	-.63743465 1
1.57	-.60838352 2	-.61852181 3	-.62820599 4	-.63747512 4
1.58	-.60842911 4	-.61856554 4	-.62824800 2	-.63751555 2
1.59	-.60847466 3	-.61860923 2	-.62828999 3	-.63755596 3
1.60	-.60852018 3	-.61865290 3	-.62833195 3	-.63759634 2
1.61	-.60856567 4	-.61869654 3	-.62837388 2	-.63763670 3
1.62	-.60861112 2	-.61874015 4	-.62841579 3	-.63767703 2
1.63	-.60865655 4	-.61878372 2	-.62845767 4	-.63771734 3
1.64	-.60870194 3	-.61882727 3	-.62849951 1	-.63775762 3
1.65	-.60874730 4	-.61887079 3	-.62854134 4	-.63779787 2
1.66	-.60879262 2	-.61891428 4	-.62858313 2	-.63783810 3
1.67	-.60883792 4	-.61895773 2	-.62862490 3	-.63787830 3
1.68	-.60888318 3	-.61900116 3	-.62866664 3	-.63791848 3
1.69	-.60892841 3	-.61904456 3	-.62870835 3	-.63795863 2
1.70	-.60897361 3	-.61908793 3	-.62875003 2	-.63799876 3
1.71	-.60901878 4	-.61913127 3	-.62879169 3	-.63803886 3
1.72	-.60906391 2	-.61917458 3	-.62883332 3	-.63807893 3
1.73	-.60910902 4	-.61921786 2	-.62887492 2	-.63811898 3
1.74	-.60915409 3	-.61926112 4	-.62891650 4	-.63815901 3
1.75	-.60919913 3	-.61930434 3	-.62895804 1	-.63819901 3
1.76	-.60924414 3	-.61934753 2	-.62899957 4	-.63823898 3
1.77	-.60928912 4	-.61939070 3	-.62904106 2	-.63827893 3
1.78	-.60933406 2	-.61943384 4	-.62908253 3	-.63831886 4
1.79	-.60937898 4	-.61947694 2	-.62912397 3	-.63835875 1
1.80	-.60942386 3	-.61952002 3	-.62916538 2	-.63839863 3
1.81	-.60946871 2	-.61956307 3	-.62920677 3	-.63843848 3
1.82	-.60951354 4	-.61960609 3	-.62924813 3	-.63847830 2
1.83	-.60955833 3	-.61964908 2	-.62928946 2	-.63851810 3
1.84	-.60960309 3	-.61969205 4	-.62933077 3	-.63855787 2
1.85	-.60964782 4	-.61973498 2	-.62937205 3	-.63859762 2
1.86	-.60969251 2	-.61977789 4	-.62941330 2	-.63863735 3
1.87	-.60973718 3	-.61982076 2	-.62945453 3	-.63867705 3
1.88	-.60978182 3	-.61986361 3	-.62949573 3	-.63871672 2
1.89	-.60982643 4	-.61990643 3	-.62953690 2	-.63875637 2
1.90	-.60987100 2	-.61994922 2	-.62957805 3	-.63879600 3
1.91	-.60991555 4	-.61999199 4	-.62961917 3	-.63883560 2
1.92	-.60996006 3	-.62003472 2	-.62966026 2	-.63887518 3
1.93	-.61000454 2	-.62007743 3	-.62970133 2	-.63891473 2
1.94	-.61004900 4	-.62012011 3	-.62974238 4	-.63895426 3
1.95	-.61009342 3	-.62016276 3	-.62978339 2	-.63899376 2
1.96	-.61013781 2	-.62020538 2	-.62982438 2	-.63903324 2
1.97	-.61018218 4	-.62024798 4	-.62986535 4	-.63907270 3
1.98	-.61022651 3	-.62029054 2	-.62990628 1	-.63911213 3
1.99	-.61027081 3	-.62033308 3	-.62994720 4	-.63915153 1
2.00	-.61031508 2	-.62037559 2	-.62998808 2	-.63919092 4

LOG(G) FOR S=0.5

P	I=20	I=21	I=22	I=23
2.00	-.61031508	-.62037559	-.62998808	-.63919092
2.01	-.61035933	-.62041809	-.63002894	-.63923027
2.02	-.61040354	-.62046053	-.63006978	-.63926961
2.03	-.61044772	-.62050296	-.63011059	-.63930892
2.04	-.61049187	-.62054536	-.63015137	-.63934820
2.05	-.61053600	-.62058773	-.63019213	-.63938747
2.06	-.61058009	-.62063008	-.63023286	-.63942670
2.07	-.61062415	-.62067240	-.63027356	-.63946592
2.08	-.61066819	-.62071469	-.63031424	-.63950511
2.09	-.61071219	-.62075695	-.63035490	-.63954427
2.10	-.61075617	-.62079918	-.63039553	-.63958342
2.11	-.61080011	-.62084139	-.63043613	-.63962254
2.12	-.61084403	-.62088357	-.63047671	-.63966163
2.13	-.61088792	-.62092572	-.63051726	-.63970070
2.14	-.61093177	-.62096785	-.63055779	-.63973975
2.15	-.61097560	-.62100995	-.63059829	-.63977877
2.16	-.61101940	-.62105202	-.63063877	-.63981778
2.17	-.61106317	-.62109407	-.63067922	-.63985675
2.18	-.61110691	-.62113608	-.63071965	-.63989571
2.19	-.61115062	-.62117807	-.63076005	-.63993464
2.20	-.61119431	-.62122004	-.63080043	-.63997354
2.21	-.61123811	-.62126197	-.63084078	-.64001243
2.22	-.61128199	-.62130388	-.63088111	-.64005129
2.23	-.61132585	-.62134577	-.63092141	-.64009013
2.24	-.61136975	-.62138763	-.63096169	-.64012894
2.25	-.61141362	-.62142946	-.63100194	-.64016773
2.26	-.61145748	-.62147126	-.63104216	-.64020650
2.27	-.61150132	-.62151304	-.63108237	-.64024524
2.28	-.61154515	-.62155479	-.63112255	-.64028396
2.29	-.61158896	-.62159651	-.63116270	-.64032266
2.30	-.61163275	-.62163821	-.63120283	-.64036134
2.31	-.61167652	-.62167988	-.63124293	-.64039999
2.32	-.61172028	-.62172152	-.63128301	-.64043862
2.33	-.61176403	-.62176314	-.63132307	-.64047722
2.34	-.61180776	-.62180473	-.63136310	-.64051581
2.35	-.61185146	-.62184630	-.63140310	-.64055437
2.36	-.61189514	-.62188784	-.63144308	-.64059291
2.37	-.61193881	-.62192935	-.63148304	-.64063142
2.38	-.61198247	-.62197084	-.63152297	-.64066991
2.39	-.61202611	-.62201230	-.63156288	-.64070838
2.40	-.61206974	-.62205374	-.63160277	-.64074683
2.41	-.61211336	-.62209515	-.63164263	-.64078526
2.42	-.61215697	-.62213653	-.63168247	-.64082366
2.43	-.61219957	-.62217789	-.63172228	-.64086204
2.44	-.61224214	-.62221922	-.63176207	-.64090039
2.45	-.61228471	-.62226053	-.63180183	-.64093873
2.46	-.61232727	-.62230181	-.63184157	-.64097704
2.47	-.61236982	-.62234306	-.63188129	-.64101533
2.48	-.61241235	-.62238429	-.63192098	-.64105360
2.49	-.61245487	-.62242550	-.63196065	-.64109184
2.50	-.61249738	-.62246668	-.63200029	-.64113007

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LOG (G) FOR S=0.5

P	I=24	P	I=24	P	I=24			
0.	-.63991235	0	0.50	-.64204378	2	1.00	-.64410061	2
0.01	-.63995576	3	0.51	-.64208563	4	1.01	-.64414104	3
0.02	-.63999914	3	0.52	-.64212744	3	1.02	-.64418144	3
0.03	-.64004249	4	0.53	-.64216922	3	1.03	-.64422181	3
0.04	-.64008580	3	0.54	-.64221097	2	1.04	-.64426216	3
0.05	-.64012908	3	0.55	-.64225270	4	1.05	-.64430248	3
0.06	-.64017233	4	0.56	-.64229439	3	1.06	-.64434277	3
0.07	-.64021554	2	0.57	-.64233605	2	1.07	-.64438303	2
0.08	-.64025873	4	0.58	-.64237769	4	1.08	-.64442327	2
0.09	-.64030188	4	0.59	-.64241929	2	1.09	-.64446349	4
0.10	-.64034499	2	0.60	-.64246087	3	1.10	-.64450367	2
0.11	-.64038808	4	0.61	-.64250242	3	1.11	-.64454383	2
0.12	-.64043113	3	0.62	-.64254394	3	1.12	-.64458397	4
0.13	-.64047415	3	0.63	-.64258543	3	1.13	-.64462407	2
0.14	-.64051714	4	0.64	-.64262689	3	1.14	-.64466415	2
0.15	-.64056009	2	0.65	-.64266832	3	1.15	-.64470421	3
0.16	-.64060302	4	0.66	-.64270972	3	1.16	-.64474424	3
0.17	-.64064591	3	0.67	-.64275109	2	1.17	-.64478424	3
0.18	-.64068877	4	0.68	-.64279244	4	1.18	-.64482421	2
0.19	-.64073159	2	0.69	-.64283375	2	1.19	-.64486416	2
0.20	-.64077439	4	0.70	-.64287504	3	1.20	-.64490409	3
0.21	-.64081715	3	0.71	-.64291630	3	1.21	-.64494399	3
0.22	-.64085988	2	0.72	-.64295753	3	1.22	-.64498386	3
0.23	-.64090259	5	0.73	-.64299873	3	1.23	-.64502370	1
0.24	-.64094525	2	0.74	-.64303990	2	1.24	-.64506353	4
0.25	-.64098789	3	0.75	-.64308105	4	1.25	-.64510332	2
0.26	-.64103050	4	0.76	-.64312216	2	1.26	-.64514309	3
0.27	-.64107307	3	0.77	-.64316325	3	1.27	-.64518283	2
0.28	-.64111561	2	0.78	-.64320431	3	1.28	-.64522255	3
0.29	-.64115813	4	0.79	-.64324534	2	1.29	-.64526224	2
0.30	-.64120061	3	0.80	-.64328635	4	1.30	-.64530191	3
0.31	-.64124306	3	0.81	-.64332732	2	1.31	-.64534155	3
0.32	-.64128548	4	0.82	-.64336827	3	1.32	-.64538116	2
0.33	-.64132786	2	0.83	-.64340919	3	1.33	-.64542075	2
0.34	-.64137022	3	0.84	-.64345008	2	1.34	-.64546032	3
0.35	-.64141255	4	0.85	-.64349095	3	1.35	-.64549986	3
0.36	-.64145484	2	0.86	-.64353179	4	1.36	-.64553937	2
0.37	-.64149711	4	0.87	-.64357259	1	1.37	-.64557886	3
0.38	-.64153934	3	0.88	-.64361338	4	1.38	-.64561832	2
0.39	-.64158154	2	0.89	-.64365413	3	1.39	-.64565776	2
0.40	-.64162372	4	0.90	-.64369485	2	1.40	-.64569718	3
0.41	-.64166586	3	0.91	-.64373555	3	1.41	-.64573657	3
0.42	-.64170797	3	0.92	-.64377622	2	1.42	-.64577593	2
0.43	-.64175005	3	0.93	-.64381687	4	1.43	-.64581527	3
0.44	-.64179210	2	0.94	-.64385748	2	1.44	-.64585458	2
0.45	-.64183413	4	0.95	-.64389807	2	1.45	-.64589387	3
0.46	-.64187612	3	0.96	-.64393864	4	1.46	-.64593313	2
0.47	-.64191808	3	0.97	-.64397917	2	1.47	-.64597237	2
0.48	-.64196001	3	0.98	-.64401968	3	1.48	-.64601159	3
0.49	-.64200191	3	0.99	-.64406016	3	1.49	-.64605078	3
0.50	-.64204378	2	1.00	-.64410061	2	1.50	-.64608994	2

LOG (G) FOR S=0.5

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P	I=24		P	I=24	
1.50	-.64608994	2	2.00	-.64801772	1
1.51	-.64612908	2	2.01	-.64805569	3
1.52	-.64616820	3	2.02	-.64809363	2
1.53	-.64620729	2	2.03	-.64813155	3
1.54	-.64624636	3	2.04	-.64816944	1
1.55	-.64628540	2	2.05	-.64820732	3
1.56	-.64632442	3	2.06	-.64824517	3
1.57	-.64636341	3	2.07	-.64828300	3
1.58	-.64640238	3	2.08	-.64832080	3
1.59	-.64644133	3	2.09	-.64835859	3
1.60	-.64648025	2	2.10	-.64839635	2
1.61	-.64651915	3	2.11	-.64843409	3
1.62	-.64655802	3	2.12	-.64847181	3
1.63	-.64659687	3	2.13	-.64850950	3
1.64	-.64663569	2	2.14	-.64854718	3
1.65	-.64667449	2	2.15	-.64858483	2
1.66	-.64671327	3	2.16	-.64862246	3
1.67	-.64675202	2	2.17	-.64866006	3
1.68	-.64679075	2	2.18	-.64869765	3
1.69	-.64682946	3	2.19	-.64873521	1
1.70	-.64686814	2	2.20	-.64877276	3
1.71	-.64690680	2	2.21	-.64881028	3
1.72	-.64694543	2	2.22	-.64884777	3
1.73	-.64698404	2	2.23	-.64888525	3
1.74	-.64702263	3	2.24	-.64892270	1
1.75	-.64706119	2	2.25	-.64896014	3
1.76	-.64709973	2	2.26	-.64899755	2
1.77	-.64713825	3	2.27	-.64903494	3
1.78	-.64717674	3	2.28	-.64907230	1
1.79	-.64721521	2	2.29	-.64910965	2
1.80	-.64725366	3	2.30	-.64914698	3
1.81	-.64729208	2	2.31	-.64918428	2
1.82	-.64733048	3	2.32	-.64922156	2
1.83	-.64736885	1	2.33	-.64925882	2
1.84	-.64740721	3	2.34	-.64929606	2
1.85	-.64744554	3	2.35	-.64933328	3
1.86	-.64748384	1	2.36	-.64937047	1
1.87	-.64752213	3	2.37	-.64940765	3
1.88	-.64756039	3	2.38	-.64944480	2
1.89	-.64759862	1	2.39	-.64948193	1
1.90	-.64763684	3	2.40	-.64951905	3
1.91	-.64767503	2	2.41	-.64955614	3
1.92	-.64771320	3	2.42	-.64959320	1
1.93	-.64775134	2	2.43	-.64963025	2
1.94	-.64778946	2	2.44	-.64966728	3
1.95	-.64782756	2	2.45	-.64970428	1
1.96	-.64786564	3	2.46	-.64974127	3
1.97	-.64790369	1	2.47	-.64977823	1
1.98	-.64794173	3	2.48	-.64981518	3
1.99	-.64797974	3	2.49	-.64985210	2
2.00	-.64801772	1	2.50	-.64988900	0

LOG(G) FOR S=1.5

P	I=12	I=13	I=14	I=15
0.	0.90628185 0	0.92267227 0	0.93791223 0	0.95215267 0
0.01	0.90653222 -37	0.92290477 -32	0.93812924 -28	0.95235613 -26
0.02	0.90678222 -36	0.92313695 -32	0.93834597 -27	0.95255933 -23
0.03	0.90703186 -36	0.92336881 -31	0.93856243 -28	0.95276230 -25
0.04	0.90728114 -37	0.92360036 -31	0.93877861 -28	0.95296502 -24
0.05	0.90753005 -36	0.92383160 -32	0.93899451 -27	0.95316750 -24
0.06	0.90777860 -36	0.92406252 -31	0.93921014 -27	0.95336974 -24
0.07	0.90802679 -37	0.92429313 -31	0.93942550 -28	0.95357174 -24
0.08	0.90827461 -34	0.92452343 -31	0.93964058 -26	0.95377350 -25
0.09	0.90852209 -37	0.92475342 -31	0.93985540 -28	0.95397501 -23
0.10	0.90876920 -35	0.92498310 -31	0.94006994 -27	0.95417629 -24
0.11	0.90901596 -35	0.92521247 -31	0.94028421 -26	0.95437733 -23
0.12	0.90926237 -36	0.92544153 -30	0.94049822 -27	0.95457814 -24
0.13	0.90950842 -35	0.92567029 -31	0.94071196 -27	0.95477871 -24
0.14	0.90975412 -35	0.92589874 -30	0.94092543 -27	0.95497904 -23
0.15	0.90999947 -35	0.92612689 -30	0.94113863 -26	0.95517914 -24
0.16	0.91024447 -34	0.92635474 -30	0.94135157 -27	0.95537900 -23
0.17	0.91048913 -35	0.92658229 -31	0.94156424 -26	0.95557863 -24
0.18	0.91073344 -35	0.92680953 -30	0.94177665 -26	0.95577802 -23
0.19	0.91097740 -35	0.92703647 -29	0.94198880 -27	0.95597718 -22
0.20	0.91122101 -33	0.92726312 -31	0.94220068 -25	0.95617612 -24
0.21	0.91146429 -35	0.92748946 -29	0.94241231 -27	0.95637482 -23
0.22	0.91170722 -34	0.92771551 -30	0.94262367 -26	0.95657329 -24
0.23	0.91194981 -34	0.92794126 -29	0.94283477 -26	0.95677152 -21
0.24	0.91219206 -33	0.92816672 -30	0.94304561 -25	0.95696954 -24
0.25	0.91243398 -35	0.92839188 -29	0.94325620 -26	0.95716732 -23
0.26	0.91267555 -33	0.92861675 -29	0.94346653 -26	0.95736487 -22
0.27	0.91291679 -33	0.92884133 -29	0.94367660 -26	0.95756220 -23
0.28	0.91315770 -34	0.92906562 -30	0.94388641 -25	0.95775930 -23
0.29	0.91339827 -34	0.92928961 -28	0.94409597 -25	0.95795617 -22
0.30	0.91363850 -32	0.92951332 -30	0.94430528 -26	0.95815282 -23
0.31	0.91387841 -34	0.92973673 -28	0.94451433 -25	0.95834924 -22
0.32	0.91411798 -32	0.92995986 -29	0.94472313 -26	0.95854544 -22
0.33	0.91435723 -33	0.93018270 -28	0.94493167 -24	0.95874142 -22
0.34	0.91459615 -33	0.93040526 -29	0.94513997 -26	0.95893718 -23
0.35	0.91483474 -33	0.93062753 -29	0.94534801 -25	0.95913271 -22
0.36	0.91507300 -32	0.93084951 -27	0.94555580 -24	0.95932802 -22
0.37	0.91531094 -33	0.93107122 -29	0.94576335 -26	0.95952311 -23
0.38	0.91554855 -32	0.93129264 -29	0.94597064 -24	0.95971797 -21
0.39	0.91578584 -32	0.93151377 -27	0.94617769 -25	0.95991262 -22
0.40	0.91602281 -32	0.93173463 -28	0.94638449 -24	0.96010705 -22
0.41	0.91625946 -32	0.93195521 -28	0.94659105 -26	0.96030126 -21
0.42	0.91649579 -32	0.93217551 -29	0.94679735 -23	0.96049526 -23
0.43	0.91673180 -32	0.93239552 -26	0.94700342 -25	0.96068903 -21
0.44	0.91696749 -32	0.93261527 -29	0.94720924 -25	0.96088259 -22
0.45	0.91720286 -31	0.93283473 -27	0.94741481 -23	0.96107593 -21
0.46	0.91743792 -32	0.93305392 -27	0.94762015 -25	0.96126906 -22
0.47	0.91767266 -31	0.93327284 -28	0.94782524 -25	0.96146197 -21
0.48	0.91790709 -31	0.93349148 -28	0.94803008 -23	0.96165467 -22
0.49	0.91814121 -31	0.93370984 -26	0.94823469 -24	0.96184715 -21
0.50	0.91837502 -32	0.93392794 -28	0.94843906 -24	0.96203942 -21

LOG(G) FOR S=1.5

P	I=12	I=13	I=14	I=15
0.50	0.91837502 -32	0.93392794 -28	0.94843906 -24	0.96203942 -21
0.51	0.91860851 -30	0.93414576 -27	0.94864319 -24	0.96223148 -21
0.52	0.91884170 -32	0.93436331 -26	0.94884708 -24	0.96242333 -22
0.53	0.91907457 -30	0.93458060 -28	0.94905073 -24	0.96261496 -21
0.54	0.91930714 -31	0.93479761 -27	0.94925414 -23	0.96280638 -20
0.55	0.91953940 -31	0.93501435 -26	0.94945732 -24	0.96299760 -22
0.56	0.91977135 -30	0.93523083 -27	0.94966026 -23	0.96318860 -21
0.57	0.92000300 -30	0.93544704 -27	0.94986297 -24	0.96337939 -20
0.58	0.92023435 -31	0.93566298 -26	0.95006544 -24	0.96356998 -22
0.59	0.92046539 -30	0.93587866 -26	0.95026767 -22	0.96376035 -20
0.60	0.92069613 -30	0.93609408 -27	0.95046968 -24	0.96395052 -21
0.61	0.92092657 -30	0.93630923 -27	0.95067145 -24	0.96414048 -20
0.62	0.92115671 -30	0.93652411 -25	0.95087298 -22	0.96433024 -21
0.63	0.92138655 -30	0.93673874 -27	0.95107429 -24	0.96451979 -21
0.64	0.92161609 -30	0.93695310 -26	0.95127536 -22	0.96470913 -20
0.65	0.92184533 -29	0.93716720 -25	0.95147621 -24	0.96489827 -21
0.66	0.92207428 -30	0.93738105 -27	0.95167682 -22	0.96508720 -20
0.67	0.92230293 -29	0.93759463 -25	0.95187721 -25	0.96527593 -21
0.68	0.92253129 -30	0.93780796 -27	0.95207737 -23	0.96546445 -19
0.69	0.92275935 -29	0.93802102 -25	0.95227730 -23	0.96565278 -21
0.70	0.92298712 -29	0.93823383 -25	0.95247700 -22	0.96584090 -20
0.71	0.92321460 -30	0.93844639 -26	0.95267648 -24	0.96602882 -21
0.72	0.92344178 -28	0.93865869 -26	0.95287572 -21	0.96621653 -19
0.73	0.92366868 -29	0.93887073 -25	0.95307475 -23	0.96640405 -20
0.74	0.92389529 -30	0.93908252 -25	0.95327355 -23	0.96659137 -21
0.75	0.92412160 -28	0.93929406 -26	0.95347212 -21	0.96677848 -19
0.76	0.92434763 -28	0.93950534 -25	0.95367048 -23	0.96696540 -20
0.77	0.92457338 -30	0.93971637 -25	0.95386861 -23	0.96715212 -20
0.78	0.92479883 -27	0.93992715 -25	0.95406651 -21	0.96733864 -20
0.79	0.92502401 -30	0.94013768 -25	0.95426420 -23	0.96752496 -19
0.80	0.92524889 -27	0.94034796 -24	0.95446166 -22	0.96771109 -20
0.81	0.92547350 -29	0.94055800 -26	0.95465890 -21	0.96789702 -20
0.82	0.92569782 -28	0.94076778 -25	0.95485593 -23	0.96808275 -19
0.83	0.92592186 -28	0.94097731 -24	0.95505273 -22	0.96826829 -20
0.84	0.92614562 -29	0.94118660 -25	0.95524931 -21	0.96845363 -20
0.85	0.92636909 -27	0.94139564 -24	0.95544568 -22	0.96863877 -19
0.86	0.92659229 -28	0.94160444 -25	0.95564183 -22	0.96882372 -19
0.87	0.92681521 -27	0.94181299 -24	0.95583776 -21	0.96900848 -19
0.88	0.92703786 -29	0.94202130 -25	0.95603348 -23	0.96919305 -20
0.89	0.92726022 -27	0.94222936 -24	0.95622897 -20	0.96937742 -19
0.90	0.92748231 -27	0.94243718 -24	0.95642426 -22	0.96956160 -19
0.91	0.92770413 -28	0.94264476 -24	0.95661933 -22	0.96974559 -20
0.92	0.92792567 -28	0.94285210 -24	0.95681418 -21	0.96992938 -18
0.93	0.92814693 -26	0.94305920 -25	0.95700882 -21	0.97011299 -20
0.94	0.92836793 -28	0.94326605 -23	0.95720325 -22	0.97029640 -18
0.95	0.92858865 -27	0.94347267 -25	0.95739746 -21	0.97047963 -20
0.96	0.92880910 -27	0.94367904 -23	0.95759146 -20	0.97066266 -18
0.97	0.92902928 -28	0.94388518 -24	0.95778526 -22	0.97084551 -20
0.98	0.92924918 -25	0.94409108 -23	0.95797884 -22	0.97102816 -18
0.99	0.92946883 -28	0.94429675 -25	0.95817220 -20	0.97121063 -19
1.00	0.92968820 -27	0.94450217 -22	0.95836536 -21	0.97139291 -18

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LOG (G) FOR S=1.5

P	l=12	l=13	l=14	l=15
1.00	0.92968820 -27	0.94450217 -22	0.95836536 -21	0.97139291 -18
1.01	0.92990730 -26	0.94470737 -25	0.95855831 -20	0.97157501 -19
1.02	0.93012614 -27	0.94491232 -23	0.95875106 -22	0.97175692 -19
1.03	0.93034471 -26	0.94511704 -23	0.95894359 -21	0.97193864 -19
1.04	0.93056302 -27	0.94532153 -23	0.95913591 -20	0.97212017 -18
1.05	0.93078106 -26	0.94552579 -24	0.95932803 -21	0.97230152 -18
1.06	0.93099884 -27	0.94572981 -23	0.95951994 -20	0.97248269 -19
1.07	0.93121635 -25	0.94593360 -23	0.95971165 -21	0.97266367 -19
1.08	0.93143361 -27	0.94613716 -23	0.95990315 -21	0.97284446 -18
1.09	0.93165060 -26	0.94634049 -23	0.96009444 -20	0.97302507 -18
1.10	0.93186733 -26	0.94654359 -24	0.96028553 -21	0.97320550 -18
1.11	0.93208380 -26	0.94674645 -22	0.96047641 -20	0.97338575 -19
1.12	0.93230001 -26	0.94694909 -23	0.96066709 -20	0.97356581 -18
1.13	0.93251596 -25	0.94715150 -22	0.96085757 -20	0.97374569 -18
1.14	0.93273166 -26	0.94735369 -24	0.96104785 -21	0.97392539 -18
1.15	0.93294710 -26	0.94755564 -22	0.96123792 -20	0.97410491 -18
1.16	0.93316228 -26	0.94775737 -22	0.96142779 -20	0.97428425 -18
1.17	0.93337720 -25	0.94795888 -24	0.96161746 -20	0.97446341 -18
1.18	0.93359187 -25	0.94816015 -21	0.96180693 -20	0.97464239 -18
1.19	0.93380629 -26	0.94836121 -23	0.96199620 -20	0.97482119 -18
1.20	0.93402045 -25	0.94856204 -23	0.96218527 -20	0.97499981 -18
1.21	0.93423436 -25	0.94876264 -22	0.96237414 -20	0.97517825 -18
1.22	0.93444802 -26	0.94896302 -22	0.96256281 -19	0.97535651 -17
1.23	0.93466142 -24	0.94916318 -22	0.96275129 -21	0.97553460 -18
1.24	0.93487458 -26	0.94936312 -22	0.96293956 -19	0.97571251 -18
1.25	0.93508748 -24	0.94956284 -23	0.96312764 -19	0.97589024 -18
1.26	0.93530014 -26	0.94976233 -21	0.96331553 -21	0.97606779 -17
1.27	0.93551254 -24	0.94996161 -22	0.96350321 -19	0.97624517 -17
1.28	0.93572470 -25	0.95016067 -23	0.96369070 -19	0.97642238 -19
1.29	0.93593661 -25	0.95035950 -21	0.96387800 -20	0.97659940 -16
1.30	0.93614827 -24	0.95055812 -22	0.96406510 -20	0.97677626 -18
1.31	0.93635969 -25	0.95075652 -22	0.96425200 -19	0.97695294 -18
1.32	0.93657086 -24	0.95095470 -21	0.96443871 -19	0.97712944 -17
1.33	0.93678179 -25	0.95115267 -22	0.96462523 -19	0.97730577 -17
1.34	0.93699247 -24	0.95135042 -22	0.96481156 -20	0.97748193 -17
1.35	0.93720291 -25	0.95154795 -21	0.96499769 -19	0.97765792 -18
1.36	0.93741310 -23	0.95174527 -21	0.96518363 -19	0.97783373 -17
1.37	0.93762306 -25	0.95194238 -22	0.96536938 -19	0.97800937 -17
1.38	0.93783277 -24	0.95213927 -22	0.96555494 -19	0.97818484 -17
1.39	0.93804224 -24	0.95233594 -20	0.96574031 -20	0.97836014 -18
1.40	0.93825147 -24	0.95253241 -22	0.96592548 -18	0.97853526 -16
1.41	0.93846046 -24	0.95272866 -21	0.96611047 -19	0.97871022 -17
1.42	0.93866921 -24	0.95292470 -22	0.96629527 -19	0.97888501 -18
1.43	0.93887772 -23	0.95312052 -20	0.96647988 -19	0.97905962 -16
1.44	0.93908600 -24	0.95331614 -22	0.96666430 -19	0.97923407 -17
1.45	0.93929404 -24	0.95351154 -20	0.96684853 -18	0.97940835 -17
1.46	0.93950184 -24	0.95370674 -21	0.96703258 -20	0.97958246 -17
1.47	0.93970940 -23	0.95390173 -22	0.96721643 -17	0.97975640 -16
1.48	0.93991673 -23	0.95409650 -20	0.96740011 -20	0.97993018 -18
1.49	0.94012383 -24	0.95429107 -21	0.96758359 -18	0.98010378 -16
1.50	0.94033069 -24	0.95448543 -20	0.96776689 -18	0.98027722 -17

LOG (G) FOR S=1.5

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P	I=12	I=13	I=14	I=15
1.50	0.94033069 -24	0.95448543 -20	0.96776689 -18	0.98027722 -17
1.51	0.94053731 -22	0.95467959 -21	0.96795001 -19	0.98045049 -16
1.52	0.94074371 -24	0.95487354 -21	0.96813294 -19	0.98062360 -17
1.53	0.94094987 -23	0.95506728 -21	0.96831568 -18	0.98079654 -16
1.54	0.94115580 -23	0.95526081 -20	0.96849824 -18	0.98096932 -17
1.55	0.94136150 -23	0.95545414 -20	0.96868062 -19	0.98114193 -17
1.56	0.94156697 -24	0.95564727 -21	0.96886281 -18	0.98131437 -16
1.57	0.94177220 -22	0.95584019 -21	0.96904482 -18	0.98148665 -16
1.58	0.94197721 -23	0.95603290 -19	0.96922665 -18	0.98165877 -17
1.59	0.94218199 -23	0.95622542 -21	0.96940830 -18	0.98183072 -16
1.60	0.94238654 -22	0.95641773 -20	0.96958977 -19	0.98200251 -16
1.61	0.94259087 -24	0.95660984 -21	0.96977105 -17	0.98217414 -17
1.62	0.94279496 -22	0.95680174 -19	0.96995216 -19	0.98234560 -16
1.63	0.94299883 -23	0.95699345 -21	0.97013308 -18	0.98251690 -16
1.64	0.94320248 -23	0.95718495 -20	0.97031382 -17	0.98268804 -16
1.65	0.94340590 -23	0.95737625 -19	0.97049439 -19	0.98285902 -17
1.66	0.94360909 -22	0.95756736 -21	0.97067477 -17	0.98302983 -15
1.67	0.94381206 -22	0.95775826 -19	0.97085498 -18	0.98320049 -17
1.68	0.94401481 -23	0.95794897 -21	0.97103501 -18	0.98337098 -15
1.69	0.94421733 -22	0.95813947 -19	0.97121486 -18	0.98354132 -17
1.70	0.94441963 -22	0.95832978 -20	0.97139453 -17	0.98371149 -15
1.71	0.94462171 -22	0.95851989 -19	0.97157403 -18	0.98388151 -17
1.72	0.94482357 -23	0.95870981 -20	0.97175335 -18	0.98405136 -15
1.73	0.94502520 -21	0.95889953 -20	0.97193249 -17	0.98422106 -16
1.74	0.94522662 -23	0.95908905 -20	0.97211146 -18	0.98439060 -16
1.75	0.94542781 -21	0.95927837 -19	0.97229025 -17	0.98455998 -16
1.76	0.94562879 -22	0.95946750 -19	0.97246887 -18	0.98472920 -15
1.77	0.94582955 -22	0.95965644 -20	0.97264731 -17	0.98489827 -16
1.78	0.94603009 -22	0.95984518 -19	0.97282558 -17	0.98506718 -16
1.79	0.94623041 -22	0.96003373 -20	0.97300368 -18	0.98523593 -15
1.80	0.94643051 -21	0.96022208 -19	0.97318160 -17	0.98540453 -17
1.81	0.94663040 -22	0.96041024 -19	0.97335935 -18	0.98557296 -14
1.82	0.94683007 -21	0.96059821 -19	0.97353692 -17	0.98574125 -16
1.83	0.94702953 -22	0.96078599 -20	0.97371432 -16	0.98590938 -16
1.84	0.94722877 -21	0.96097357 -19	0.97389156 -18	0.98607735 -15
1.85	0.94742780 -22	0.96116096 -18	0.97406862 -17	0.98624517 -16
1.86	0.94762661 -21	0.96134817 -20	0.97424551 -18	0.98641283 -15
1.87	0.94782521 -21	0.96153518 -19	0.97442222 -16	0.98658034 -16
1.88	0.94802360 -21	0.96172200 -18	0.97459877 -17	0.98674769 -14
1.89	0.94822178 -22	0.96190864 -20	0.97477515 -17	0.98691490 -16
1.90	0.94841974 -21	0.96209508 -18	0.97495136 -17	0.98708195 -16
1.91	0.94861749 -21	0.96228134 -20	0.97512740 -18	0.98724884 -15
1.92	0.94881503 -21	0.96246740 -18	0.97530326 -15	0.98741558 -14
1.93	0.94901236 -21	0.96265328 -18	0.97547897 -18	0.98758218 -16
1.94	0.94920948 -21	0.96283898 -20	0.97565450 -17	0.98774862 -16
1.95	0.94940639 -21	0.96302448 -18	0.97582986 -16	0.98791490 -14
1.96	0.94960309 -20	0.96320980 -18	0.97600506 -17	0.98808104 -15
1.97	0.94979959 -22	0.96339494 -19	0.97618009 -16	0.98824703 -16
1.98	0.94999587 -20	0.96357989 -19	0.97635496 -17	0.98841286 -14
1.99	0.95019195 -20	0.96376465 -18	0.97652966 -17	0.98857855 -16
2.00	0.95038783 -22	0.96394923 -19	0.97670419 -17	0.98874408 -14

LOG (G) FOR S=1.5

P	I=12	I=13	I=14	I=15
2.00	0.95038783 -22	0.96394923 -19	0.97670419 -17	0.98874408 -14
2.01	0.95058349 -20	0.96413362 -18	0.97687855 -16	0.98890947 -16
2.02	0.95077895 -20	0.96431783 -18	0.97705275 -16	0.98907470 -14
2.03	0.95097421 -21	0.96450186 -19	0.97722679 -17	0.98923979 -15
2.04	0.95116926 -21	0.96468570 -18	0.97740066 -16	0.98940473 -16
2.05	0.95136410 -20	0.96486936 -18	0.97757437 -17	0.98956951 -13
2.06	0.95155874 -20	0.96505284 -18	0.97774791 -16	0.98973416 -16
2.07	0.95175318 -21	0.96523614 -18	0.97792129 -16	0.98989865 -14
2.08	0.95194741 -19	0.96541926 -19	0.97809451 -17	0.99006300 -16
2.09	0.95214145 -21	0.96560219 -18	0.97826756 -15	0.99022719 -13
2.10	0.95233528 -20	0.96578494 -17	0.97844046 -17	0.99039125 -16
2.11	0.95252891 -21	0.96596752 -19	0.97861319 -17	0.99055515 -14
2.12	0.95272233 -19	0.96614991 -17	0.97878575 -15	0.99071891 -15
2.13	0.95291556 -20	0.96633213 -19	0.97895816 -16	0.99088252 -14
2.14	0.95310859 -21	0.96651416 -17	0.97913041 -17	0.99104599 -15
2.15	0.95330141 -19	0.96669602 -18	0.97930249 -15	0.99120931 -14
2.16	0.95349404 -20	0.96687770 -18	0.97947442 -17	0.99137249 -15
2.17	0.95368647 -20	0.96705920 -17	0.97964618 -16	0.99153552 -14
2.18	0.95387870 -19	0.96724053 -19	0.97981778 -15	0.99169841 -15
2.19	0.95407074 -21	0.96742167 -17	0.97998923 -16	0.99186115 -14
2.20	0.95426257 -19	0.96760264 -17	0.98016052 -17	0.99202375 -15
2.21	0.95445421 -20	0.96778344 -18	0.98033164 -15	0.99218620 -14
2.22	0.95464565 -19	0.96796406 -18	0.98050261 -16	0.99234851 -14
2.23	0.95483690 -20	0.96814450 -17	0.98067342 -15	0.99251068 -14
2.24	0.95502795 -19	0.96832477 -18	0.98084408 -17	0.99267271 -15
2.25	0.95521881 -20	0.96850486 -17	0.98101457 -15	0.99283459 -14
2.26	0.95540947 -19	0.96868478 -18	0.98118491 -16	0.99299633 -14
2.27	0.95559994 -20	0.96886452 -17	0.98135509 -15	0.99315793 -14
2.28	0.95579021 -19	0.96904409 -17	0.98152512 -16	0.99331939 -15
2.29	0.95598029 -19	0.96922349 -17	0.98169499 -16	0.99348070 -13
2.30	0.95617018 -20	0.96940272 -18	0.98186470 -15	0.99364188 -15
2.31	0.95635987 -18	0.96958177 -17	0.98203426 -15	0.99380291 -14
2.32	0.95654938 -20	0.96976065 -17	0.98220367 -16	0.99396380 -13
2.33	0.95673869 -19	0.96993936 -17	0.98237292 -16	0.99412456 -15
2.34	0.95692781 -19	0.97011790 -17	0.98254201 -15	0.99428517 -14
2.35	0.95711674 -20	0.97029627 -18	0.98271095 -15	0.99444564 -13
2.36	0.95730547 -18	0.97047446 -16	0.98287974 -16	0.99460598 -15
2.37	0.95749402 -19	0.97065249 -17	0.98304837 -15	0.99476617 -13
2.38	0.95768238 -19	0.97083035 -18	0.98321685 -15	0.99492623 -14
2.39	0.95787055 -18	0.97100803 -16	0.98338518 -16	0.99508615 -15
2.40	0.95805854 -20	0.97118555 -17	0.98355335 -15	0.99524592 -13
2.41	0.95824633 -18	0.97136290 -17	0.98372137 -15	0.99540556 -13
2.42	0.95843394 -19	0.97154008 -17	0.98388924 -15	0.99556507 -15
2.43	0.95862136 -19	0.97171709 -17	0.98405696 -15	0.99572443 -13
2.44	0.95880859 -19	0.97189394 -17	0.98422453 -15	0.99588366 -14
2.45	0.95899563 -18	0.97207062 -17	0.98439195 -16	0.99604275 -13
2.46	0.95918249 -18	0.97224713 -17	0.98455921 -14	0.99620171 -15
2.47	0.95936917 -19	0.97242347 -16	0.98472633 -16	0.99636052 -12
2.48	0.95955566 -19	0.97259965 -17	0.98489329 -14	0.99651921 -15
2.49	0.95974196 -18	0.97277566 -16	0.98506011 -16	0.99667775 -13
2.50	0.95992808 0	0.97295151 0	0.98522677 0	0.99683616 0

LOG(G) FOR S=1.5

G-214

P	I=16	I=17	I=18	I=19
0.	0.96551663 -0	0.97810576 -0	0.99000498 -0	1.00128599 -0
0.01	0.96570813 -23	0.97828662 -20	0.99011763 -18	1.00144878 -17
0.02	0.96589940 -21	0.97846728 -19	0.99034750 -17	1.00161140 -15
0.03	0.96609046 -22	0.97864776 -20	0.99051850 -18	1.00177387 -16
0.04	0.96628130 -21	0.97882804 -20	0.99068932 -17	1.00193618 -16
0.05	0.96647193 -22	0.97900812 -18	0.99085997 -17	1.00209833 -15
0.06	0.96666234 -21	0.97918802 -20	0.99103045 -18	1.00226033 -16
0.07	0.96685254 -21	0.97936772 -19	0.99120075 -17	1.00242217 -16
0.08	0.96704253 -22	0.97954723 -19	0.99137088 -16	1.00258385 -14
0.09	0.96723230 -21	0.97972655 -18	0.99154085 -18	1.00274539 -17
0.10	0.96742186 -21	0.97990569 -20	0.99171064 -17	1.00290676 -15
0.11	0.96761121 -21	0.98008463 -19	0.99188026 -17	1.00306798 -15
0.12	0.96780035 -21	0.98026338 -18	0.99204971 -17	1.00322905 -15
0.13	0.96798928 -21	0.98044195 -19	0.99221899 -17	1.00338997 -16
0.14	0.96817800 -22	0.98062033 -19	0.99238810 -16	1.00355073 -15
0.15	0.96836650 -20	0.98079852 -19	0.99255705 -18	1.00371134 -16
0.16	0.96855480 -20	0.98097652 -18	0.99272582 -16	1.00387179 -14
0.17	0.96874290 -22	0.98115434 -19	0.99289443 -17	1.00403210 -16
0.18	0.96893078 -20	0.98133197 -19	0.99306287 -17	1.00419225 -15
0.19	0.96911846 -21	0.98150941 -18	0.99323114 -16	1.00435225 -15
0.20	0.96930593 -20	0.98168667 -18	0.99339925 -17	1.00451210 -15
0.21	0.96949320 -21	0.98186375 -19	0.99356719 -17	1.00467180 -15
0.22	0.96968026 -21	0.98204064 -18	0.99373496 -16	1.00483135 -15
0.23	0.96986711 -20	0.98221735 -18	0.99390257 -17	1.00499075 -15
0.24	0.97005376 -20	0.98239388 -19	0.99407001 -16	1.00515000 -15
0.25	0.97024021 -20	0.98257022 -18	0.99423729 -17	1.00530910 -14
0.26	0.97042646 -21	0.98274638 -18	0.99440440 -16	1.00546806 -16
0.27	0.97061250 -20	0.98292236 -18	0.99457135 -16	1.00562686 -14
0.28	0.97079834 -20	0.98309816 -18	0.99473814 -17	1.00578552 -16
0.29	0.97098398 -21	0.98327378 -19	0.99490476 -15	1.00594402 -14
0.30	0.97116941 -19	0.98344921 -17	0.99507123 -17	1.00610238 -14
0.31	0.97135465 -20	0.98362447 -18	0.99523753 -17	1.00626060 -16
0.32	0.97153969 -20	0.98379955 -18	0.99540366 -15	1.00641866 -14
0.33	0.97172453 -20	0.98397445 -18	0.99556964 -17	1.00657658 -15
0.34	0.97190917 -20	0.98414917 -18	0.99573545 -15	1.00673435 -14
0.35	0.97209361 -20	0.98432371 -17	0.99590111 -17	1.00689198 -15
0.36	0.97227785 -19	0.98449808 -18	0.99606660 -16	1.00704946 -14
0.37	0.97246190 -20	0.98467227 -18	0.99623193 -15	1.00720680 -15
0.38	0.97264575 -20	0.98484628 -18	0.99639711 -17	1.00736399 -14
0.39	0.97282940 -19	0.98502011 -17	0.99656212 -15	1.00752104 -15
0.40	0.97301286 -20	0.98519377 -17	0.99672698 -16	1.00767794 -14
0.41	0.97319612 -19	0.98536726 -19	0.99689168 -16	1.00783470 -14
0.42	0.97337919 -20	0.98554056 -16	0.99705622 -16	1.00799132 -15
0.43	0.97356206 -19	0.98571370 -18	0.99722060 -16	1.00814779 -14
0.44	0.97374474 -19	0.98588666 -17	0.99738482 -15	1.00830412 -14
0.45	0.97392723 -20	0.98605945 -18	0.99754889 -16	1.00846031 -15
0.46	0.97410952 -19	0.98623206 -17	0.99771280 -15	1.00861635 -13
0.47	0.97429162 -19	0.98640450 -17	0.99787656 -17	1.00877226 -15
0.48	0.97447353 -19	0.98657677 -17	0.99804015 -14	1.00892802 -14
0.49	0.97465525 -19	0.98674887 -18	0.99820360 -16	1.00908364 -14
0.50	0.97483678 -19	0.98692079 -17	0.99836689 -16	1.00923912 -14

LOG (G) FOR S=1.5

P	I=16	I=17	I=18	I=19
0.50	0.97483678 -19	0.98692079 -17	0.99836689 -16	1.00923912 -14
0.51	0.97501812 -20	0.98709254 -16	0.99853002 -15	1.00939446 -14
0.52	0.97519926 -18	0.98726413 -18	0.99869300 -16	1.00954966 -15
0.53	0.97538022 -19	0.98743554 -17	0.99885582 -14	1.00970471 -13
0.54	0.97556099 -19	0.98760678 -16	0.99901850 -17	1.00985963 -14
0.55	0.97574157 -18	0.98777786 -18	0.99918101 -14	1.01001441 -14
0.56	0.97592197 -19	0.98794876 -16	0.99934338 -16	1.01016905 -14
0.57	0.97610218 -20	0.98811950 -18	0.99950559 -15	1.01032355 -13
0.58	0.97628219 -17	0.98829006 -16	0.99966765 -15	1.01047792 -15
0.59	0.97646203 -19	0.98846046 -17	0.99982956 -15	1.01063214 -13
0.60	0.97664168 -19	0.98863069 -16	0.99999132 -16	1.01078623 -14
0.61	0.97682114 -19	0.98880076 -17	1.00015292 -15	1.01094018 -14
0.62	0.97700041 -17	0.98897066 -17	1.00031437 -14	1.01109399 -14
0.63	0.97717951 -20	0.98914039 -17	1.00047568 -16	1.01124766 -13
0.64	0.97735841 -17	0.98930995 -15	1.00063683 -14	1.01140120 -14
0.65	0.97753714 -19	0.98947936 -18	1.00079784 -16	1.01155460 -13
0.66	0.97771568 -18	0.98964859 -16	1.00095869 -15	1.01170787 -14
0.67	0.97789404 -19	0.98981766 -16	1.00111939 -14	1.01186100 -14
0.68	0.97807221 -17	0.98998657 -17	1.00127995 -15	1.01201399 -13
0.69	0.97825021 -19	0.99015531 -16	1.00144036 -15	1.01216685 -14
0.70	0.97842802 -18	0.99032389 -17	1.00160062 -15	1.01231957 -13
0.71	0.97860565 -18	0.99049230 -15	1.00176073 -15	1.01247216 -13
0.72	0.97878310 -18	0.99066056 -17	1.00192069 -14	1.01262462 -14
0.73	0.97896037 -17	0.99082883 -16	1.00208051 -15	1.01277694 -14
0.74	0.97913747 -19	0.99099658 -17	1.00224018 -15	1.01292912 -12
0.75	0.97931438 -18	0.99116434 -15	1.00239970 -14	1.01308118 -14
0.76	0.97949111 -17	0.99133195 -17	1.00255908 -15	1.01323310 -14
0.77	0.97966767 -19	0.99149939 -15	1.00271831 -15	1.01338488 -12
0.78	0.97984404 -17	0.99166668 -17	1.00287739 -14	1.01353654 -14
0.79	0.98002024 -17	0.99183380 -15	1.00303633 -14	1.01368806 -13
0.80	0.98019627 -19	0.99200077 -17	1.00319513 -15	1.01383945 -13
0.81	0.98037211 -17	0.99216757 -15	1.00335378 -15	1.01399071 -13
0.82	0.98054778 -17	0.99233422 -17	1.00351228 -13	1.01414184 -14
0.83	0.98072328 -18	0.99250070 -15	1.00367065 -16	1.01429283 -12
0.84	0.98089860 -18	0.99266703 -16	1.00382886 -13	1.01444370 -14
0.85	0.98107374 -17	0.99283320 -15	1.00398694 -15	1.01459443 -13
0.86	0.98124871 -18	0.99299922 -17	1.00414487 -14	1.01474503 -12
0.87	0.98142350 -16	0.99316507 -15	1.00430266 -14	1.01489551 -14
0.88	0.98159813 -19	0.99333077 -16	1.00446031 -15	1.01504585 -13
0.89	0.98177257 -16	0.99349631 -15	1.00461781 -14	1.01519606 -12
0.90	0.98194685 -18	0.99366170 -16	1.00477517 -14	1.01534615 -14
0.91	0.98212095 -17	0.99382693 -16	1.00493239 -14	1.01549610 -12
0.92	0.98229488 -17	0.99399200 -15	1.00508947 -14	1.01564593 -14
0.93	0.98246864 -17	0.99415692 -15	1.00524641 -14	1.01579562 -12
0.94	0.98264223 -17	0.99432169 -16	1.00540321 -14	1.01594519 -12
0.95	0.98281565 -18	0.99448630 -16	1.00555987 -14	1.01609464 -14
0.96	0.98298889 -16	0.99465075 -14	1.00571639 -14	1.01624395 -13
0.97	0.98316197 -17	0.99481506 -17	1.00587277 -15	1.01639313 -12
0.98	0.98333488 -17	0.99497920 -14	1.00602900 -13	1.01654219 -13
0.99	0.98350762 -18	0.99514320 -16	1.00618510 -13	1.01669112 -12
1.00	0.98368018 -16	0.99530704 -15	1.00634107 -15	1.01683993 -13

LOG (G) FOR S=1.5

P	I=16	I=17	I=18	I=19
1.00	0.98368018 -16	0.99530704 -15	1.00634107 -15	1.01683993 -13
1.01	0.98385258 -16	0.99547073 -15	1.00649689 -14	1.01698861 -13
1.02	0.98402482 -16	0.99563427 -15	1.00665257 -13	1.01713716 -12
1.03	0.98419688 -16	0.99579766 -15	1.00680812 -14	1.01728559 -13
1.04	0.98436878 -17	0.99596090 -16	1.00696353 -14	1.01743389 -13
1.05	0.98454051 -17	0.99612398 -15	1.00711880 -14	1.01758206 -12
1.06	0.98471207 -16	0.99628691 -14	1.00727393 -13	1.01773011 -12
1.07	0.98488347 -17	0.99644970 -16	1.00742893 -14	1.01787804 -13
1.08	0.98505470 -16	0.99661233 -15	1.00758379 -14	1.01802584 -13
1.09	0.98522577 -17	0.99677481 -14	1.00773851 -13	1.01817351 -12
1.10	0.98539667 -16	0.99693715 -16	1.00789310 -13	1.01832106 -12
1.11	0.98556741 -17	0.99709933 -14	1.00804756 -15	1.01846849 -12
1.12	0.98573798 -16	0.99726137 -15	1.00820187 -12	1.01861580 -13
1.13	0.98590839 -17	0.99742326 -15	1.00835606 -15	1.01876298 -13
1.14	0.98607863 -16	0.99758500 -15	1.00851010 -12	1.01891003 -11
1.15	0.98624871 -16	0.99774659 -15	1.00866402 -14	1.01905697 -13
1.16	0.98641863 -16	0.99790803 -14	1.00881780 -14	1.01920378 -12
1.17	0.98658839 -17	0.99806933 -15	1.00897144 -13	1.01935047 -12
1.18	0.98675798 -15	0.99823048 -14	1.00912495 -13	1.01949704 -13
1.19	0.98692742 -17	0.99839149 -16	1.00927833 -13	1.01964348 -12
1.20	0.98709669 -16	0.99855234 -13	1.00943158 -14	1.01978980 -11
1.21	0.98726580 -16	0.99871306 -16	1.00958469 -13	1.01993601 -13
1.22	0.98743475 -16	0.99887362 -14	1.00973767 -14	1.02008209 -12
1.23	0.98760354 -16	0.99903404 -14	1.00989051 -12	1.02022805 -12
1.24	0.98777217 -16	0.99919432 -15	1.01004323 -14	1.02037389 -13
1.25	0.98794064 -16	0.99935445 -14	1.01019581 -12	1.02051960 -11
1.26	0.98810895 -16	0.99951444 -15	1.01034827 -14	1.02066520 -12
1.27	0.98827710 -16	0.99967428 -14	1.01050059 -13	1.02081068 -12
1.28	0.98844509 -15	0.99983398 -14	1.01065278 -14	1.02095604 -12
1.29	0.98861293 -16	0.99999354 -15	1.01080483 -12	1.02110128 -13
1.30	0.98878061 -16	1.00015295 -14	1.01095676 -13	1.02124639 -11
1.31	0.98894813 -16	1.00031222 -14	1.01110856 -13	1.02139139 -11
1.32	0.98911549 -15	1.00047135 -15	1.01126023 -13	1.02153628 -13
1.33	0.98928270 -16	1.00063033 -14	1.01141177 -13	1.02168104 -12
1.34	0.98944975 -16	1.00078917 -13	1.01156318 -13	1.02182568 -11
1.35	0.98961664 -15	1.00094788 -15	1.01171446 -13	1.02197021 -13
1.36	0.98978338 -16	1.00110644 -14	1.01186561 -13	1.02211461 -11
1.37	0.98994996 -15	1.00126486 -15	1.01201663 -12	1.02225890 -11
1.38	0.99011639 -16	1.00142313 -13	1.01216753 -14	1.02240308 -13
1.39	0.99028266 -15	1.00158127 -14	1.01231829 -12	1.02254713 -11
1.40	0.99044878 -15	1.00173927 -14	1.01246893 -13	1.02269107 -12
1.41	0.99061475 -16	1.00189713 -14	1.01261944 -12	1.02283489 -11
1.42	0.99078056 -15	1.00205485 -14	1.01276983 -14	1.02297860 -13
1.43	0.99094622 -16	1.00221243 -14	1.01292008 -12	1.02312218 -10
1.44	0.99111172 -15	1.00236987 -14	1.01307021 -12	1.02326566 -13
1.45	0.99127707 -15	1.00252717 -14	1.01322022 -14	1.02340901 -11
1.46	0.99144227 -15	1.00268433 -13	1.01337009 -11	1.02355225 -11
1.47	0.99160732 -15	1.00284136 -15	1.01351985 -14	1.02369538 -12
1.48	0.99177222 -16	1.00299824 -13	1.01366947 -12	1.02383839 -12
1.49	0.99193696 -14	1.00315499 -13	1.01381897 -13	1.02398128 -11
1.50	0.99210156 -16	1.00331161 -15	1.01396834 -12	1.02412406 -12

LOG(G) FOR S=1.5

P	I=16	I=17	I=18	I=19
1.50	0.99210156 -16	1.00331161 -15	1.01396834 -12	1.02412406 -12
1.51	0.99226600 -15	1.00346808 -13	1.01411759 -12	1.02426672 -10
1.52	0.99243029 -15	1.00362442 -14	1.01426672 -13	1.02440928 -13
1.53	0.99259443 -14	1.00378062 -13	1.01441572 -13	1.02455171 -11
1.54	0.99275843 -16	1.00393669 -14	1.01456459 -12	1.02469403 -11
1.55	0.99292227 -15	1.00409262 -14	1.01471334 -12	1.02483624 -11
1.56	0.99308596 -14	1.00424841 -13	1.01486197 -12	1.02497834 -12
1.57	0.99324951 -15	1.00440407 -13	1.01501048 -13	1.02512032 -11
1.58	0.99341291 -16	1.00455960 -14	1.01515886 -13	1.02526219 -12
1.59	0.99357615 -13	1.00471499 -14	1.01530711 -11	1.02540394 -10
1.60	0.99373926 -16	1.00487024 -13	1.01545525 -13	1.02554559 -12
1.61	0.99390221 -15	1.00502536 -13	1.01560326 -12	1.02568712 -12
1.62	0.99406501 -14	1.00518035 -14	1.01575115 -12	1.02582853 -10
1.63	0.99422767 -14	1.00533520 -13	1.01589892 -13	1.02596984 -12
1.64	0.99439019 -16	1.00548992 -13	1.01604656 -11	1.02611103 -10
1.65	0.99455255 -14	1.00564451 -14	1.01619409 -13	1.02625212 -12
1.66	0.99471477 -15	1.00579896 -13	1.01634149 -12	1.02639309 -11
1.67	0.99487684 -14	1.00595328 -13	1.01648877 -12	1.02653395 -11
1.68	0.99503877 -14	1.00610747 -13	1.01663593 -12	1.02667470 -12
1.69	0.99520056 -15	1.00626153 -14	1.01678297 -12	1.02681533 -10
1.70	0.99536220 -15	1.00641545 -12	1.01692989 -12	1.02695586 -11
1.71	0.99552369 -14	1.00656925 -14	1.01707669 -12	1.02709628 -12
1.72	0.99568504 -14	1.00672291 -13	1.01722337 -13	1.02723658 -10
1.73	0.99584623 -15	1.00687644 -13	1.01736992 -11	1.02737678 -11
1.74	0.99600731 -14	1.00702984 -13	1.01751636 -12	1.02751687 -12
1.75	0.99616823 -15	1.00718311 -13	1.01766268 -12	1.02765684 -10
1.76	0.99632900 -13	1.00733625 -13	1.01780888 -12	1.02779671 -11
1.77	0.99648964 -15	1.00748926 -13	1.01795496 -11	1.02793647 -11
1.78	0.99665013 -14	1.00764214 -13	1.01810093 -13	1.02807612 -11
1.79	0.99681048 -15	1.00779489 -13	1.01824677 -11	1.02821566 -11
1.80	0.99697068 -13	1.00794751 -13	1.01839250 -12	1.02835509 -10
1.81	0.99713075 -15	1.00810000 -13	1.01853811 -12	1.02849442 -12
1.82	0.99729067 -13	1.00825236 -12	1.01868360 -12	1.02863363 -10
1.83	0.99745046 -15	1.00840460 -14	1.01882897 -12	1.02877274 -11
1.84	0.99761010 -14	1.00855670 -12	1.01897422 -11	1.02891174 -11
1.85	0.99776960 -14	1.00870868 -13	1.01911936 -12	1.02905063 -11
1.86	0.99792896 -14	1.00886053 -13	1.01926438 -11	1.02918941 -10
1.87	0.99808818 -13	1.00901225 -12	1.01940929 -12	1.02932809 -11
1.88	0.99824727 -15	1.00916385 -13	1.01955408 -12	1.02946666 -11
1.89	0.99840621 -14	1.00931532 -13	1.01969875 -12	1.02960512 -10
1.90	0.99856501 -13	1.00946666 -12	1.01984330 -11	1.02974348 -11
1.91	0.99872368 -15	1.00961788 -14	1.01998774 -11	1.02988173 -11
1.92	0.99888220 -13	1.00976896 -11	1.02013207 -12	1.03001987 -10
1.93	0.99904059 -14	1.00991993 -13	1.02027628 -12	1.03015791 -11
1.94	0.99919884 -13	1.01007077 -13	1.02042037 -11	1.03029584 -10
1.95	0.99935696 -15	1.01022148 -13	1.02056435 -12	1.03043367 -11
1.96	0.99951493 -13	1.01037206 -11	1.02070821 -11	1.03057139 -11
1.97	0.99967277 -14	1.01052253 -14	1.02085196 -11	1.03070900 -10
1.98	0.99983047 -13	1.01067286 -12	1.02099560 -12	1.03084651 -10
1.99	0.99998804 -14	1.01082307 -12	1.02113912 -12	1.03098392 -11
2.00	1.00014547 -14	1.01097316 -12	1.02128252 -10	1.03112122 -11

LOG (G) FOR S=1.5

P	l=16	l=17	l=18	l=19
2.00	1.00014547 -14	1.01097316 -12	1.02128252 -10	1.03112122 -11
2.01	1.00030276 -13	1.01112313 -13	1.02142582 -12	1.03125841 -10
2.02	1.00045992 -14	1.01127297 -13	1.02156900 -10	1.03139550 -11
2.03	1.00061694 -13	1.01142268 -13	1.02171206 -10	1.03153249 -11
2.04	1.00077383 -14	1.01157228 -13	1.02185502 -12	1.03166937 -10
2.05	1.00093058 -13	1.01172175 -13	1.02199786 -12	1.03180615 -10
2.06	1.00108720 -14	1.01187109 -13	1.02214058 -10	1.03194283 -11
2.07	1.00124368 -13	1.01202032 -13	1.02228320 -12	1.03207940 -10
2.08	1.00140003 -14	1.01216942 -12	1.02242570 -11	1.03221587 -11
2.09	1.00155624 -12	1.01231840 -12	1.02256809 -11	1.03235223 -9
2.10	1.00171233 -15	1.01246726 -13	1.02271037 -11	1.03248850 -11
2.11	1.00186827 -12	1.01261599 -11	1.02285254 -12	1.03262466 -11
2.12	1.00202409 -14	1.01276461 -13	1.02299459 -10	1.03276071 -9
2.13	1.00217977 -13	1.01291310 -12	1.02313654 -12	1.03289667 -11
2.14	1.00233532 -13	1.01306147 -12	1.02327837 -11	1.03303252 -10
2.15	1.00249074 -14	1.01320972 -12	1.02342009 -10	1.03316827 -10
2.16	1.00264602 -12	1.01335785 -12	1.02356171 -12	1.03330392 -11
2.17	1.00280118 -14	1.01350586 -12	1.02370321 -11	1.03343946 -9
2.18	1.00295620 -13	1.01365378 -13	1.02384460 -11	1.03357491 -11
2.19	1.00311109 -13	1.01380152 -12	1.02398588 -11	1.03371025 -9
2.20	1.00326585 -13	1.01394917 -12	1.02412705 -11	1.03384550 -11
2.21	1.00342048 -13	1.01409670 -12	1.02426811 -10	1.03398064 -10
2.22	1.00357498 -13	1.01424411 -11	1.02440907 -12	1.03411568 -10
2.23	1.00372935 -13	1.01439141 -13	1.02454991 -11	1.03425062 -10
2.24	1.00388359 -14	1.01453858 -12	1.02469064 -10	1.03438546 -10
2.25	1.00403769 -12	1.01468563 -11	1.02483127 -11	1.03452020 -10
2.26	1.00419167 -13	1.01483257 -12	1.02497179 -12	1.03465484 -10
2.27	1.00434552 -13	1.01497939 -12	1.02511219 -10	1.03478938 -10
2.28	1.00449924 -12	1.01512609 -12	1.02525249 -11	1.03492382 -11
2.29	1.00465284 -14	1.01527267 -11	1.02539268 -10	1.03505815 -8
2.30	1.00480630 -12	1.01541914 -12	1.02553277 -12	1.03519240 -11
2.31	1.00495964 -14	1.01556549 -12	1.02567274 -10	1.03532654 -10
2.32	1.00511284 -12	1.01571172 -12	1.02581261 -11	1.03546058 -10
2.33	1.00526592 -13	1.01585783 -11	1.02595237 -10	1.03559452 -9
2.34	1.00541887 -12	1.01600383 -12	1.02609203 -12	1.03572837 -11
2.35	1.00557170 -13	1.01614971 -12	1.02623157 -10	1.03586211 -9
2.36	1.00572440 -13	1.01629547 -11	1.02637101 -10	1.03599576 -10
2.37	1.00587697 -13	1.01644112 -12	1.02651035 -11	1.03612931 -10
2.38	1.00602941 -12	1.01658665 -11	1.02664958 -11	1.03626276 -10
2.39	1.00618173 -13	1.01673207 -12	1.02678870 -11	1.03639611 -9
2.40	1.00633392 -12	1.01687737 -11	1.02692771 -10	1.03652937 -11
2.41	1.00648599 -13	1.01702256 -12	1.02706662 -11	1.03666252 -9
2.42	1.00663793 -12	1.01716763 -11	1.02720542 -10	1.03679558 -9
2.43	1.00678975 -13	1.01731259 -12	1.02734412 -11	1.03692855 -11
2.44	1.00694144 -13	1.01745743 -11	1.02748271 -10	1.03706141 -9
2.45	1.00709300 -12	1.01760216 -12	1.02762120 -11	1.03719418 -10
2.46	1.00724444 -12	1.01774677 -11	1.02775958 -10	1.03732685 -9
2.47	1.00739576 -13	1.01789127 -11	1.02789786 -10	1.03745943 -10
2.48	1.00754695 -12	1.01803566 -12	1.02803604 -12	1.03759191 -10
2.49	1.00769802 -13	1.01817993 -11	1.02817410 -9	1.03772429 -9
2.50	1.00784896 0	1.01832409 0	1.02831207 0	1.03785658 0

G-214

LOG(G) FOR S=1.5

P	I=20	I=21	I=22	I=23
0.	1.01200986 0	1.02222903 0	1.03198886 0	1.04132889 0
0.01	1.01216489 -14	1.02237701 -12	1.03213042 -12	1.04146455 -11
0.02	1.01231978 -14	1.02252487 -13	1.03227186 -12	1.04160010 -11
0.03	1.01247453 -14	1.02267260 -13	1.03241318 -12	1.04173554 -10
0.04	1.01262914 -15	1.02282020 -13	1.03255438 -12	1.04187088 -12
0.05	1.01278360 -14	1.02296767 -13	1.03269546 -12	1.04200610 -11
0.06	1.01293792 -14	1.02311501 -13	1.03283642 -12	1.04214121 -10
0.07	1.01309210 -14	1.02326222 -13	1.03297726 -11	1.04227622 -11
0.08	1.01324614 -15	1.02340930 -13	1.03311799 -12	1.04241112 -12
0.09	1.01340003 -13	1.02355625 -12	1.03325860 -12	1.04254590 -10
0.10	1.01355379 -14	1.02370308 -14	1.03339909 -12	1.04268058 -11
0.11	1.01370741 -15	1.02384977 -12	1.03353946 -12	1.04281515 -10
0.12	1.01386088 -13	1.02399634 -13	1.03367971 -11	1.04294962 -12
0.13	1.01401422 -14	1.02414278 -13	1.03381985 -12	1.04308397 -10
0.14	1.01416742 -14	1.02428909 -12	1.03395987 -11	1.04321822 -11
0.15	1.01432048 -14	1.02443528 -13	1.03409978 -12	1.04335236 -10
0.16	1.01447340 -14	1.02458134 -13	1.03423957 -12	1.04348640 -11
0.17	1.01462618 -14	1.02472727 -13	1.03437924 -11	1.04362033 -11
0.18	1.01477882 -13	1.02487308 -13	1.03451880 -12	1.04375415 -11
0.19	1.01493133 -14	1.02501876 -12	1.03465824 -11	1.04388786 -10
0.20	1.01508370 -14	1.02516432 -13	1.03479757 -12	1.04402147 -10
0.21	1.01523593 -14	1.02530975 -13	1.03493678 -12	1.04415498 -12
0.22	1.01538802 -13	1.02545505 -11	1.03507587 -10	1.04428837 -10
0.23	1.01553998 -14	1.02560024 -14	1.03521486 -12	1.04442166 -10
0.24	1.01569180 -13	1.02574529 -12	1.03535373 -12	1.04455485 -11
0.25	1.01584349 -14	1.02589022 -12	1.03549248 -11	1.04468793 -10
0.26	1.01599504 -14	1.02603503 -12	1.03563112 -11	1.04482091 -11
0.27	1.01614645 -13	1.02617972 -13	1.03576965 -12	1.04495378 -10
0.28	1.01629773 -13	1.02632428 -13	1.03590806 -11	1.04508655 -11
0.29	1.01644888 -14	1.02646871 -11	1.03604636 -11	1.04521921 -10
0.30	1.01659989 -13	1.02661303 -13	1.03618455 -12	1.04535177 -10
0.31	1.01675077 -14	1.02675722 -12	1.03632262 -11	1.04548423 -11
0.32	1.01690151 -13	1.02690129 -12	1.03646058 -11	1.04561658 -10
0.33	1.01705212 -13	1.02704524 -13	1.03659843 -11	1.04574883 -11
0.34	1.01720260 -14	1.02718906 -11	1.03673617 -11	1.04588097 -10
0.35	1.01735294 -13	1.02733277 -13	1.03687380 -12	1.04601301 -10
0.36	1.01750315 -13	1.02747635 -12	1.03701131 -10	1.04614495 -10
0.37	1.01765323 -13	1.02761981 -12	1.03714872 -12	1.04627679 -10
0.38	1.01780318 -14	1.02776315 -12	1.03728601 -11	1.04640853 -11
0.39	1.01795299 -12	1.02790637 -12	1.03742319 -11	1.04654016 -10
0.40	1.01810268 -14	1.02804947 -12	1.03756026 -11	1.04667169 -10
0.41	1.01825223 -13	1.02819245 -12	1.03769722 -11	1.04680312 -11
0.42	1.01840165 -13	1.02833531 -12	1.03783407 -11	1.04693444 -9
0.43	1.01855094 -13	1.02847805 -12	1.03797081 -11	1.04706567 -11
0.44	1.01870010 -13	1.02862067 -12	1.03810744 -11	1.04719679 -10
0.45	1.01884913 -13	1.02876317 -12	1.03824396 -11	1.04732781 -9
0.46	1.01899803 -13	1.02890555 -11	1.03838037 -10	1.04745874 -11
0.47	1.01914680 -12	1.02904782 -13	1.03851668 -12	1.04758956 -10
0.48	1.01929545 -14	1.02918996 -11	1.03865287 -10	1.04772028 -10
0.49	1.01944396 -13	1.02933199 -12	1.03878896 -12	1.04785090 -10
0.50	1.01959234 -12	1.02947390 -12	1.03892493 -10	1.04798142 -10

LOG(G) FOR S=1.5

G-214

P	l=20	l=21	l=22	l=23
0.50	1.01959234 -12	1.02947390 -12	1.03892493 -10	1.04798142 -10
0.51	1.01974060 -13	1.02961569 -11	1.03906080 -11	1.04811184 -10
0.52	1.01988873 -13	1.02975737 -13	1.03919656 -11	1.04824216 -10
0.53	1.02003673 -13	1.02989892 -11	1.03933221 -10	1.04837238 -10
0.54	1.02018460 -13	1.03004036 -11	1.03946776 -11	1.04850250 -9
0.55	1.02033234 -12	1.03018169 -13	1.03960320 -11	1.04863253 -11
0.56	1.02047996 -13	1.03032289 -11	1.03973853 -11	1.04876245 -9
0.57	1.02062745 -12	1.03046398 -11	1.03987375 -10	1.04889228 -11
0.58	1.02077482 -14	1.03060496 -12	1.04000887 -11	1.04902200 -9
0.59	1.02092205 -11	1.03074582 -12	1.04014388 -11	1.04915163 -10
0.60	1.02106917 -14	1.03088656 -11	1.04027878 -10	1.04928116 -10
0.61	1.02121615 -12	1.03102719 -12	1.04041358 -11	1.04941059 -9
0.62	1.02136301 -12	1.03116770 -11	1.04054827 -11	1.04953993 -11
0.63	1.02150975 -13	1.03130810 -12	1.04068285 -10	1.04966916 -9
0.64	1.02165636 -12	1.03144838 -11	1.04081733 -10	1.04979830 -10
0.65	1.02180285 -13	1.03158855 -11	1.04095171 -11	1.04992734 -9
0.66	1.02194921 -12	1.03172861 -12	1.04108598 -11	1.05005629 -11
0.67	1.02209545 -13	1.03186855 -12	1.04122014 -10	1.05018513 -9
0.68	1.02224156 -12	1.03200837 -10	1.04135420 -10	1.05031388 -9
0.69	1.02238755 -12	1.03214809 -12	1.04148816 -11	1.05044254 -10
0.70	1.02253342 -13	1.03228769 -12	1.04162201 -10	1.05057110 -10
0.71	1.02267916 -12	1.03242717 -10	1.04175576 -11	1.05069956 -10
0.72	1.02282478 -12	1.03256655 -12	1.04188940 -10	1.05082792 -9
0.73	1.02297028 -12	1.03270581 -11	1.04202294 -11	1.05095619 -10
0.74	1.02311566 -13	1.03284496 -11	1.04215637 -9	1.05108436 -9
0.75	1.02326091 -12	1.03298400 -12	1.04228971 -11	1.05121244 -9
0.76	1.02340604 -12	1.03312292 -10	1.04242294 -11	1.05134043 -11
0.77	1.02355105 -12	1.03326174 -12	1.04255606 -9	1.05146831 -8
0.78	1.02369594 -12	1.03340044 -11	1.04268909 -11	1.05159611 -11
0.79	1.02384071 -12	1.03353903 -11	1.04282201 -11	1.05172380 -8
0.80	1.02398536 -13	1.03367751 -11	1.04295482 -9	1.05185141 -11
0.81	1.02412988 -11	1.03381588 -11	1.04308754 -10	1.05197891 -8
0.82	1.02427429 -13	1.03395414 -11	1.04322016 -11	1.05210633 -10
0.83	1.02441857 -11	1.03409229 -12	1.04335267 -10	1.05223365 -10
0.84	1.02456274 -13	1.03423032 -10	1.04348508 -10	1.05236087 -8
0.85	1.02470678 -11	1.03436825 -11	1.04361739 -10	1.05248801 -11
0.86	1.02485071 -12	1.03450607 -11	1.04374960 -11	1.05261504 -8
0.87	1.02499452 -12	1.03464378 -11	1.04388170 -9	1.05274199 -10
0.88	1.02513821 -12	1.03478138 -11	1.04401371 -10	1.05286884 -9
0.89	1.02528178 -12	1.03491887 -11	1.04414562 -11	1.05299560 -10
0.90	1.02542523 -12	1.03505625 -11	1.04427742 -9	1.05312226 -8
0.91	1.02556856 -12	1.03519352 -11	1.04440913 -11	1.05324884 -10
0.92	1.02571177 -11	1.03533068 -10	1.04454073 -9	1.05337532 -10
0.93	1.02585487 -12	1.03546774 -11	1.04467224 -11	1.05350170 -8
0.94	1.02599785 -12	1.03560469 -11	1.04480364 -9	1.05362800 -10
0.95	1.02614071 -11	1.03574153 -11	1.04493495 -11	1.05375420 -9
0.96	1.02628346 -12	1.03587826 -11	1.04506615 -9	1.05388031 -9
0.97	1.02642609 -12	1.03601488 -10	1.04519726 -10	1.05400633 -9
0.98	1.02656860 -12	1.03615140 -11	1.04532827 -10	1.05413226 -9
0.99	1.02671099 -11	1.03628781 -11	1.04545918 -10	1.05425810 -10
1.00	1.02685327 -12	1.03642411 -10	1.04558999 -10	1.05438384 -9

LOG(G) FOR S=1.5

P	I=20	I=21	I=22	I=23
1.00	1.02685327 -12	1.03642411 -10	1.04558999 -10	1.05438384 -9
1.01	1.02699543 -11	1.03656031 -11	1.04572070 -10	1.05450949 -10
1.02	1.02713748 -12	1.03669640 -11	1.04585131 -9	1.05463506 -10
1.03	1.02727941 -11	1.03683238 -10	1.04598183 -10	1.05476053 -9
1.04	1.02742123 -12	1.03696826 -11	1.04611225 -10	1.05488591 -9
1.05	1.02756293 -11	1.03710403 -10	1.04624257 -10	1.05501120 -9
1.06	1.02770452 -12	1.03723970 -11	1.04637279 -10	1.05513640 -9
1.07	1.02784599 -11	1.03737526 -11	1.04650291 -9	1.05526151 -9
1.08	1.02798735 -12	1.03751071 -10	1.04663294 -10	1.05538653 -9
1.09	1.02812859 -11	1.03764606 -10	1.04676287 -9	1.05551146 -9
1.10	1.02826972 -11	1.03778131 -11	1.04689271 -11	1.05563630 -9
1.11	1.02841074 -12	1.03791645 -10	1.04702244 -9	1.05576105 -9
1.12	1.02855164 -11	1.03805149 -11	1.04715208 -9	1.05588571 -9
1.13	1.02869243 -11	1.03818642 -10	1.04728163 -11	1.05601028 -9
1.14	1.02883311 -12	1.03832125 -11	1.04741107 -8	1.05613476 -9
1.15	1.02897367 -11	1.03845597 -10	1.04754043 -11	1.05625915 -8
1.16	1.02911412 -11	1.03859059 -10	1.04766968 -9	1.05638346 -10
1.17	1.02925446 -12	1.03872511 -11	1.04779884 -9	1.05650767 -8
1.18	1.02939468 -10	1.03885952 -10	1.04792791 -10	1.05663180 -9
1.19	1.02953480 -12	1.03899383 -10	1.04805688 -10	1.05675584 -9
1.20	1.02967480 -11	1.03912804 -11	1.04818575 -9	1.05687979 -9
1.21	1.02981469 -11	1.03926214 -10	1.04831453 -9	1.05700365 -8
1.22	1.02995447 -11	1.03939614 -10	1.04844322 -11	1.05712743 -10
1.23	1.03009414 -11	1.03953004 -10	1.04857180 -8	1.05725111 -8
1.24	1.03023370 -12	1.03966384 -10	1.04870030 -10	1.05737471 -9
1.25	1.03037314 -10	1.03979754 -11	1.04882870 -9	1.05749822 -8
1.26	1.03051248 -11	1.03993113 -10	1.04895701 -10	1.05762165 -9
1.27	1.03065171 -12	1.04006462 -10	1.04908522 -9	1.05774499 -9
1.28	1.03079082 -10	1.04019801 -10	1.04921334 -9	1.05786824 -9
1.29	1.03092983 -11	1.04033130 -10	1.04934137 -10	1.05799140 -8
1.30	1.03106873 -12	1.04046449 -11	1.04946930 -9	1.05811448 -10
1.31	1.03120751 -10	1.04059757 -9	1.04959714 -10	1.05823746 -7
1.32	1.03134619 -11	1.04073056 -10	1.04972488 -9	1.05836037 -9
1.33	1.03148476 -11	1.04086345 -11	1.04985253 -9	1.05848319 -9
1.34	1.03162322 -11	1.04099623 -9	1.04998009 -9	1.05860592 -9
1.35	1.03176157 -11	1.04112892 -11	1.05010756 -10	1.05872856 -8
1.36	1.03189981 -10	1.04126150 -9	1.05023493 -8	1.05885112 -9
1.37	1.03203795 -12	1.04139399 -11	1.05036222 -11	1.05897359 -8
1.38	1.03217597 -10	1.04152637 -9	1.05048940 -8	1.05909598 -9
1.39	1.03231389 -11	1.04165866 -10	1.05061650 -9	1.05921828 -8
1.40	1.03245170 -10	1.04179085 -11	1.05074351 -10	1.05934050 -9
1.41	1.03258941 -12	1.04192293 -9	1.05087042 -9	1.05946263 -8
1.42	1.03272700 -10	1.04205492 -10	1.05099724 -9	1.05958468 -9
1.43	1.03286449 -11	1.04218681 -10	1.05112397 -9	1.05970664 -8
1.44	1.03300187 -10	1.04231860 -9	1.05125061 -9	1.05982852 -9
1.45	1.03313915 -11	1.04245030 -11	1.05137716 -9	1.05995031 -8
1.46	1.03327632 -11	1.04258189 -9	1.05150362 -9	1.06007202 -9
1.47	1.03341338 -10	1.04271339 -10	1.05162999 -10	1.06019364 -8
1.48	1.03355034 -11	1.04284479 -10	1.05175626 -8	1.06031518 -8
1.49	1.03368719 -10	1.04297609 -10	1.05188245 -10	1.06043664 -9
1.50	1.03382394 -11	1.04310729 -9	1.05200854 -8	1.06055801 -8

LOG (G) FOR S=1.5

P	I=20	I=21	I=22	I=23
1.50	1.03382394 -11	1.04310729 -9	1.05200854 -8	1.06055801 -8
1.51	1.03396058 -11	1.04323840 -10	1.05213455 -10	1.06067930 -9
1.52	1.03409711 -10	1.04336941 -10	1.05226046 -8	1.06080050 -8
1.53	1.03423354 -10	1.04350032 -10	1.05238629 -9	1.06092162 -8
1.54	1.03436987 -11	1.04363113 -9	1.05251203 -10	1.06104266 -9
1.55	1.03450609 -11	1.04376185 -10	1.05263767 -8	1.06116361 -7
1.56	1.03464220 -10	1.04389247 -9	1.05276323 -9	1.06128449 -10
1.57	1.03477821 -10	1.04402300 -10	1.05288870 -10	1.06140527 -7
1.58	1.03491412 -11	1.04415343 -10	1.05301407 -8	1.06152598 -9
1.59	1.03504992 -10	1.04428376 -9	1.05313936 -9	1.06164660 -8
1.60	1.03518562 -10	1.04441400 -10	1.05326456 -8	1.06176714 -8
1.61	1.03532122 -11	1.04454414 -9	1.05338968 -10	1.06188760 -8
1.62	1.03545671 -10	1.04467419 -10	1.05351470 -9	1.06200798 -9
1.63	1.03559210 -10	1.04480414 -10	1.05363963 -8	1.06212827 -8
1.64	1.03572739 -11	1.04493399 -9	1.05376448 -9	1.06224848 -8
1.65	1.03586257 -10	1.04506375 -9	1.05388924 -9	1.06236861 -8
1.66	1.03599765 -10	1.04519342 -10	1.05401391 -9	1.06248866 -9
1.67	1.03613263 -10	1.04532299 -9	1.05413849 -8	1.06260863 -9
1.68	1.03626751 -11	1.04545247 -10	1.05426299 -10	1.06272851 -8
1.69	1.03640228 -10	1.04558185 -9	1.05438739 -7	1.06284831 -7
1.70	1.03653695 -10	1.04571114 -10	1.05451172 -10	1.06296804 -9
1.71	1.03667152 -10	1.04584033 -9	1.05463595 -9	1.06308768 -8
1.72	1.03680599 -10	1.04596943 -9	1.05476009 -8	1.06320724 -8
1.73	1.03694036 -11	1.04609844 -10	1.05488415 -8	1.06332672 -8
1.74	1.03707462 -9	1.04622735 -9	1.05500813 -10	1.06344612 -9
1.75	1.03720879 -11	1.04635617 -9	1.05513201 -8	1.06356543 -7
1.76	1.03734285 -9	1.04648490 -10	1.05525581 -9	1.06368467 -8
1.77	1.03747682 -11	1.04661353 -9	1.05537952 -8	1.06380383 -8
1.78	1.03761068 -10	1.04674207 -9	1.05550315 -9	1.06392291 -8
1.79	1.03774444 -9	1.04687052 -10	1.05562669 -8	1.06404191 -9
1.80	1.03787811 -11	1.04699887 -8	1.05575015 -9	1.06416082 -7
1.81	1.03801167 -10	1.04712714 -10	1.05587352 -9	1.06427966 -8
1.82	1.03814513 -10	1.04725531 -10	1.05599680 -8	1.06439842 -8
1.83	1.03827849 -9	1.04738338 -8	1.05612000 -9	1.06451710 -8
1.84	1.03841176 -11	1.04751137 -10	1.05624311 -8	1.06463570 -8
1.85	1.03854492 -9	1.04763926 -8	1.05636614 -9	1.06475422 -8
1.86	1.03867799 -11	1.04776707 -10	1.05648908 -8	1.06487266 -8
1.87	1.03881095 -9	1.04789478 -9	1.05661194 -9	1.06499102 -8
1.88	1.03894382 -10	1.04802240 -10	1.05673471 -8	1.06510930 -8
1.89	1.03907659 -10	1.04814992 -8	1.05685740 -9	1.06522750 -7
1.90	1.03920926 -9	1.04827736 -9	1.05698000 -8	1.06534563 -8
1.91	1.03934184 -11	1.04840471 -10	1.05710252 -8	1.06546368 -8
1.92	1.03947431 -9	1.04853196 -8	1.05722496 -9	1.06558165 -8
1.93	1.03960669 -10	1.04865913 -10	1.05734731 -9	1.06569954 -8
1.94	1.03973897 -10	1.04878620 -8	1.05746957 -7	1.06581735 -8
1.95	1.03987115 -10	1.04891319 -10	1.05759176 -9	1.06593508 -7
1.96	1.04000323 -9	1.04904008 -8	1.05771386 -9	1.06605274 -9
1.97	1.04013522 -10	1.04916689 -10	1.05783587 -8	1.06617031 -6
1.98	1.04026711 -10	1.04929360 -9	1.05795780 -8	1.06628782 -9
1.99	1.04039890 -9	1.04942022 -8	1.05807965 -8	1.06640524 -8
2.00	1.04053060 -10	1.04954676 -9	1.05820142 -9	1.06652258 -7

G-214

LOG(G) FOR S=1.5

P	I=20	I=21	I=22	I=23
2.00	1.04053060 -10	1.04954676 -9	1.05820142 -9	1.06652258 -7
2.01	1.04066220 -10	1.04967321 -10	1.05832310 -8	1.06663985 -7
2.02	1.04079370 -9	1.04979956 -8	1.05844470 -8	1.06675704 -7
2.03	1.04092511 -10	1.04992583 -9	1.05856622 -9	1.06687416 -9
2.04	1.04105642 -10	1.05005201 -9	1.05868765 -7	1.06699119 -7
2.05	1.04118763 -9	1.05017810 -9	1.05880901 -9	1.06710815 -7
2.06	1.04131875 -10	1.05030410 -9	1.05893028 -9	1.06722504 -9
2.07	1.04144977 -9	1.05043001 -9	1.05905146 -7	1.06734184 -7
2.08	1.04158070 -9	1.05055583 -8	1.05917257 -9	1.06745857 -7
2.09	1.04171154 -11	1.05068157 -9	1.05929359 -8	1.06757523 -9
2.10	1.04184227 -8	1.05080722 -9	1.05941453 -8	1.06769180 -6
2.11	1.04197292 -10	1.05093278 -9	1.05953539 -8	1.06780831 -9
2.12	1.04210347 -10	1.05105825 -9	1.05965617 -8	1.06792473 -7
2.13	1.04223392 -9	1.05118363 -8	1.05977687 -9	1.06804108 -8
2.14	1.04236428 -10	1.05130893 -9	1.05989748 -7	1.06815735 -7
2.15	1.04249454 -9	1.05143414 -9	1.06001802 -9	1.06827355 -7
2.16	1.04262471 -9	1.05155926 -8	1.06013847 -8	1.06838968 -9
2.17	1.04275479 -10	1.05168430 -10	1.06025884 -8	1.06850572 -7
2.18	1.04288477 -9	1.05180924 -8	1.06037913 -8	1.06862169 -7
2.19	1.04301466 -9	1.05193410 -8	1.06049934 -7	1.06873759 -8
2.20	1.04314446 -10	1.05205888 -9	1.06061948 -10	1.06885341 -7
2.21	1.04327416 -9	1.05218357 -9	1.06073952 -7	1.06896916 -8
2.22	1.04340377 -9	1.05230817 -9	1.06085949 -8	1.06908483 -7
2.23	1.04353329 -10	1.05243268 -8	1.06097938 -8	1.06920043 -8
2.24	1.04366271 -9	1.05255711 -8	1.06109919 -8	1.06931595 -7
2.25	1.04379204 -9	1.05268146 -10	1.06121892 -8	1.06943140 -8
2.26	1.04392128 -9	1.05280571 -7	1.06133857 -8	1.06954677 -7
2.27	1.04405043 -10	1.05292989 -10	1.06145814 -8	1.06966207 -8
2.28	1.04417948 -9	1.05305397 -8	1.06157763 -8	1.06977729 -7
2.29	1.04430844 -9	1.05317797 -8	1.06169704 -8	1.06989244 -7
2.30	1.04443731 -9	1.05330189 -9	1.06181637 -8	1.07000752 -8
2.31	1.04456609 -10	1.05342572 -9	1.06193562 -7	1.07012252 -7
2.32	1.04469477 -8	1.05354946 -8	1.06205480 -9	1.07023745 -7
2.33	1.04482337 -10	1.05367312 -8	1.06217389 -7	1.07035231 -8
2.34	1.04495187 -9	1.05379670 -9	1.06229291 -9	1.07046709 -7
2.35	1.04508028 -8	1.05392019 -8	1.06241184 -7	1.07058180 -8
2.36	1.04520861 -10	1.05404360 -9	1.06253070 -8	1.07069643 -6
2.37	1.04533684 -10	1.05416692 -8	1.06264948 -8	1.07081100 -8
2.38	1.04546497 -8	1.05429016 -9	1.06276818 -8	1.07092549 -8
2.39	1.04559302 -9	1.05441331 -8	1.06288680 -7	1.07103990 -7
2.40	1.04572098 -9	1.05453638 -8	1.06300535 -8	1.07115424 -6
2.41	1.04584885 -9	1.05465937 -9	1.06312382 -9	1.07126852 -9
2.42	1.04597663 -10	1.05478227 -8	1.06324220 -6	1.07138271 -6
2.43	1.04610431 -8	1.05490509 -8	1.06336052 -9	1.07149684 -8
2.44	1.04623191 -9	1.05502783 -9	1.06347875 -7	1.07161089 -7
2.45	1.04635942 -9	1.05515048 -8	1.06359691 -9	1.07172487 -7
2.46	1.04648684 -9	1.05527305 -9	1.06371498 -6	1.07183878 -7
2.47	1.04661417 -9	1.05539553 -7	1.06383299 -9	1.07195262 -8
2.48	1.04674141 -9	1.05551794 -9	1.06395091 -7	1.07206638 -8
2.49	1.04686856 -9	1.05564026 -9	1.06406876 -8	1.07218007 -7
2.50	1.04699562 0	1.05576249 0	1.06418653 0	1.07229369 0

LOG (G) FOR S=1.5

G-214	P			P			P		
		I=24			I=24			I=24	
	0.	1.05028373	0	0.50	1.05667501	-10	1.00	1.06283475	-9
	0.01	1.05041397	-10	0.51	1.05680040	-9	1.01	1.06295572	-8
	0.02	1.05054411	-11	0.52	1.05692570	-9	1.02	1.06307661	-9
	0.03	1.05067414	-10	0.53	1.05705091	-9	1.03	1.06319741	-8
	0.04	1.05080407	-9	0.54	1.05717603	-10	1.04	1.06331813	-8
	0.05	1.05093391	-11	0.55	1.05730105	-8	1.05	1.06343877	-9
	0.06	1.05106364	-10	0.56	1.05742599	-10	1.06	1.06355932	-9
	0.07	1.05119327	-10	0.57	1.05755083	-9	1.07	1.06367978	-7
	0.08	1.05132280	-10	0.58	1.05767558	-9	1.08	1.06380017	-9
	0.09	1.05145223	-10	0.59	1.05780024	-9	1.09	1.06392047	-8
	0.10	1.05158156	-10	0.60	1.05792481	-10	1.10	1.06404069	-9
	0.11	1.05171079	-10	0.61	1.05804928	-8	1.11	1.06416082	-8
	0.12	1.05183992	-9	0.62	1.05817367	-9	1.12	1.06428087	-8
	0.13	1.05196896	-11	0.63	1.05829797	-10	1.13	1.06440084	-9
	0.14	1.05209789	-10	0.64	1.05842217	-8	1.14	1.06452072	-8
	0.15	1.05222672	-9	0.65	1.05854629	-9	1.15	1.06464052	-8
	0.16	1.05235546	-10	0.66	1.05867032	-10	1.16	1.06476024	-8
	0.17	1.05248410	-10	0.67	1.05879425	-8	1.17	1.06487988	-9
	0.18	1.05261264	-10	0.68	1.05891810	-10	1.18	1.06499943	-7
	0.19	1.05274108	-10	0.69	1.05904185	-8	1.19	1.06511891	-9
	0.20	1.05286942	-10	0.70	1.05916552	-9	1.20	1.06523830	-9
	0.21	1.05299766	-9	0.71	1.05928910	-9	1.21	1.06535760	-7
	0.22	1.05312581	-10	0.72	1.05941259	-9	1.22	1.06547683	-8
	0.23	1.05325386	-10	0.73	1.05953599	-9	1.23	1.06559598	-9
	0.24	1.05338181	-10	0.74	1.05965930	-9	1.24	1.06571504	-8
	0.25	1.05350966	-9	0.75	1.05978252	-8	1.25	1.06583402	-8
	0.26	1.05363742	-10	0.76	1.05990566	-10	1.26	1.06595292	-8
	0.27	1.05376508	-9	0.77	1.06002870	-8	1.27	1.06607174	-8
	0.28	1.05389265	-10	0.78	1.06015166	-9	1.28	1.06619048	-8
	0.29	1.05402012	-10	0.79	1.06027453	-9	1.29	1.06630914	-8
	0.30	1.05414749	-10	0.80	1.06039731	-8	1.30	1.06642772	-9
	0.31	1.05427476	-9	0.81	1.06052001	-10	1.31	1.06654621	-7
	0.32	1.05440194	-9	0.82	1.06064261	-8	1.32	1.06666463	-8
	0.33	1.05452903	-10	0.83	1.06076513	-8	1.33	1.06678297	-9
	0.34	1.05465602	-10	0.84	1.06088757	-10	1.34	1.06690122	-7
	0.35	1.05478291	-9	0.85	1.06100991	-8	1.35	1.06701940	-9
	0.36	1.05490971	-9	0.86	1.06113217	-9	1.36	1.06713749	-7
	0.37	1.05503642	-11	0.87	1.06125434	-8	1.37	1.06725551	-8
	0.38	1.05516302	-8	0.88	1.06137643	-9	1.38	1.06737345	-9
	0.39	1.05528954	-10	0.89	1.06149843	-9	1.39	1.06749130	-7
	0.40	1.05541596	-9	0.90	1.06162034	-9	1.40	1.06760908	-8
	0.41	1.05554229	-10	0.91	1.06174216	-8	1.41	1.06772678	-8
	0.42	1.05566852	-9	0.92	1.06186390	-8	1.42	1.06784440	-8
	0.43	1.05579466	-10	0.93	1.06198556	-9	1.43	1.06796194	-8
	0.44	1.05592070	-9	0.94	1.06210713	-9	1.44	1.06807940	-8
	0.45	1.05604665	-9	0.95	1.06222861	-8	1.45	1.06819678	-7
	0.46	1.05617251	-10	0.96	1.06235001	-9	1.46	1.06831409	-9
	0.47	1.05629827	-9	0.97	1.06247132	-8	1.47	1.06843131	-7
	0.48	1.05642394	-9	0.98	1.06259255	-9	1.48	1.06854846	-8
	0.49	1.05654952	-9	0.99	1.06271369	-8	1.49	1.06866553	-8
	0.50	1.05667501	-10	1.00	1.06283475	-9	1.50	1.06878252	-8

LOG(G) FOR S=1.5

P	l=24		P	l=24	
1.50	1.06878252	-8	2.00	1.07453511	-6
1.51	1.06889943	-7	2.01	1.07464828	-8
1.52	1.06901627	-9	2.02	1.07476137	-7
1.53	1.06913302	-7	2.03	1.07487439	-7
1.54	1.06924970	-8	2.04	1.07498734	-8
1.55	1.06936630	-7	2.05	1.07510021	-6
1.56	1.06948283	-8	2.06	1.07521302	-8
1.57	1.06959928	-8	2.07	1.07532575	-6
1.58	1.06971565	-8	2.08	1.07543842	-8
1.59	1.06983194	-7	2.09	1.07555101	-7
1.60	1.06994816	-8	2.10	1.07566353	-8
1.61	1.07006430	-8	2.11	1.07577597	-6
1.62	1.07018036	-8	2.12	1.07588835	-7
1.63	1.07029634	-7	2.13	1.07600066	-8
1.64	1.07041225	-7	2.14	1.07611289	-6
1.65	1.07052809	-8	2.15	1.07622506	-8
1.66	1.07064385	-8	2.16	1.07633715	-6
1.67	1.07075953	-8	2.17	1.07644918	-8
1.68	1.07087513	-7	2.18	1.07656113	-7
1.69	1.07099066	-7	2.19	1.07667301	-6
1.70	1.07110612	-9	2.20	1.07678483	-8
1.71	1.07122149	-6	2.21	1.07689657	-7
1.72	1.07133680	-8	2.22	1.07700824	-6
1.73	1.07145203	-8	2.23	1.07711985	-8
1.74	1.07156718	-7	2.24	1.07723138	-6
1.75	1.07168226	-8	2.25	1.07734285	-8
1.76	1.07179726	-8	2.26	1.07745424	-6
1.77	1.07191218	-6	2.27	1.07756557	-8
1.78	1.07202704	-8	2.28	1.07767682	-6
1.79	1.07214182	-8	2.29	1.07778801	-8
1.80	1.07225652	-7	2.30	1.07789912	-6
1.81	1.07237115	-8	2.31	1.07801017	-7
1.82	1.07248570	-7	2.32	1.07812115	-7
1.83	1.07260018	-7	2.33	1.07823206	-7
1.84	1.07271459	-8	2.34	1.07834290	-6
1.85	1.07282892	-7	2.35	1.07845368	-8
1.86	1.07294318	-7	2.36	1.07856438	-6
1.87	1.07305737	-8	2.37	1.07867502	-7
1.88	1.07317148	-7	2.38	1.07878559	-8
1.89	1.07328552	-8	2.39	1.07889608	-5
1.90	1.07339948	-7	2.40	1.07900652	-8
1.91	1.07351337	-7	2.41	1.07911688	-7
1.92	1.07362719	-8	2.42	1.07922717	-4
1.93	1.07374093	-6	2.43	1.07933740	-7
1.94	1.07385461	-9	2.44	1.07944756	-7
1.95	1.07396820	-6	2.45	1.07955765	-6
1.96	1.07408173	-7	2.46	1.07966768	-8
1.97	1.07419519	-8	2.47	1.07977763	-6
1.98	1.07430857	-7	2.48	1.07988752	-6
1.99	1.07442188	-8	2.49	1.07999735	-8
2.00	1.07453511	-6	2.50	1.08010710	0

APPENDIX B

**Differences between Values of $\log G_1^{(1)}$
Tabulated by Brown and Brouwer
and the Values Computed for Comparison**

S ¹ =5	11	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	0	
	10	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	0	
	9	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	1	
	8	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	1	
	7	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	0	
	6	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	0	
	5	0000	1011	NNNN	NNNN	NNNN	NNNN	NNNN	1111	0000	1111	2
	4	1011	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	1111	0
	3	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	1111	0
	2	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	1111	0
	1	1111	1111	0000	1111	NNNN	NNNN	NNNN	1111	0000	0101	1
0	1111	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	1111	1	
S ⁰ =5	11	1111	NNNN	NNNN	NNNN	NNNN	NNNN	1111	1010	0000	0	
	10	1111	1010	1010	1111	1111	1111	1111	1111	1111	1	
	9	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	1	
	8	0000	1010	1111	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	1	
	7	1010	0000	1111	NNNN	NNNN	NNNN	NNNN	1111	0010	0	
	6	0111	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	1	
	5	1011	1111	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	1000	1	
	4	0011	0011	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	1000	0	
	3	0111	1111	NNNN	NNNN	NNNN	NNNN	NNNN	1000	0000	1010	0
	2	1011	NNNN	NNNN	0011	1111	0010	1111	1111	1010	0000	1
	1	0010	1000	0000	0010	0000	1000	0100	0000	0000	1010	0
0	0110	0111	1111	0100	0000	0100	0000	0000	0000	1111	0	
6	0111	0111	0111	0111	0111	0111	0111	0111	0111	0111	002	

<p>NASA TN D-1290 National Aeronautics and Space Administration. AN ADDITION TO THE YALE TABLES FOR THE DEVELOPMENT OF THE DISTURBING FUNCTION. Lloyd Carpenter. March 1962. 49p. OTS price, \$1.25. (NASA TECHNICAL NOTE D-1290)</p> <p>The tables for the development of the disturbing function, published by Brown and Brouwer in 1933, are extended for use in investigating sharp commen- surabilities and in computing long period effects in the motions of minor planets with large orbital semi- major axes. The logarithms of the coefficients of $\cos iS$ in the expansions of Δ^{-1} and Δ^{-3} are tabu- lated for $i = 12$ through 24.</p>	<p>I. Carpenter, Lloyd II. NASA TN D-1290</p> <p>(Initial NASA distribution: 6, Astronomy; 21, Geophysics and geodesy; 27, Mathematics; 33, Physics, theoretical; 46, Space mechanics.)</p>	<p>NASA TN D-1290 National Aeronautics and Space Administration. AN ADDITION TO THE YALE TABLES FOR THE DEVELOPMENT OF THE DISTURBING FUNCTION. Lloyd Carpenter. March 1962. 49p. OTS price, \$1.25. (NASA TECHNICAL NOTE D-1290)</p> <p>The tables for the development of the disturbing function, published by Brown and Brouwer in 1933, are extended for use in investigating sharp commen- surabilities and in computing long period effects in the motions of minor planets with large orbital semi- major axes. The logarithms of the coefficients of $\cos iS$ in the expansions of Δ^{-1} and Δ^{-3} are tabu- lated for $i = 12$ through 24.</p>	<p>I. Carpenter, Lloyd II. NASA TN D-1290</p> <p>(Initial NASA distribution: 6, Astronomy; 21, Geophysics and geodesy; 27, Mathematics; 33, Physics, theoretical; 46, Space mechanics.)</p>
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