Exp0

:

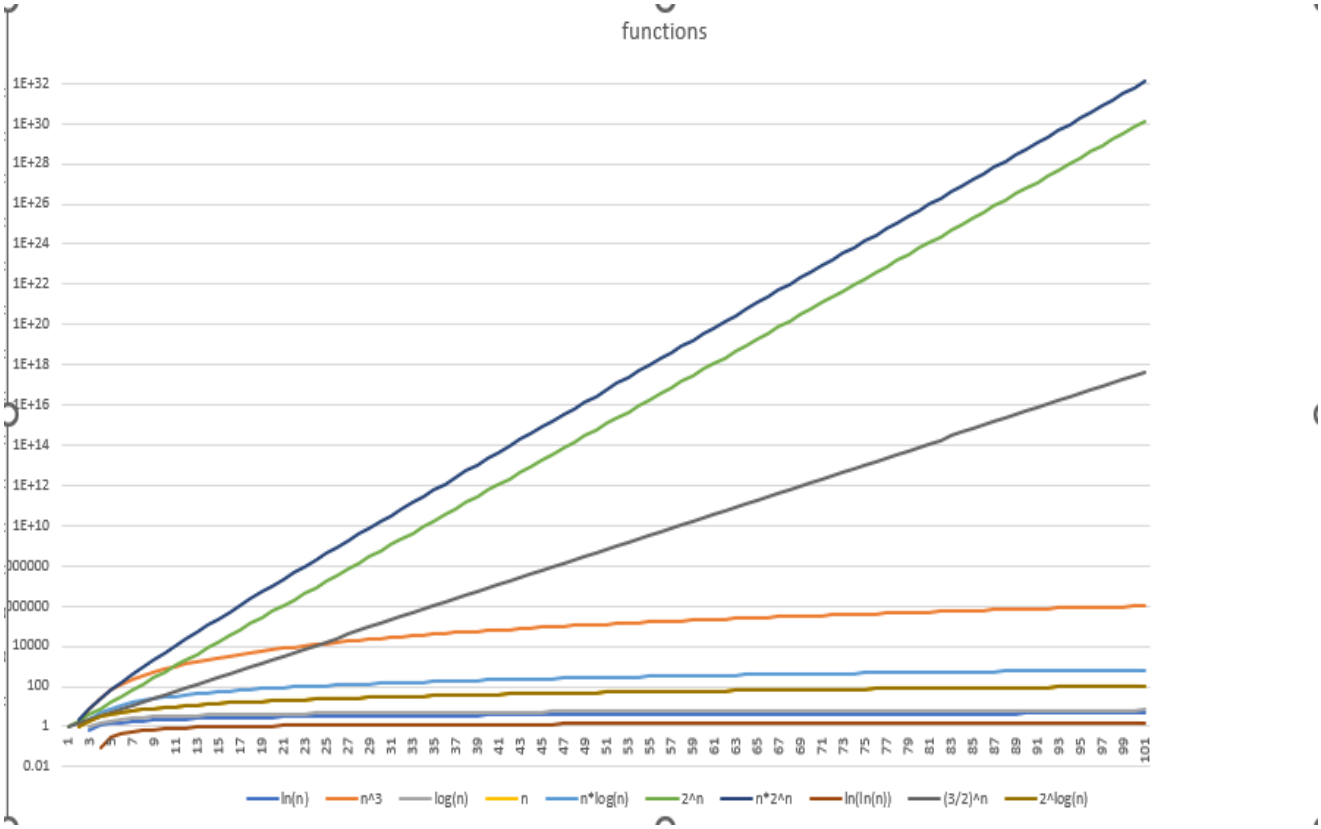
Maureen Miranda

Link to sheet:

https://1drv.ms/x/s!AilGdWH4QZwPuzerhkxcAxAVx1qw?e=cvJNmg&nav=MTVfezIwMUZCQjNBLUI4MDEtNEE1NS1BMUY1LTg2MjhCMDk5MUY1M30

	A	B	C	D	E	F	G	H	I	J
1	ln(n)	n^3	log(n)	n	n*log(n)	2^n	n*2^n	ln(ln(n))	(3/2)^n	2^logn
2	-Infinity	0	-Infinity	0	NaN	1	0	NaN	1	0
3	0	1	0	1	0	2	2	-Infinity	1.5	1
4	0.6931472	8	1	2	2	4	8	-0.366512921	2.25	2
5	1.0986123	27	1.5849625	3	4.754887502	8	24	0.094047828	3.375	3
6	1.3862944	64	2	4	8	16	64	0.32663426	5.0625	4
7	1.6094379	125	2.32192809	5	11.60964047	32	160	0.475884995	7.59375	5
8	1.7917595	216	2.5849625	6	15.509775	64	384	0.583198081	11.390625	6
9	1.9459101	343	2.80735492	7	19.65148445	128	896	0.665729811	17.0859375	7
10	2.0794415	512	3	8	24	256	2048	0.732099368	25.62890625	8
11	2.1972246	729	3.169925	9	28.52932501	512	4608	0.787195008	38.44335938	9
12	2.3025851	1000	3.32192809	10	33.21928095	1024	10240	0.834032445	57.66503906	10
13	2.3978953	1331	3.45943162	11	38.05374781	2048	22528	0.874591383	86.49755859	11
14	2.4849066	1728	3.5849625	12	43.01955001	4096	49152	0.910235093	129.7463379	12
15	2.5649494	2197	3.70043972	13	48.10571634	8192	106496	0.941938735	194.6195068	13
16	2.6390573	2744	3.80735492	14	53.30296891	16384	229376	0.970421781	291.9292603	14
17	2.7080502	3375	3.9068906	15	58.60335893	32768	491520	0.996228893	437.8938904	15
18	2.7725887	4096	4	16	64	65536	1048576	1.019781441	656.8408356	16
19	2.8332133	4913	4.08746284	17	69.4868683	131072	2228224	1.041411525	985.2612534	17
20	2.8903718	5832	4.169925	18	75.05865003	262144	4718592	1.06138513	1477.89188	18
21	2.944439	6859	4.24792751	19	80.71062276	524288	9961472	1.0799183	2216.83782	19
22	2.9957323	8000	4.32192809	20	86.4385619	1048576	2.10E+07	1.0971887	3325.25673	20
23	3.0445224	9261	4.39231742	21	92.23866588	2097152	4.40E+07	1.113344054	4987.885095	21
24	3.0910425	10648	4.45943162	22	98.10749561	4194304	9.23E+07	1.128508398	7481.827643	22
25	3.1354942	12167	4.52356196	23	104.041925	8388608	1.93E+08	1.142786806	11222.74146	23
26	3.1780538	13824	4.5849625	24	110.0391	1.68E+07	4.03E+08	1.156269006	16834.1122	24
27	3.2188758	15625	4.64385619	25	116.0964047	3.36E+07	8.39E+08	1.169032176	25251.16829	25
28	3.2580965	17576	4.70043972	26	122.2114327	6.71E+07	1.74E+09	1.181143141	37876.75244	26
29	3.2958369	19683	4.7548875	27	128.3819626	1.34E+08	3.62E+09	1.192660116	56815.12866	27
30	3.3322045	21952	4.80735492	28	134.6059378	2.68E+08	7.52E+09	1.2036341	85222.69299	28
31	3.3672958	24389	4.857981	29	140.8814489	5.37E+08	1.56E+10	1.214109998	127834.0395	29
32	3.4011974	27000	4.9068906	30	147.2067179	1.07E+09	3.22E+10	1.224127541	191751.0592	30
33	3.4339872	29791	4.95419631	31	153.5800856	2.15E+09	6.66E+10	1.233722036	287626.5888	31
34	3.4657359	32768	5	32	160	4.29E+09	1.37E+11	1.242924992	431439.8833	32
35	3.4965076	35937	5.04439412	33	166.4650059	8.59E+09	2.83E+11	1.251764631	647159.8249	33
36	3.5263605	39304	5.08746284	34	172.9737366	1.72E+10	5.84E+11	1.260266326	970739.7374	34
37	3.5553481	42875	5.12928302	35	179.5249056	3.44E+10	1.20E+12	1.268452966	1456109.606	35
38	3.5835189	46656	5.169925	36	186.1173001	6.87E+10	2.47E+12	1.276345261	2184164.409	36
39	3.6109179	50653	5.20945337	37	192.7497745	1.37E+11	5.09E+12	1.283962009	3276246.614	37
40	3.6375862	54872	5.24792751	38	199.4212455	2.75E+11	1.04E+13	1.291320319	4914369.92	38
41	3.6635616	59319	5.28540222	39	206.1306865	5.50E+11	2.14E+13	1.298435802	7371554.881	39
42	3.6888795	64000	5.32192809	40	212.8771238	1.10E+12	4.40E+13	1.305322741	1.11E+07	40
43	3.7135721	68921	5.357552	41	219.6596322	2.20E+12	9.02E+13	1.311994235	1.66E+07	41
44	3.7376696	74088	5.39231742	42	226.4773318	4.40E+12	1.85E+14	1.318462321	2.49E+07	42
45	3.7612001	79507	5.42626475	43	233.3293845	8.80E+12	3.78E+14	1.324738086	3.73E+07	43
46	3.7841896	85184	5.45943162	44	240.2149912	1.76E+13	7.74E+14	1.330831765	5.60E+07	44
47	3.8066625	91125	5.4918531	45	247.1333893	3.52E+13	1.58E+15	1.336752818	8.40E+07	45
48	3.8286414	97336	5.52356196	46	254.08385	7.04E+13	3.24E+15	1.342510013	1.26E+08	46
49	3.8501476	103823	5.55458885	47	261.065676	1.41E+14	6.61E+15	1.348111486	1.89E+08	47
50	3.871201	110592	5.5849625	48	268.0782	2.81E+14	1.35E+16	1.353564798	2.83E+08	48

	A	B	C	D	E	F	G	H	I	J	K
49	3.8501476	103823	5.554588852	47	261.065676	1.41E+14	6.61E+15	1.348111486	1.89E+08	47	
50	3.87120101	110592	5.584962501	48	268.0782	2.81E+14	1.35E+16	1.353564798	2.83E+08	48	
51	3.8918203	117649	5.614709844	49	275.1207824	5.63E+14	2.76E+16	1.358876991	4.25E+08	49	
52	3.91202301	125000	5.64385619	50	282.1928095	1.13E+15	5.63E+16	1.364054633	6.38E+08	50	
53	3.93182563	132651	5.672425342	51	289.2936924	2.25E+15	1.15E+17	1.369103856	9.56E+08	51	
54	3.95124372	140608	5.700439718	52	296.4228653	4.50E+15	2.34E+17	1.374030395	1.43E+09	52	
55	3.97029191	148877	5.727920455	53	303.5797841	9.01E+15	4.77E+17	1.378839622	2.15E+09	53	
56	3.98898405	157464	5.754887502	54	310.7639251	1.80E+16	9.73E+17	1.383536574	3.23E+09	54	
57	4.00733319	166375	5.781359714	55	317.9747842	3.60E+16	1.98E+18	1.388125979	4.84E+09	55	
58	4.02535169	175616	5.807354922	56	325.2118756	7.21E+16	4.04E+18	1.392612284	7.26E+09	56	
59	4.04305127	185193	5.832890014	57	332.4747308	1.44E+17	8.21E+18	1.396999671	1.09E+10	57	
60	4.06044301	195112	5.857980995	58	339.7628977	2.88E+17	1.67E+19	1.401292084	1.63E+10	58	
61	4.07753744	205379	5.882643049	59	347.0759399	5.76E+17	3.40E+19	1.405493239	2.45E+10	59	
62	4.09434456	216000	5.906890596	60	354.4134357	1.15E+18	6.92E+19	1.409606646	3.68E+10	60	
63	4.11087386	226981	5.930737338	61	361.7749776	2.31E+18	1.41E+20	1.413635625	5.52E+10	61	
64	4.12713439	238328	5.95419631	62	369.1601712	4.61E+18	2.86E+20	1.417583313	8.27E+10	62	
65	4.14313473	250047	5.977279923	63	376.5686352	9.22E+18	5.81E+20	1.421452682	1.24E+11	63	
66	4.15888308	262144	6	64	384	1.84E+19	1.18E+21	1.425246549	1.86E+11	64	
67	4.17438727	274625	6.022367813	65	391.4539078	3.69E+19	2.40E+21	1.428967586	2.79E+11	65	
68	4.18965474	287496	6.044394119	66	398.9300119	7.38E+19	4.87E+21	1.43261833	4.19E+11	66	
69	4.20469262	300763	6.06608919	67	406.4279758	1.48E+20	9.89E+21	1.436201192	6.28E+11	67	
70	4.21950771	314432	6.087462841	68	413.9474732	2.95E+20	2.01E+22	1.439718464	9.42E+11	68	
71	4.2341065	328509	6.108524457	69	421.4881875	5.90E+20	4.07E+22	1.443172327	1.41E+12	69	
72	4.24849524	343000	6.129283017	70	429.0498112	1.18E+21	8.26E+22	1.44656486	2.12E+12	70	
73	4.26267988	357911	6.14974712	71	436.6320455	2.36E+21	1.68E+23	1.449898042	3.18E+12	71	
74	4.27666612	373248	6.169925001	72	444.2346001	4.72E+21	3.40E+23	1.453173762	4.77E+12	72	
75	4.29045944	389017	6.189824559	73	451.8571928	9.44E+21	6.89E+23	1.456393823	7.16E+12	73	
76	4.30406509	405224	6.209453366	74	459.4995491	1.89E+22	1.40E+24	1.459559947	1.07E+13	74	
77	4.31748811	421875	6.22881869	75	467.1614018	3.78E+22	2.83E+24	1.462673778	1.61E+13	75	
78	4.33073334	438976	6.247927513	76	474.842491	7.56E+22	5.74E+24	1.46573689	2.42E+13	76	
79	4.34380542	456533	6.266786541	77	482.5425636	1.51E+23	1.16E+25	1.468750789	3.62E+13	77	
80	4.35670883	474552	6.285402219	78	490.2613731	3.02E+23	2.36E+25	1.471716916	5.43E+13	78	
81	4.36944785	493039	6.303780748	79	497.9986791	6.04E+23	4.78E+25	1.474636652	8.15E+13	79	
82	4.38202663	512000	6.321928095	80	505.7542476	1.21E+24	9.67E+25	1.477511319	1.22E+14	80	
83	4.39444915	531441	6.339850003	81	513.5278502	2.42E+24	1.96E+26	1.480342189	1.83E+14	81	
84	4.40671925	551368	6.357552005	82	521.3192644	4.84E+24	3.97E+26	1.483130478	2.75E+14	82	
85	4.41884061	571787	6.375039431	83	529.1282728	9.67E+24	8.03E+26	1.485877356	4.13E+14	83	
86	4.4308168	592704	6.392317423	84	536.9546635	1.93E+25	1.62E+27	1.488583946	6.19E+14	84	
87	4.44265126	614125	6.409390936	85	544.7982296	3.87E+25	3.29E+27	1.491251328	9.28E+14	85	
88	4.4543473	636056	6.426264755	86	552.6587689	7.74E+25	6.65E+27	1.49388054	1.39E+15	86	
89	4.46590812	658503	6.442943496	87	560.5360841	1.55E+26	1.35E+28	1.49647258	2.09E+15	87	
90	4.47733681	681472	6.459431619	88	568.4299824	3.09E+26	2.72E+28	1.499028409	3.13E+15	88	
91	4.48863637	704969	6.475733431	89	576.3402754	6.19E+26	5.51E+28	1.501548952	4.70E+15	89	
92	4.49980967	729000	6.491853096	90	584.2667787	1.24E+27	1.11E+29	1.5040351	7.05E+15	90	
93	4.51085951	753571	6.50779464	91	592.2093123	2.48E+27	2.25E+29	1.506487713	1.06E+16	91	
94	4.52178858	778688	6.523561956	92	600.1677	4.95E+27	4.56E+29	1.508907618	1.59E+16	92	
95	4.53259949	804357	6.539158811	93	608.1417694	9.90E+27	9.21E+29	1.511295614	2.38E+16	93	
96	4.54329478	830584	6.554588852	94	616.1313521	1.98E+28	1.86E+30	1.513652472	3.57E+16	94	
97	4.55387689	857375	6.569855608	95	624.1362828	3.96E+28	3.76E+30	1.515978934	5.35E+16	95	
98	4.56434819	884736	6.584962501	96	632.1564001	7.92E+28	7.61E+30	1.51827572	8.03E+16	96	
99	4.57471098	912673	6.599912842	97	640.1915457	1.58E+29	1.54E+31	1.520543523	1.20E+17	97	
100	4.58496748	941192	6.614709844	98	648.2415647	3.17E+29	3.11E+31	1.522783013	1.81E+17	98	
101	4.59511985	970299	6.62935662	99	656.3063054	6.34E+29	6.27E+31	1.524994838	2.71E+17	99	
102	4.60517019	1000000	6.64385619	100	664.385619	1.27E+30	1.27E+32	1.527179626	4.07E+17	100	



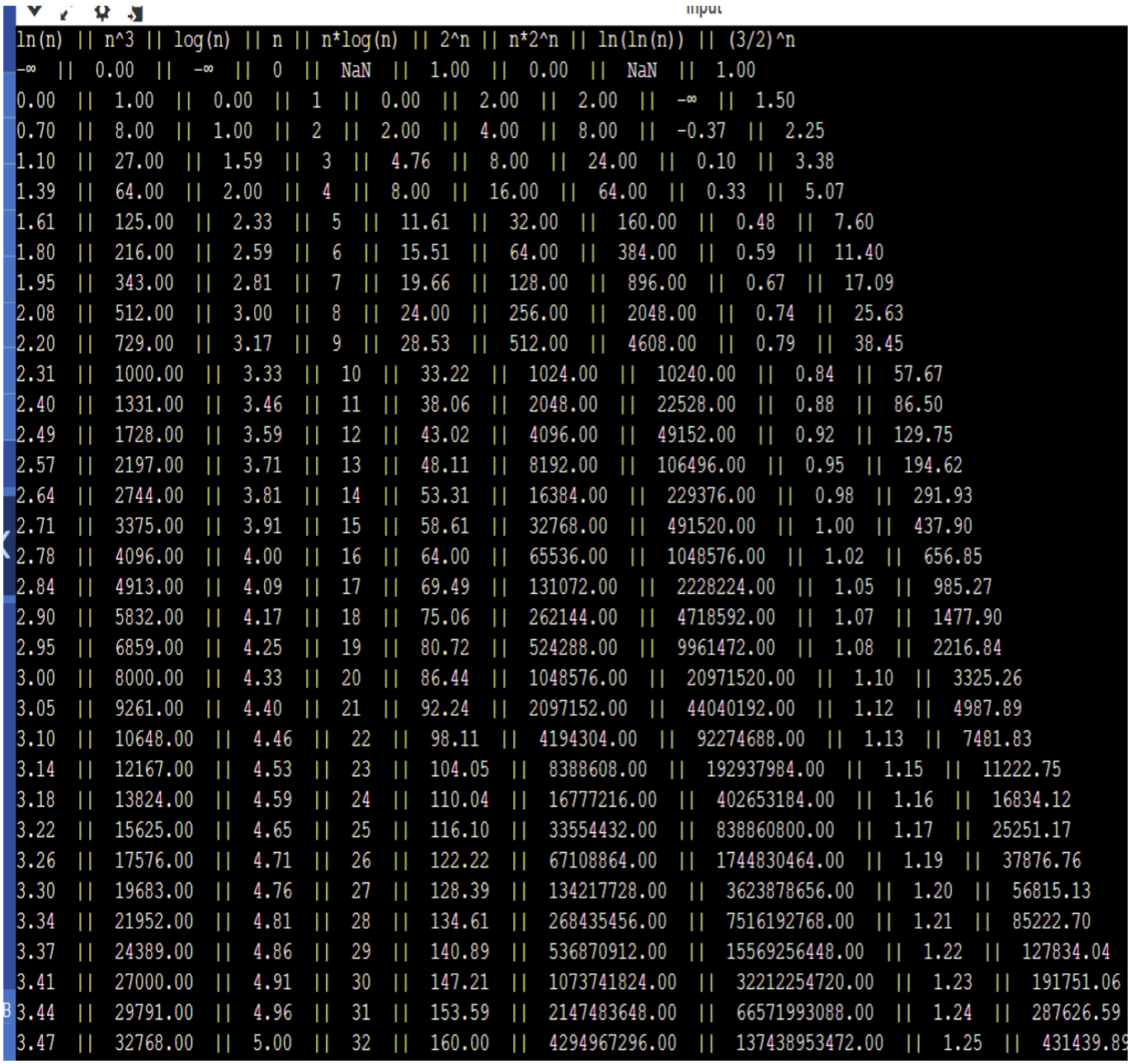

```java

import java.util.*;
import java.lang.*;
import java.math.RoundingMode;
import java.text.DecimalFormat;
public class Main
{


    public static void main(String[] args) {
    DecimalFormat decfor = new DecimalFormat("0.00");
    decfor.setRoundingMode(RoundingMode.UP);
    System.out.println("ln(n) || n^3 || log(n) || n || n*log(n) || 2^n || n*
    for(int i=0;i<=100;i++)
    {

        double x=Math.log(i)/Math.log(2);
        System.out.println(decfor.format(Math.log(i))+"  ||  "+decfor.format
        decfor.format((Math.log(i)/Math.log(2)))+
        "  ||  "+i+"  ||  "+decfor.format(i*(Math.log(i)/Math.log(2)))+"  ||
        "  ||  "+decfor.format(i*Math.pow(2,i))+
        "  ||  "+decfor.format(Math.log(Math.log(i)))+"  ||  "+decfor.format
    }
    }
}
```

Output:



ln(n)	n^3	log(n)	n	n*log(n)	2^n	n*2^n	ln(ln(n))	(3/2)^n
-∞	0.00	-∞	0	NaN	1.00	0.00	NaN	1.00
0.00	1.00	0.00	1	0.00	2.00	2.00	-∞	1.50
0.70	8.00	1.00	2	2.00	4.00	8.00	-0.37	2.25
1.10	27.00	1.59	3	4.76	8.00	24.00	0.10	3.38
1.39	64.00	2.00	4	8.00	16.00	64.00	0.33	5.07
1.61	125.00	2.33	5	11.61	32.00	160.00	0.48	7.60
1.80	216.00	2.59	6	15.51	64.00	384.00	0.59	11.40
1.95	343.00	2.81	7	19.66	128.00	896.00	0.67	17.09
2.08	512.00	3.00	8	24.00	256.00	2048.00	0.74	25.63
2.20	729.00	3.17	9	28.53	512.00	4608.00	0.79	38.45
2.31	1000.00	3.33	10	33.22	1024.00	10240.00	0.84	57.67
2.40	1331.00	3.46	11	38.06	2048.00	22528.00	0.88	86.50
2.49	1728.00	3.59	12	43.02	4096.00	49152.00	0.92	129.75
2.57	2197.00	3.71	13	48.11	8192.00	106496.00	0.95	194.62
2.64	2744.00	3.81	14	53.31	16384.00	229376.00	0.98	291.93
2.71	3375.00	3.91	15	58.61	32768.00	491520.00	1.00	437.90
2.78	4096.00	4.00	16	64.00	65536.00	1048576.00	1.02	656.85
2.84	4913.00	4.09	17	69.49	131072.00	2228224.00	1.05	985.27
2.90	5832.00	4.17	18	75.06	262144.00	4718592.00	1.07	1477.90
2.95	6859.00	4.25	19	80.72	524288.00	9961472.00	1.08	2216.84
3.00	8000.00	4.33	20	86.44	1048576.00	20971520.00	1.10	3325.26
3.05	9261.00	4.40	21	92.24	2097152.00	44040192.00	1.12	4987.89
3.10	10648.00	4.46	22	98.11	4194304.00	92274688.00	1.13	7481.83
3.14	12167.00	4.53	23	104.05	8388608.00	192937984.00	1.15	11222.75
3.18	13824.00	4.59	24	110.04	16777216.00	402653184.00	1.16	16834.12
3.22	15625.00	4.65	25	116.10	33554432.00	838860800.00	1.17	25251.17
3.26	17576.00	4.71	26	122.22	67108864.00	1744830464.00	1.19	37876.76
3.30	19683.00	4.76	27	128.39	134217728.00	3623878656.00	1.20	56815.13
3.34	21952.00	4.81	28	134.61	268435456.00	7516192768.00	1.21	85222.70
3.37	24389.00	4.86	29	140.89	536870912.00	15569256448.00	1.22	127834.04
3.41	27000.00	4.91	30	147.21	1073741824.00	32212254720.00	1.23	191751.06
3.44	29791.00	4.96	31	153.59	2147483648.00	66571993088.00	1.24	287626.59
3.47	32768.00	5.00	32	160.00	4294967296.00	137438953472.00	1.25	431439.89

4.10 || 216000.00 || 5.91 || 60 || 354.42 || 1152921504606846980.00 || 69175290276410820000.00 || 1.41 || 36768468716.94
4.12 || 226981.00 || 5.94 || 61 || 361.78 || 2305843009213694000.00 || 140656423562035330000.00 || 1.42 || 55152703075.4
4.13 || 238328.00 || 5.96 || 62 || 369.17 || 4611686018427387900.00 || 285924533142498050000.00 || 1.42 || 82729054613.1
4.15 || 250047.00 || 5.98 || 63 || 376.57 || 9223372036854776000.00 || 581072438321850900000.00 || 1.43 || 124093581919.
5
4.16 || 262144.00 || 6.00 || 64 || 384.00 || 18446744073709552000.00 || 1180591620717411300000.00 || 1.43 || 18614037287
.48
4.18 || 274625.00 || 6.03 || 65 || 391.46 || 36893488147419103000.00 || 2398076729582241700000.00 || 1.43 || 27921055931
.22
4.19 || 287496.00 || 6.05 || 66 || 398.94 || 73786976294838210000.00 || 4869940435459322000000.00 || 1.44 || 41881583897
.82
4.21 || 300763.00 || 6.07 || 67 || 406.43 || 147573952589676410000.00 || 9887454823508320000000.00 || 1.44 || 6282237584
8.23
4.22 || 314432.00 || 6.09 || 68 || 413.95 || 295147905179352830000.00 || 2007005755219599200000.00 || 1.44 || 942335637
02.34
4.24 || 328509.00 || 6.11 || 69 || 421.49 || 590295810358705650000.00 || 4073041091475069000000.00 || 1.45 || 141350345
553.51
4.25 || 343000.00 || 6.13 || 70 || 429.05 || 1180591620717411300000.00 || 8264141345021879000000.00 || 1.45 || 21202551
4830.26
4.27 || 357911.00 || 6.15 || 71 || 436.64 || 2361183241434822600000.00 || 1676440101418724000000000.00 || 1.45 || 3180382
77245.38
4.28 || 373248.00 || 6.17 || 72 || 444.24 || 4722366482869645000000.00 || 3400103867666144600000000.00 || 1.46 || 4770574
65868.07
4.30 || 389017.00 || 6.19 || 73 || 451.86 || 9444732965739290000000.00 || 6894655064989682000000000.00 || 1.46 || 7155861
48802.11
4.31 || 405224.00 || 6.21 || 74 || 459.50 || 18889465931478580000000.00 || 1397820478929415000000000.00 || 1.46 || 10733
91873203.15
4.32 || 421875.00 || 6.23 || 75 || 467.17 || 37778931862957160000000.00 || 2833419889721787000000000.00 || 1.47 || 16100
87809804.73
4.34 || 438976.00 || 6.25 || 76 || 474.85 || 75557863725914320000000.00 || 5742397643169489000000000.00 || 1.47 || 24151
81714707.09
4.35 || 456533.00 || 6.27 || 77 || 482.55 || 151115727451828650000000.00 || 1163591101379080600000000000.00 || 1.47 || 362
6547572060.63
4.36 || 474552.00 || 6.29 || 78 || 490.27 || 302231454903657300000000.00 || 2357405348248527000000000000.00 || 1.48 || 543