

NAME: VISHAKA HOLE

BATCH: COMPS A(C)

UID: 2021300043

CODE:

```
#include <stdio.h>
#include<math.h>

float power(int n)
{
    return pow(1.5, n);
}
float cube(int n)
{
    return n * n * n;
}

float logsq(int n)
{
    return log(n) * log(n);
}

float powpow(int n)
{
    return sqrt(log(n));
}

float loga(int n)
{
    return log(n);
}

float func(int n)
{
    return n * pow(2, n);
}

float logdiv(int n)
{
    return (log(n) / log(2.718));
}

float loga2(int n)
```


input										
Number	$(3/2)^n$	n^3	$(\lg n)^2$	$\sqrt{\log n}$	$\log n$	n^{2^n}	$\ln n$	$\log(\log n)$	e^n	2^n
0	1.00	0.00	inf	-nan	-inf	0.00	-inf	-nan	1.00	1.00
1	1.50	1.00	0.00	0.00	0.00	2.00	0.00	-inf	2.72	2.00
2	2.25	8.00	0.48	0.83	0.69	8.00	0.69	-0.37	7.39	4.00
3	3.38	27.00	1.21	1.05	1.10	24.00	1.10	0.09	20.09	8.00
4	5.06	64.00	1.92	1.18	1.39	64.00	1.39	0.33	54.60	16.00
5	7.59	125.00	2.59	1.27	1.61	160.00	1.61	0.48	148.41	32.00
6	11.39	216.00	3.21	1.34	1.79	384.00	1.79	0.58	403.43	64.00
7	17.09	343.00	3.79	1.39	1.95	896.00	1.95	0.67	1096.63	128.00
8	25.63	512.00	4.32	1.44	2.08	2048.00	2.08	0.73	2980.96	256.00
9	38.44	729.00	4.83	1.48	2.20	4608.00	2.20	0.79	8103.08	512.00
10	57.67	1000.00	5.30	1.52	2.30	10240.00	2.30	0.83	22026.46	1024.00
11	86.50	1331.00	5.75	1.55	2.40	22528.00	2.40	0.87	59874.14	2048.00
12	129.75	1728.00	6.17	1.58	2.48	49152.00	2.49	0.91	162754.80	4096.00
13	194.62	2197.00	6.58	1.60	2.56	106496.00	2.57	0.94	442413.41	8192.00
14	291.93	2744.00	6.96	1.62	2.64	229376.00	2.64	0.97	1202604.25	16384.00
15	437.89	3375.00	7.33	1.65	2.71	491520.00	2.71	1.00	3269017.25	32768.00
16	656.84	4096.00	7.69	1.67	2.77	1048576.00	2.77	1.02	8886111.00	65536.00
17	985.26	4913.00	8.03	1.68	2.83	2228224.00	2.83	1.04	24154952.00	131072.00
18	1477.89	5832.00	8.35	1.70	2.89	4718592.00	2.89	1.06	65659968.00	262144.00
19	2216.84	6859.00	8.67	1.72	2.94	9961472.00	2.94	1.08	178482304.00	524288.00
20	3325.26	8000.00	8.97	1.73	3.00	20971520.00	3.00	1.10	485165184.00	1048576.00
21	4987.89	9261.00	9.27	1.74	3.04	44040192.00	3.04	1.11	1318815744.00	2097152.00
22	7481.83	10648.00	9.55	1.76	3.09	92274688.00	3.09	1.13	3584912896.00	4194304.00
23	11222.74	12167.00	9.83	1.77	3.14	192937984.00	3.14	1.14	9744803840.00	8388608.00
24	16834.11	13824.00	10.10	1.78	3.18	402653184.00	3.18	1.16	26489122816.00	16777216.00
25	25251.17	15625.00	10.36	1.79	3.22	838860800.00	3.22	1.17	72004902912.00	33554432.00
26	37876.75	17576.00	10.62	1.81	3.26	1744830464.00	3.26	1.18	195729604608.00	67108864.00
27	56815.13	19683.00	10.86	1.82	3.30	3623878656.00	3.30	1.19	532048248832.00	134217728.00
28	85222.70	21952.00	11.10	1.83	3.33	7516192768.00	3.33	1.20	1446257098752.00	268435456.00
29	127834.04	24389.00	11.34	1.84	3.37	15569256448.00	3.37	1.21	3931334246400.00	536870912.00
30	191751.06	27000.00	11.57	1.84	3.40	32212254720.00	3.40	1.22	10686474223616.00	1073741824.00
31	287626.59	29791.00	11.79	1.85	3.43	66571993088.00	3.43	1.23	29048849825792.00	2147483648.00
32	431439.88	32768.00	12.01	1.86	3.47	137438953472.00	3.47	1.24	78962956959744.00	4294967296.00
33	647159.81	35937.00	12.23	1.87	3.50	283467841536.00	3.50	1.25	214643574308864.00	8589934592.00

output										
33	647159.81	35937.00	12.23	1.87	3.50	283467841536.00	3.50	1.25	214643574308864.00	8589934592.00
34	970739.75	39304.00	12.44	1.88	3.53	584115552256.00	3.53	1.26	583461710594048.00	17179869184.00
35	1456109.62	42875.00	12.64	1.89	3.56	1202590842880.00	3.56	1.27	1586013445029888.00	343597383
36	2184164.50	46656.00	12.84	1.89	3.58	2473901162496.00	3.58	1.28	4311231531843584.00	687194767
37	3276246.50	50653.00	13.04	1.90	3.61	5085241278464.00	3.61	1.28	11719142537166848.00	137438953
38	4914370.00	54872.00	13.23	1.91	3.64	10445360463872.00	3.64	1.29	31855931348221952.00	274877906
39	7371555.00	59319.00	13.42	1.91	3.66	21440476741632.00	3.66	1.30	86593404045099008.00	549755813
40	11057332.00	64000.00	13.61	1.92	3.69	43980465111040.00	3.69	1.31	235385270340419584.00	109951162
41	16585998.00	68921.00	13.79	1.93	3.71	90159953477632.00	3.71	1.31	639843474476105728.00	219902325
42	24878998.00	74088.00	13.97	1.93	3.74	184717953466368.00	3.74	1.32	1739274975342231552.00	439804651
43	37318496.00	79507.00	14.15	1.94	3.76	378231999954944.00	3.76	1.32	4727839526297272320.00	879609302
44	55977744.00	85184.00	14.32	1.95	3.78	774056185954304.00	3.78	1.33	12851599879817920512.00	175921860
45	83966616.00	91125.00	14.49	1.95	3.81	1583296743997440.00	3.81	1.34	34934270576908304384.00	351843720
46	125949928.00	97336.00	14.66	1.96	3.83	3236962232172544.00	3.83	1.34	94961195300687970304.00	703687441
47	188924896.00	103823.00	14.82	1.96	3.85	6614661952700416.00	3.85	1.35	258131289321808855040.00	140
48	283387328.00	110592.00	14.99	1.97	3.87	13510798882111488.00	3.87	1.35	701673558687019433984.00	281
49	425080992.00	117649.00	15.15	1.97	3.89	27584547717644288.00	3.89	1.36	1907346640522931339264.00	562
50	637621504.00	125000.00	15.30	1.98	3.91	56294995342131200.00	3.91	1.36	5184705457665546911744.00	112
51	956432256.00	132651.00	15.46	1.98	3.93	114841790497947648.00	3.93	1.37	14093490364499378569216.00	225

[illegible]

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84      618964514242560.00      592704.00      19.63      2.10      4.43      1624796301562061610805100544.00      4.43      1.49      30250773415262887
12760030518872899584.00      19342813113834066795298816.00
85      928446771363840.00      614125.00      19.74      2.11      4.44      3288278229351791355200798720.00      4.44      1.49      82230130268435815
62725734558126309376.00      38685626227668133590597632.00
86      1392670123491328.00      636056.00      19.84      2.11      4.45      6653927711158918977582792704.00      4.45      1.49      22352465286715965
841379746666550132736.00      77371252455336267181195264.00
87      2089005252345856.00      658503.00      19.94      2.11      4.47      13462597927228510489527975936.00      4.47      1.50      607603034
73996161125322321925848956928.00      154742504910672534362390528.00
88      3133508012736512.00      681472.00      20.05      2.12      4.48      27234680864278366047780732928.00      4.48      1.50      165163626
613613066163770348909654704128.00      309485009821345068724781056.00
89      4700261884887040.00      704969.00      20.15      2.12      4.49      55088331748199422233011027968.00      4.49      1.50      inf      618
970019642690137449562112.00
90      7050392827330560.00      729000.00      20.25      2.12      4.50      111414603535684224740921180160.00      4.50      1.50      inf      123
7940039285380274899124224.00
91      10575589240995840.00      753571.00      20.35      2.12      4.51      225305087149939210031640608768.00      4.51      1.51      inf      247
5880078570760549798248448.00
92      15863383324622848.00      778688.00      20.45      2.13      4.52      455561934457019941162877714432.00      4.52      1.51      inf      495
1760157141521099596496896.00
93      23795076597547008.00      804357.00      20.54      2.13      4.53      921027389228322924524948422656.00      4.53      1.51      inf      990
3520314283042199192993792.00
94      35692612748836864.00      830584.00      20.64      2.13      4.54      1861861819085211933448282832896.00      4.54      1.51      inf      198
07040628566084398385987584.00
95      53538919123255296.00      857375.00      20.74      2.13      4.55      3763337719427556035693337640960.00      4.55      1.52      inf      396
14081257132168796771975168.00
96      80308380832366592.00      884736.00      20.83      2.14      4.56      7605903601369376408980219232256.00      4.56      1.52      inf      792
28162514264337593543950336.00
97      120462571248549888.00      912673.00      20.93      2.14      4.57      15370263527767281493147526365184.00      4.58      1.52      inf      158
456325028528675187087900672.00
98      180693861167792128.00      941192.00      21.02      2.14      4.58      31057439705591620336669228531712.00      4.59      1.52      inf      316
912650057057350374175801344.00
99      271040783161753600.00      970299.00      21.12      2.14      4.60      62748704711297355374086808666112.00      4.60      1.52      inf      633
825300114114700748351602688.00
100      406561191922499584.00      1000000.00      21.21      2.15      4.61      126765060022822940149670320537600.00      4.61      1.53      inf      126
7650600228229401496703205376.00
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88      3133508012736512.00      681472.00      20.05      2.12      4.48      27234680864278366047780732928.00      4.48      1.50      165163626
613613066163770348909654704128.00      309485009821345068724781056.00
89      4700261884887040.00      704969.00      20.15      2.12      4.49      55088331748199422233011027968.00      4.49      1.50      inf      618
970019642690137449562112.00
90      7050392827330560.00      729000.00      20.25      2.12      4.50      111414603535684224740921180160.00      4.50      1.50      inf      123
7940039285380274899124224.00
91      10575589240995840.00      753571.00      20.35      2.12      4.51      225305087149939210031640608768.00      4.51      1.51      inf      247
5880078570760549798248448.00
92      15863383324622848.00      778688.00      20.45      2.13      4.52      455561934457019941162877714432.00      4.52      1.51      inf      495
1760157141521099596496896.00
93      23795076597547008.00      804357.00      20.54      2.13      4.53      921027389228322924524948422656.00      4.53      1.51      inf      990
3520314283042199192993792.00
94      35692612748836864.00      830584.00      20.64      2.13      4.54      1861861819085211933448282832896.00      4.54      1.51      inf      198
07040628566084398385987584.00
95      53538919123255296.00      857375.00      20.74      2.13      4.55      3763337719427556035693337640960.00      4.55      1.52      inf      396
14081257132168796771975168.00
96      80308380832366592.00      884736.00      20.83      2.14      4.56      7605903601369376408980219232256.00      4.56      1.52      inf      792
28162514264337593543950336.00
97      120462571248549888.00      912673.00      20.93      2.14      4.57      15370263527767281493147526365184.00      4.58      1.52      inf      158
456325028528675187087900672.00
98      180693861167792128.00      941192.00      21.02      2.14      4.58      31057439705591620336669228531712.00      4.59      1.52      inf      316
912650057057350374175801344.00
99      271040783161753600.00      970299.00      21.12      2.14      4.60      62748704711297355374086808666112.00      4.60      1.52      inf      633
825300114114700748351602688.00
100      406561191922499584.00      1000000.00      21.21      2.15      4.61      126765060022822940149670320537600.00      4.61      1.53      inf      126
7650600228229401496703205376.00

Factorial of first 20 numbers
Number  n!
0      1.001      1.002      2.003      6.004      24.005      120.006      720.007      5040.008      40320.009      362880.0010      3628800.0011      39916800.
0012      479001600.0013      6227020800.0014      87178289152.0015      1307674279936.0016      20922788478976.0017      355687414628352.0018      64023
73530419200.0019      121645096004222976.0020      2432902023163674624.00

...Program finished with exit code 0
Press ENTER to exit console.
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