INFORMATION BOOKLET

Algebra

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$\sum_{i=1}^{n} 1 = n$$

$$S_n = \frac{n}{2} \left[2a + (n-1)d \right]$$

$$z=a+bi$$

$$\ln A + \ln B = \ln (AB)$$

$$\ln A^n = n \ln A$$

$$|x| = \begin{cases} x & ; & x \ge 0 \\ -x & ; & x < 0 \end{cases}$$

$$\sum_{i=1}^{n} i = \frac{n(n+1)}{2} = \frac{n^2}{2} + \frac{n}{2}$$

$$S_n = \frac{a(1-r^n)}{1-r}$$

$$z^* = a - bi$$

$$\ln A - \ln B = \ln \left(\frac{A}{B} \right)$$

$$\log_a x = \frac{\log_b x}{\log_b a}$$

 $\int_{0}^{b} x^{n} dx = \left[\frac{x^{n+1}}{n+1} \right]_{0}^{b}, \quad n \neq -1$

Calculus

Area =
$$\lim_{n\to\infty} \left(\frac{b-a}{n}\right) \sum_{i=1}^{n} f(x_i)$$

$$f'(x) = \lim_{h \to 0} \frac{f(x+h) - f(x)}{h}$$

$$\int f'(g(x)).g'(x)dx = f(g(x)) + c$$

$$\int f(x).g'(x)dx = f(x).g(x) - \int g(x).f'(x)dx + c$$

$$X_{r+1} = X_r - \frac{f(X_r)}{f'(X_r)}$$

 $V = \pi \int_{0}^{b} y^{2} dx$

 $\frac{dy}{dx} = \frac{dy}{dt} \times \frac{dt}{dx}$

Function	Derivative
x ⁿ	nx^{n-1}
sin x	cos x
COS X	−sin <i>x</i>
tan x	sec ² x
cot x	-cosec ² x
sec x	sec x.tan x
cosec x	-cosec x.cot x
e ^x	e ^x
ln x	$\frac{1}{x}$
f(g(x))	f'(g(x)).g'(x)
f(x).g(x)	g(x).f'(x)+f(x).g'(x)
f(x)	g(x).f'(x)-f(x).g'(x)
$\overline{g(x)}$	$\left[g(x)\right]^2$

$$A = \frac{1}{2}r^2\theta \qquad \qquad s = r\theta$$

In
$$\triangle ABC$$
:
$$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$
$$a^2 = b^2 + c^2 - 2bc.\cos A$$

$$Area = \frac{1}{2}ab.\sin C$$

$$1+\cot^2 A = \csc^2 A$$

$$\sin(A \pm B) = \sin A.\cos B \pm \cos A \sin B$$

$$\cos(A \pm B) = \cos A \cos B \mp \sin A \sin B$$

$$\cos 2A = \begin{cases} \cos^2 A - \sin^2 A \\ 2\cos^2 A - 1 \\ 1 - 2\sin^2 A \end{cases}$$

$$\sin A.\cos B = \frac{1}{2} \left[\sin(A+B) + \sin(A-B) \right]$$

$$\sin A.\sin B = \frac{1}{2} \left[\cos(A-B) - \cos(A+B)\right]$$

$$\cos A.\cos B = \frac{1}{2} \left[\cos(A-B) + \cos(A+B)\right]$$

Matrix Transformations

$$\begin{pmatrix}
\cos\theta & -\sin\theta \\
\sin\theta & \cos\theta
\end{pmatrix} \qquad \begin{pmatrix}
\cos 2\theta & \sin 2\theta \\
\sin 2\theta & -\cos 2\theta
\end{pmatrix}$$

Finance & Modelling

$$F = P(1+in) F = P(1-in) F = P(1+i)^n F = P(1-i)^n$$

$$F = x \left[\frac{(1+i)^n - 1}{i} \right] P = x \left[\frac{1 - (1+i)^{-n}}{i} \right] r_{eff} = \left(1 + \frac{r}{k} \right)^k - 1$$

$$P_{n+1} = P_n + rP_n \left(1 - \frac{P_n}{K} \right)$$

$$R_{n+1} = R_n + aR_n \left(1 - \frac{R_n}{K} \right) - bR_n F_n F_{n+1} = F_n + f bR_n F_n - cF_n$$

Statistics

$$P(A) = \frac{n(A)}{n(S)} \qquad P(B|A) = \frac{P(B \cap A)}{P(A)} \qquad P(A \cup B) = P(A) + P(B) - P(A \cap B)$$

$${}^{n}P_{r} = \frac{n!}{(n-r)!} \qquad {}^{n}C_{r} = \binom{n}{r} = \frac{n!}{(n-r)!r!} \qquad P(X = x) = \binom{n}{x}p^{x}(1-p)^{n-x}$$

$$P(R = r) = \frac{\binom{p}{r}\binom{N-p}{n-r}}{\binom{N}{n}} \qquad E[X] = n \cdot p \qquad Var[X] = n \cdot p(1-p)$$

$$z = \frac{X-\mu}{\sigma} \qquad z = \frac{\overline{X}-\mu}{\frac{\sigma}{\sqrt{n}}} \qquad z = \frac{(\overline{X}-\overline{Y})-(\mu_{x}-\mu_{y})}{\sqrt{\frac{\sigma_{x}^{2}}{n_{x}} + \frac{\sigma_{y}^{2}}{n_{y}}}}$$

$$\overline{X} \pm z\frac{\sigma}{\sqrt{n}} \qquad p \pm z\sqrt{\frac{p(1-p)}{n}} \qquad E[X] = \sum x \cdot P(X = x)$$

$$Var[X] = E[X^{2}] - (E[X])^{2}$$

IEB Copyright © 2021

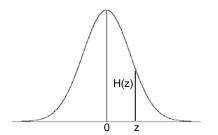
NORMAL DISTRIBUTION TABLE

Areas under the Normal Curve

$$H(z) = \frac{1}{\sqrt{2\pi}} \int_{0}^{z} e^{-\frac{1}{2}x^{2}} dx$$

$$\mathsf{H}(\mathsf{-z}) = \mathsf{H}(\mathsf{z}), \, \mathsf{H}(\infty) = \frac{1}{2}$$

Entries in the table are values of H(z) for $z \ge 0$.



2,4 ,49180 ,49202 ,49224 ,49245 ,49266 ,49286 ,49305 ,49324 ,49343 ,49361 2,5 ,49379 ,49396 ,49413 ,49430 ,49446 ,49461 ,49477 ,49492 ,49506 ,49520 2,6 ,49534 ,49547 ,49560 ,49573 ,49585 ,49598 ,49609 ,49621 ,49632 ,49643 2,7 ,49653 ,49664 ,49674 ,49683 ,49693 ,49702 ,49711 ,49720 ,49728 ,49736 2,8 ,49744 ,49752 ,49760 ,49767 ,49774 ,49781 ,49886 ,49851 ,49856 ,49861 3,0 ,49813 ,49825 ,49831 ,49836 ,49841 ,49846 ,49851 ,49856 ,49861 3,0 ,49865 ,49869 ,49874 ,49878 ,49882 ,49886 ,49889 ,49893 ,49926 ,49926 3,1 ,49903 ,49906 ,49910 ,49913 ,49916 ,49918 ,49944 ,49946 ,49946 ,49948	Z	,00	,01	,02	,03	,04	,05	,06	,07	,08	,09
0,2 0,793 0,832 0,871 0,910 0,948 0,987 1,026 ,1064 ,1103 ,1141 0,3 1,179 1,217 ,1255 ,1293 ,1331 ,1368 ,1406 ,1443 ,1480 ,1517 0,4 ,1554 ,1591 ,1628 ,1664 ,1700 ,1736 ,1772 ,1808 ,1844 ,1879 0,5 ,1915 ,1950 ,1985 ,2019 ,2054 ,2088 ,2123 ,2157 ,2190 ,2224 0,6 ,2257 ,2291 ,2324 ,2357 ,2389 ,2422 ,2454 ,2486 ,2517 ,2580 0,8 ,2881 ,2910 ,2939 ,2967 ,2995 ,3023 ,3051 ,3078 ,3106 ,3133 0,9 ,3159 ,3186 ,3212 ,3238 ,3264 ,3289 ,3315 ,3544 ,3577 ,3599 ,3621 1,1 ,3643 ,3665 ,3686 ,3708 <	0,0	,0000	,0040	,0080	,0120	,0160	,0199	,0239	,0279	,0319	,0359
0,3 1,179 1,217 ,1255 ,1293 ,1331 ,1368 ,1406 ,1443 ,1480 ,1517 0,4 ,1554 ,1591 ,1628 ,1664 ,1700 ,1736 ,1772 ,1808 ,1844 ,1879 0,5 ,1915 ,1950 ,1985 ,2019 ,2054 ,2088 ,2123 ,2157 ,2190 ,2224 0,6 ,2257 ,2291 ,2324 ,2357 ,2389 ,2422 ,2454 ,2486 ,2517 ,2549 0,7 ,2580 ,2611 ,2642 ,2673 ,2704 ,2734 ,2764 ,2794 ,2823 ,2852 0,8 ,2881 ,2910 ,2939 ,2967 ,2995 ,3023 ,3051 ,3078 ,3106 ,3133 0,9 ,3143 ,3488 ,3461 ,3485 ,3508 ,3531 ,3554 ,3577 ,3599 ,3621 1,1 ,3643 ,3665 ,3686 ,3708 ,3729 <		,0398									
0.4 ,1554 ,1591 ,1628 ,1664 ,1700 ,1736 ,1772 ,1808 ,1844 ,1879 0.5 ,1915 ,1950 ,1985 ,2019 ,2054 ,2088 ,2123 ,2157 ,2190 ,2224 0.6 ,2257 ,2291 ,2324 ,2367 ,2389 ,2422 ,2454 ,2486 ,2517 ,2549 0.8 ,2881 ,2910 ,2939 ,2967 ,2995 ,3023 ,3051 ,3078 ,3106 ,3133 0.9 ,3159 ,3186 ,3212 ,3238 ,3644 ,3289 ,3315 ,3340 ,3365 ,3389 1,0 ,3413 ,3481 ,3461 ,3485 ,3508 ,3531 ,3554 ,3577 ,3599 ,3621 1,1 ,3643 ,3665 ,3686 ,3708 ,3729 ,3749 ,3770 ,3790 ,3810 ,3830 1,2 ,3849 ,3869 ,3888 ,3907 ,3925 <	1										
0.5 .1915 .1950 .1985 .2019 .2054 .2088 .2123 .2157 .2190 .2224 0.6 .2257 .2291 .2324 .2357 .2389 .2422 .2454 .2486 .2517 .2549 0.7 .2580 .2611 .2642 .2673 .2704 .2734 .2764 .2794 .2823 .2852 0.8 .2881 .2910 .2939 .2967 .2995 .3023 .3051 .3078 .3106 .3133 0.9 .3159 .3186 .3212 .3238 .3264 .3289 .3315 .3340 .3365 .3380 1.0 .3413 .3486 .3686 .3708 .3729 .3749 .3770 .3790 .3810 .3830 1.2 .3849 .3869 .3888 .3907 .3925 .3944 .3962 .3980 .3997 .4015 1.3 .4032 .4049 .4066 .4082 .4099 <								·			·
0,6 2257 2291 2324 2357 2389 2422 2454 2486 2517 2549 0,7 2580 2611 2642 2673 2704 2734 2764 2794 2823 2852 0,8 2881 2910 2939 2967 2995 3023 3051 3078 3106 3133 0,9 3,159 3,186 ,3212 ,3238 ,3264 ,3289 ,3315 ,3340 ,3365 ,3686 1,0 ,3413 ,3438 ,3461 ,3485 ,3508 ,3531 ,3554 ,3577 ,3599 ,3621 1,1 ,3643 ,3665 ,3686 ,3708 ,3729 ,3749 ,3770 ,3790 ,3810 ,3830 1,2 ,3849 ,3869 ,3888 ,3907 ,3925 ,3944 ,3962 ,3980 ,3997 ,4015 1,3 ,4032 ,4049 ,4066 ,4082 ,4099 ,4115 ,413	0,4	,1554	,1591	,1628	,1664	,1700	,1736	,1772	,1808	,1844	,1879
0,6 2257 2291 2324 2357 2389 2422 2454 2486 2517 2549 0,7 2580 2611 2642 2673 2704 2734 2764 2794 2823 2852 0,8 2881 2910 2939 2967 2995 3023 3051 3078 3106 3133 0,9 3,159 3,186 ,3212 ,3238 ,3264 ,3289 ,3315 ,3340 ,3365 ,3686 1,0 ,3413 ,3438 ,3461 ,3485 ,3508 ,3531 ,3554 ,3577 ,3599 ,3621 1,1 ,3643 ,3665 ,3686 ,3708 ,3729 ,3749 ,3770 ,3790 ,3810 ,3830 1,2 ,3849 ,3869 ,3888 ,3907 ,3925 ,3944 ,3962 ,3980 ,3997 ,4015 1,3 ,4032 ,4049 ,4066 ,4082 ,4099 ,4115 ,413	0,5	,1915	,1950	,1985	,2019	,2054	,2088	,2123	,2157	,2190	,2224
0,8 ,2881 ,2910 ,2939 ,2967 ,2995 ,3023 ,3051 ,3078 ,3106 ,3133 0,9 ,3159 ,3186 ,3212 ,3238 ,3264 ,3289 ,3315 ,3340 ,3365 ,3389 1,0 ,3413 ,3438 ,3461 ,3485 ,3508 ,3531 ,3554 ,3577 ,3599 ,3621 1,1 ,3643 ,3665 ,3686 ,3708 ,3729 ,3749 ,3770 ,3790 ,3810 ,3830 1,2 ,3849 ,3869 ,3888 ,3907 ,3925 ,3944 ,3962 ,3980 ,3997 ,4015 1,3 ,4032 ,4049 ,4066 ,4082 ,4099 ,4115 ,4131 ,4147 ,4162 ,4177 1,4 ,4192 ,4207 ,4222 ,4236 ,4251 ,4265 ,4279 ,4292 ,4306 ,4319 1,5 ,4332 ,4345 ,4357 ,4370 ,4382 <		,2257	,2291			,2389		,2454	,2486		,2549
0,9 ,3159 ,3186 ,3212 ,3238 ,3264 ,3289 ,3315 ,3340 ,3365 ,3389 1,0 ,3413 ,3438 ,3461 ,3485 ,3508 ,3531 ,3554 ,3577 ,3599 ,3621 1,1 ,3643 ,3665 ,3686 ,3708 ,3729 ,3749 ,3770 ,3790 ,3810 ,3830 1,2 ,3849 ,3869 ,3888 ,3907 ,3925 ,3944 ,3962 ,3980 ,3997 ,4015 1,3 ,4032 ,4049 ,4066 ,4082 ,4099 ,4115 ,4131 ,4147 ,4162 ,4177 1,4 ,4192 ,4207 ,4222 ,4236 ,4251 ,4265 ,4279 ,4292 ,4306 ,4319 1,5 ,4332 ,4345 ,4357 ,4370 ,4382 ,4394 ,4406 ,4418 ,4429 1,7 ,4554 ,4564 ,4573 ,4582 ,4591 ,4599 <	0,7	,2580	,2611	,2642	,2673	,2704	,2734	,2764	,2794	,2823	,2852
1,0 ,3413 ,3438 ,3461 ,3485 ,3508 ,3531 ,3554 ,3577 ,3599 ,3621 1,1 ,3643 ,3665 ,3686 ,3708 ,3729 ,3749 ,3770 ,3790 ,3810 ,3830 1,2 ,3849 ,3869 ,3888 ,3907 ,3925 ,3944 ,3962 ,3980 ,3997 ,4015 1,3 ,4032 ,4049 ,4066 ,4082 ,4099 ,4115 ,4131 ,4147 ,4162 ,4177 1,4 ,4192 ,4207 ,4222 ,4236 ,4251 ,4265 ,4279 ,4292 ,4306 ,4319 1,5 ,4332 ,4345 ,4357 ,4370 ,4382 ,4394 ,4406 ,4418 ,4429 ,4441 1,6 ,4452 ,4463 ,4474 ,4484 ,4495 ,4505 ,4515 ,4525 ,4535 ,4545 1,7 ,4554 ,4564 ,4573 ,4582 ,4591 ,4599 ,4608 ,4616 ,4625 ,4633 1,8 ,4641	0,8	,2881	,2910	,2939	,2967	,2995	,3023	,3051	,3078	,3106	,3133
1,1 ,3643 ,3665 ,3686 ,3708 ,3729 ,3749 ,3770 ,3790 ,3810 ,3830 1,2 ,3849 ,3869 ,3888 ,3907 ,3925 ,3944 ,3962 ,3980 ,3997 ,4015 1,3 ,4032 ,4049 ,4066 ,4082 ,4099 ,4115 ,4131 ,4147 ,4162 ,4177 1,4 ,4192 ,4207 ,4222 ,4236 ,4251 ,4265 ,4279 ,4292 ,4306 ,4319 1,5 ,4332 ,4345 ,4357 ,4370 ,4382 ,4394 ,4406 ,4418 ,4429 ,4441 1,6 ,4452 ,4463 ,4474 ,4484 ,4495 ,4554 ,4554 ,4554 ,4554 ,4554 ,4554 ,4564 ,4573 ,4582 ,4591 ,4599 ,4608 ,4616 ,4625 ,4633 1,8 ,4641 ,4649 ,4656 ,4664 ,4671 ,4678 ,4686 ,4669 ,4941 ,496 ,4966 ,4968 ,4812 ,4817 <	0,9	,3159	,3186	,3212	,3238	,3264	,3289	,3315	,3340	,3365	,3389
1,1 ,3643 ,3665 ,3686 ,3708 ,3729 ,3749 ,3770 ,3790 ,3810 ,3830 1,2 ,3849 ,3869 ,3888 ,3907 ,3925 ,3944 ,3962 ,3980 ,3997 ,4015 1,3 ,4032 ,4049 ,4066 ,4082 ,4099 ,4115 ,4131 ,4147 ,4162 ,4177 1,4 ,4192 ,4207 ,4222 ,4236 ,4251 ,4265 ,4279 ,4292 ,4306 ,4319 1,5 ,4332 ,4345 ,4357 ,4370 ,4382 ,4394 ,4406 ,4418 ,4429 ,4441 1,6 ,4452 ,4463 ,4474 ,4484 ,4495 ,4554 ,4554 ,4554 ,4554 ,4554 ,4554 ,4564 ,4573 ,4582 ,4591 ,4599 ,4608 ,4616 ,4625 ,4633 1,8 ,4641 ,4649 ,4656 ,4664 ,4671 ,4678 ,4686 ,4669 ,4941 ,496 ,4966 ,4968 ,4812 ,4817 <	1.0	.3413	.3438	.3461	.3485	.3508	.3531	.3554	.3577	.3599	.3621
1,2 ,3849 ,3869 ,3888 ,3907 ,3925 ,3944 ,3962 ,3980 ,3997 ,4015 1,3 ,4032 ,4049 ,4066 ,4082 ,4099 ,4115 ,4131 ,4147 ,4162 ,4177 1,4 ,4192 ,4207 ,4222 ,4236 ,4251 ,4265 ,4279 ,4292 ,4306 ,4319 1,5 ,4332 ,4345 ,4357 ,4370 ,4382 ,4394 ,4406 ,4418 ,4429 ,4441 1,6 ,4452 ,4463 ,4474 ,4484 ,4495 ,4505 ,4515 ,4525 ,4535 ,4545 1,7 ,4554 ,4564 ,4573 ,4582 ,4591 ,4599 ,4608 ,4616 ,4625 ,4633 1,8 ,4641 ,4649 ,4656 ,4664 ,4671 ,4678 ,4686 ,4893 ,4699 <t,4761< td=""> ,4767 2,0 ,4772 ,4778 ,4783 ,4788 ,4793 ,4798 ,4803 ,4884 ,4857 2,1 ,4821</t,4761<>			·			·				´	´
1,4 ,4192 ,4207 ,4222 ,4236 ,4251 ,4265 ,4279 ,4292 ,4306 ,4319 1,5 ,4332 ,4345 ,4357 ,4370 ,4382 ,4394 ,4406 ,4418 ,4429 ,4441 1,6 ,4452 ,4463 ,4474 ,4484 ,4495 ,4505 ,4515 ,4525 ,4535 ,4545 1,7 ,4554 ,4564 ,4573 ,4582 ,4591 ,4599 ,4608 ,4616 ,4625 ,4633 1,8 ,4641 ,4649 ,4656 ,4664 ,4671 ,4678 ,4686 ,4693 ,4699 ,4766 1,9 ,4713 ,4719 ,4726 ,4732 ,4738 ,4744 ,4750 ,4766 ,4761 ,4767 2,0 ,4772 ,4778 ,4783 ,4788 ,4793 ,4798 ,4803 ,4808 ,4812 ,4817 2,1 ,4821 ,4864 ,4868 ,4871 ,4875 <	1										
1,5 ,4332 ,4345 ,4357 ,4370 ,4382 ,4394 ,4406 ,4418 ,4429 ,4441 1,6 ,4452 ,4463 ,4474 ,4484 ,4495 ,4505 ,4515 ,4525 ,4535 ,4545 1,7 ,4554 ,4564 ,4573 ,4582 ,4591 ,4599 ,4608 ,4616 ,4625 ,4633 1,8 ,4641 ,4649 ,4656 ,4664 ,4671 ,4678 ,4686 ,4693 ,4699 ,4706 1,9 ,4713 ,4719 ,4726 ,4732 ,4738 ,4744 ,4750 ,4756 ,4761 ,4767 2,0 ,4772 ,4778 ,4783 ,4788 ,4793 ,4798 ,4803 ,4808 ,4812 ,4817 2,1 ,4821 ,4826 ,4830 ,4834 ,4838 ,4842 ,4846 ,4850 ,4857 2,2 ,4861 ,4864 ,4868 ,4871 ,4875 ,4878 ,4881 ,4884 ,4887 ,4890 2,3 ,48928 ,48956	1,3	,4032	,4049	,4066	,4082	,4099	,4115	,4131	,4147	,4162	,4177
1,6 ,4452 ,4463 ,4474 ,4484 ,4495 ,4505 ,4515 ,4525 ,4535 ,4545 1,7 ,4554 ,4564 ,4573 ,4582 ,4591 ,4599 ,4608 ,4616 ,4625 ,4633 1,8 ,4641 ,4649 ,4656 ,4664 ,4671 ,4678 ,4686 ,4693 ,4699 ,4706 1,9 ,4713 ,4719 ,4726 ,4732 ,4738 ,4744 ,4750 ,4756 ,4761 ,4767 2,0 ,4772 ,4778 ,4783 ,4788 ,4793 ,4798 ,4803 ,4808 ,4812 ,4817 2,1 ,4821 ,4826 ,4830 ,4834 ,4838 ,4842 ,4846 ,4857 ,4851 2,2 ,4861 ,4864 ,4868 ,4871 ,4875 ,4878 ,4881 ,4884 ,4887 ,4890 2,3 ,49828 ,48956 ,48933 ,49010 ,49036 ,49061 ,49086 ,49111 ,49134 ,49158 2,4 ,49180 ,	1,4	,4192	,4207	,4222	,4236	,4251	,4265	,4279	,4292	,4306	,4319
1,6 ,4452 ,4463 ,4474 ,4484 ,4495 ,4505 ,4515 ,4525 ,4535 ,4545 1,7 ,4554 ,4564 ,4573 ,4582 ,4591 ,4599 ,4608 ,4616 ,4625 ,4633 1,8 ,4641 ,4649 ,4656 ,4664 ,4671 ,4678 ,4686 ,4693 ,4699 ,4706 1,9 ,4713 ,4719 ,4726 ,4732 ,4738 ,4744 ,4750 ,4756 ,4761 ,4767 2,0 ,4772 ,4778 ,4783 ,4788 ,4793 ,4798 ,4803 ,4808 ,4812 ,4817 2,1 ,4821 ,4826 ,4830 ,4834 ,4838 ,4842 ,4846 ,4857 ,4851 2,2 ,4861 ,4864 ,4868 ,4871 ,4875 ,4878 ,4881 ,4884 ,4887 ,4890 2,3 ,49828 ,48956 ,48933 ,49010 ,49036 ,49061 ,49086 ,49111 ,49134 ,49158 2,4 ,49180 ,	1.5	4332	4345	.4357	.4370	.4382	.4394	.4406	.4418	4429	.4441
1,7 ,4554 ,4564 ,4573 ,4582 ,4591 ,4599 ,4608 ,4616 ,4625 ,4633 1,8 ,4641 ,4649 ,4656 ,4664 ,4671 ,4678 ,4686 ,4693 ,4699 ,4706 1,9 ,4713 ,4719 ,4726 ,4732 ,4738 ,4744 ,4750 ,4756 ,4761 ,4767 2,0 ,4772 ,4778 ,4783 ,4788 ,4793 ,4798 ,4803 ,4808 ,4812 ,4817 2,1 ,4821 ,4826 ,4830 ,4834 ,4838 ,4842 ,4846 ,4850 ,4854 ,4857 2,2 ,4861 ,4864 ,4868 ,4871 ,4875 ,4878 ,4884 ,4887 ,4890 2,4 ,49180 ,49202 ,49224 ,49245 ,49266 ,49286 ,49305 ,49324 ,49343 ,49361 2,5 ,49379 ,49396 ,49413 ,49430 ,49446 ,49477 ,49492 ,49506 ,49520 2,6 ,49534 ,49547											
1,8 ,4641 ,4649 ,4656 ,4664 ,4671 ,4678 ,4686 ,4693 ,4699 ,4706 1,9 ,4713 ,4719 ,4726 ,4732 ,4738 ,4744 ,4750 ,4756 ,4761 ,4767 2,0 ,4772 ,4778 ,4783 ,4788 ,4793 ,4798 ,4803 ,4808 ,4812 ,4817 2,1 ,4821 ,4826 ,4830 ,4834 ,4838 ,4842 ,4846 ,4850 ,4854 ,4857 2,2 ,4861 ,4864 ,4868 ,4871 ,4875 ,4878 ,4881 ,4884 ,4887 ,4890 2,3 ,48928 ,48956 ,48983 ,49010 ,49036 ,49061 ,49086 ,49111 ,49134 ,49158 2,4 ,49180 ,49202 ,49224 ,49266 ,49286 ,49305 ,49324 ,49343 ,49340 2,5 ,49379 ,49396 ,49413 ,49430 ,49461 ,49477 ,49492 ,49566 ,49520 2,6 ,49534 ,495			4-04								
1,9 ,4713 ,4719 ,4726 ,4732 ,4738 ,4744 ,4750 ,4756 ,4761 ,4767 2,0 ,4772 ,4778 ,4783 ,4788 ,4793 ,4798 ,4803 ,4808 ,4812 ,4817 2,1 ,4821 ,4826 ,4830 ,4834 ,4838 ,4842 ,4846 ,4850 ,4854 ,4857 2,2 ,4861 ,4864 ,4868 ,4871 ,4878 ,4881 ,4884 ,4887 ,4890 2,3 ,48928 ,48956 ,48983 ,49010 ,49036 ,49061 ,49086 ,49111 ,49134 ,49158 2,4 ,49180 ,49202 ,49224 ,49266 ,49286 ,49305 ,49324 ,49343 ,49361 2,5 ,49379 ,49396 ,49413 ,49430 ,49446 ,49461 ,49477 ,49492 ,49506 ,49520 2,6 ,49534 ,49547 ,49560 ,49573 ,49585 ,49598 ,49609 ,49621 ,49632 ,49632 2,7 ,49653		·		-							
2,1 ,4821 ,4826 ,4830 ,4834 ,4838 ,4842 ,4846 ,4850 ,4854 ,4857 2,2 ,4861 ,4864 ,4868 ,4871 ,4875 ,4878 ,4881 ,4884 ,4887 ,4890 2,3 ,48928 ,48956 ,48983 ,49010 ,49036 ,49061 ,49086 ,49111 ,49134 ,49136 2,4 ,49180 ,49202 ,49224 ,49245 ,49266 ,49286 ,49305 ,49324 ,49343 ,49361 2,5 ,49379 ,49396 ,49413 ,49430 ,49446 ,49461 ,49477 ,49492 ,49506 ,49520 2,6 ,49534 ,49547 ,49560 ,49573 ,49585 ,49598 ,49609 ,49621 ,49632 ,49643 2,7 ,49653 ,49664 ,49674 ,49683 ,49693 ,49702 ,49711 ,49720 ,49728 ,49807 2,8 ,49744 ,49752 ,49760 ,49767 ,49774 ,49781 ,49886 ,49891 ,49851 ,49861		,4713	,4719	,4726	,4732	,4738	,4744	,4750	,4756	,4761	,4767
2,1 ,4821 ,4826 ,4830 ,4834 ,4838 ,4842 ,4846 ,4850 ,4854 ,4857 2,2 ,4861 ,4864 ,4868 ,4871 ,4875 ,4878 ,4881 ,4884 ,4887 ,4890 2,3 ,48928 ,48956 ,48983 ,49010 ,49036 ,49061 ,49086 ,49111 ,49134 ,49158 2,4 ,49180 ,49202 ,49224 ,49245 ,49266 ,49286 ,49305 ,49324 ,49343 ,49361 2,5 ,49379 ,49396 ,49413 ,49430 ,49446 ,49461 ,49477 ,49492 ,49506 ,49520 2,6 ,49534 ,49547 ,49560 ,49573 ,49585 ,49598 ,49609 ,49621 ,49632 ,49643 2,7 ,49653 ,49664 ,49674 ,49683 ,49693 ,49702 ,49711 ,49720 ,49728 ,49807 2,8 ,49744 ,49752 ,49760 ,49767 ,49774 ,49781 ,49886 ,49891 ,49851 ,49861	2.0	.4772	.4778	.4783	.4788	.4793	.4798	.4803	.4808	.4812	.4817
2,2 ,4861 ,4864 ,4868 ,4871 ,4875 ,4878 ,4881 ,4884 ,4887 ,4890 2,3 ,48928 ,48956 ,48983 ,49010 ,49036 ,49061 ,49086 ,49111 ,49134 ,49158 2,4 ,49180 ,49202 ,49224 ,49245 ,49266 ,49286 ,49305 ,49324 ,49343 ,49361 2,5 ,49379 ,49396 ,49413 ,49430 ,49446 ,49461 ,49477 ,49492 ,49506 ,49520 2,6 ,49534 ,49547 ,49560 ,49573 ,49585 ,49598 ,49609 ,49621 ,49632 ,49643 2,7 ,49653 ,49664 ,49674 ,49683 ,49693 ,49702 ,49711 ,49720 ,49728 ,49736 2,8 ,49744 ,49752 ,49760 ,49767 ,49774 ,49788 ,49849 ,49851 ,49861 3,0 ,49865 ,49869 ,49874 ,49878 ,49882 ,49886 ,49889 ,49893 ,49896 ,49926 ,4											·
2,3 ,48928 ,48956 ,48983 ,49010 ,49036 ,49061 ,49086 ,49111 ,49134 ,49158 2,4 ,49180 ,49202 ,49224 ,49245 ,49266 ,49286 ,49305 ,49324 ,49343 ,49361 2,5 ,49379 ,49396 ,49413 ,49430 ,49446 ,49461 ,49477 ,49492 ,49506 ,49520 2,6 ,49534 ,49547 ,49560 ,49573 ,49585 ,49598 ,49609 ,49621 ,49632 ,49643 2,7 ,49653 ,49664 ,49674 ,49683 ,49693 ,49702 ,49711 ,49720 ,49728 ,49736 2,8 ,49744 ,49752 ,49760 ,49767 ,49774 ,49781 ,49886 ,49851 ,49856 ,49861 3,0 ,49865 ,49869 ,49874 ,49878 ,49882 ,49886 ,49889 ,49893 ,49866 ,49926 ,49926 3,1 ,49903 ,49934 ,49936 ,49938 ,49940 ,49942 ,49944 ,49946	1										
2,5		40000									,49158
2,6 ,49534 ,49547 ,49560 ,49573 ,49585 ,49598 ,49609 ,49621 ,49632 ,49643 2,7 ,49653 ,49664 ,49674 ,49683 ,49693 ,49702 ,49711 ,49720 ,49728 ,49736 2,8 ,49744 ,49752 ,49760 ,49767 ,49774 ,49781 ,49788 ,49795 ,49801 ,49807 2,9 ,49813 ,49819 ,49825 ,49831 ,49836 ,49841 ,49846 ,49851 ,49856 ,49861 3,0 ,49865 ,49869 ,49874 ,49878 ,49882 ,49886 ,49889 ,49893 ,49926 ,49926 3,1 ,49903 ,49906 ,49910 ,49913 ,49916 ,49918 ,49921 ,49924 ,49926 ,49929 3,2 ,49931 ,49934 ,49936 ,49938 ,49940 ,49942 ,49944 ,49946 ,49948 ,49962 3,3 ,49952 ,49953 ,49955 ,49957 ,49958 ,49960 ,49961 ,49962 ,49964	2,4	,49180	,49202	,49224	,49245	,49266	,49286	,49305	,49324	,49343	,49361
2,6 ,49534 ,49547 ,49560 ,49573 ,49585 ,49598 ,49609 ,49621 ,49632 ,49643 2,7 ,49653 ,49664 ,49674 ,49683 ,49693 ,49702 ,49711 ,49720 ,49728 ,49736 2,8 ,49744 ,49752 ,49760 ,49767 ,49774 ,49781 ,49788 ,49795 ,49801 ,49807 2,9 ,49813 ,49819 ,49825 ,49831 ,49836 ,49841 ,49846 ,49851 ,49856 ,49861 3,0 ,49865 ,49869 ,49874 ,49878 ,49882 ,49886 ,49889 ,49893 ,49926 ,49926 3,1 ,49903 ,49906 ,49910 ,49913 ,49916 ,49918 ,49921 ,49924 ,49926 ,49929 3,2 ,49931 ,49934 ,49936 ,49938 ,49940 ,49942 ,49944 ,49946 ,49948 ,49962 3,3 ,49952 ,49953 ,49955 ,49957 ,49958 ,49960 ,49961 ,49962 ,49964	2.5	.49379	.49396	.49413	.49430	.49446	.49461	.49477	.49492	.49506	.49520
2,7 ,49653 ,49664 ,49674 ,49683 ,49693 ,49702 ,49711 ,49720 ,49728 ,49736 2,8 ,49744 ,49752 ,49760 ,49767 ,49774 ,49781 ,49788 ,49795 ,49801 ,49807 2,9 ,49813 ,49819 ,49825 ,49831 ,49836 ,49841 ,49846 ,49851 ,49856 ,49861 3,0 ,49865 ,49869 ,49874 ,49878 ,49882 ,49886 ,49889 ,49893 ,49896 ,49900 3,1 ,49903 ,49906 ,49910 ,49913 ,49916 ,49918 ,49921 ,49924 ,49926 ,49929 3,2 ,49931 ,49934 ,49936 ,49938 ,49940 ,49942 ,49944 ,49946 ,49948 ,49960 3,3 ,49952 ,49953 ,49955 ,49957 ,49958 ,49960 ,49961 ,49962 ,49964 ,49965											,49643
2,9 ,49813 ,49819 ,49825 ,49831 ,49836 ,49841 ,49846 ,49851 ,49856 ,49861 3,0 ,49865 ,49869 ,49874 ,49878 ,49882 ,49886 ,49889 ,49893 ,49896 ,49900 3,1 ,49903 ,49906 ,49910 ,49913 ,49916 ,49918 ,49921 ,49924 ,49926 ,49929 3,2 ,49931 ,49934 ,49936 ,49938 ,49940 ,49942 ,49944 ,49946 ,49948 ,49950 3,3 ,49952 ,49953 ,49955 ,49957 ,49958 ,49960 ,49961 ,49962 ,49964 ,49965											,49736
3,0	2,8	,49744	,49752	,49760	,49767	,49774	,49781	,49788	,49795	,49801	,49807
3,1 ,49903 ,49906 ,49910 ,49913 ,49916 ,49918 ,49921 ,49924 ,49926 ,49929 3,2 ,49931 ,49934 ,49936 ,49938 ,49940 ,49942 ,49944 ,49946 ,49948 ,49950 3,3 ,49952 ,49953 ,49955 ,49957 ,49958 ,49960 ,49961 ,49962 ,49964 ,49965	2,9	,49813	,49819	,49825	,49831	,49836	,49841	,49846	,49851	,49856	,49861
3,1 ,49903 ,49906 ,49910 ,49913 ,49916 ,49918 ,49921 ,49924 ,49926 ,49929 3,2 ,49931 ,49934 ,49936 ,49938 ,49940 ,49942 ,49944 ,49946 ,49948 ,49950 3,3 ,49952 ,49953 ,49955 ,49957 ,49958 ,49960 ,49961 ,49962 ,49964 ,49965	3.0	.49865	.49869	.49874	.49878	.49882	.49886	.49889	.49893	.49896	.49900
3,2 ,49931 ,49934 ,49936 ,49938 ,49940 ,49942 ,49944 ,49946 ,49948 ,49950 3,3 ,49952 ,49953 ,49955 ,49957 ,49958 ,49960 ,49961 ,49962 ,49964 ,49965	1										
3,3 ,49952 ,49953 ,49955 ,49957 ,49958 ,49960 ,49961 ,49962 ,49964 ,49965		,	•	•		•	•	-	•		•
											,49976
3,5 ,49977	3.5	49977									
3,6 ,49984											
3,7 ,49989		,									
3,8 ,49993		•									
3,9 ,49995											
4,0 ,49997	4.0	.49997									