How to calculate Trigonometric and Exponential series

Here are examples of how to use calculate Trigonometric and Exponential functions using series for sin, cos and tan. One of the books I own has over 1100 series for many different types of functions. Here is a collection of five basic functions; Exponential, sine, cosine, arc tangent and tangent. For each function there are at least 40 solutions and for the trig functions have 1 to 45 degrees form which trig tables for each degree can be created, see page 43 for a sample of a small trig table.

Over the years while in high school I had collected the series for all the six trig functions the log of the six trig functions and also the six inverse trig functions and the same eighteen series for all the hyperbolic functions. There are many other functions of interest to me at the time; I found them from many different books at the Valparaiso University library.

Many of the series make use of the factorial function which I written like" n!" and it is equal to $1*2*3*…*n$. Hence $2! = 1*2 = 2$, $3! = 1*2*3 = 6$ and $4! = 1*2*3*4 = 24$ and so on. By definition $0! = 1$, most calculators can only calculate up to $69! = 1.711224524281413113724683388127e+98$, as it has 99 digits which is the max that most can display. Negative numbers and decimal number are not allowed only positive numbers. The meaning of $X^5 = X*X*X*X*X$ a total of 5 time. All of the trig functions have an input angle in radians not degrees, grads, or mil. Radian is a natural mathematic angle and is the reason it is used for trig functions including programming language even like Excel. There are pi radians in 180 degrees so one degree is pi/180 or 0.0174532925199433 radians.

The first function is the Exponential function uses all the powers of X, 1, 2, 3, 4, 5, 6, 7 and so on. The first few terms for the series are for $exp(X) = 1 + X + X^2/2! + X^3/3! + X^4/4! + X^5/5! + X^6/6! + X^7/7!$ Etc the values for X is any value real or complex. Note the all powers of X and only addition is required for this series. Just like the number pi (3.14159265) the number e (2.718281828459045235) are both irrational and transcendental and very important numbers. The number e is a natural occurring number and is used in many parts of math, science and banking in the form of continuous interest.

The second function is the Sine function uses the odd powers of X, 1, 3, 5, 7 and so on. The first few terms for the series are $sin(X^r) = X – X^3/3! + X^5/5! – X^7/7!$ Etc, the values of X are good for any real or complex number. Note the odd powers of X and the alternating addition and subtraction, both are required for this series. Following equation is an approximation for the sine function and give 9 digit accuracy for 0 to pi/2 or 0° - 90° degrees, $Sin(X^r) = X – 0.1666666664*X^3 + 0.0083333315*X^5 – 0.0001984090*X^7 + 0.0000027526*X^9 - 0.0000000239*X^{11}$. The reason most approximation series did eight digits accuracy that was what most programming language of the time could do. Series like this can be found in the "Handbook of Mathematical Functions" on page 76. Note how each number is just a small amount off of the true value like the first one should be 0.1666666667. This approximation series would be created using regression process to create the coefficients used above.

The third function is the Cosine function uses the even powers of X 0, 2, 4, 6 and so on. The first few terms for the series are $cos(X^r) = 1 – X^2/2! + X^4/4! – X^6/6!$ Etc, the values of X are good for any real or complex number. Note the even powers of X and the alternating addition and subtraction, both are required for this series. Following equation is an approximation for the cosine function and give 9 digit accuracy for 0 to pi/2 or 0° - 90° degrees "$Cos(X^r) = 1 – 0.4999999963*X^2 + 0.0416666418*X^4 – 0.0013888397*X^6 + 0.0000247609 *X^8 – 0.0000002605*X^{10}$". I will talk more about these two and more series on the last pages.

The fourth function is the Arc Tangent function uses the odd powers of X 1, 3, 5, 7and so on. The terms for the series are for $atan(X) = X - X^3/3 + X^5/5 - X^7/7$ Etc the value of X is $-1 < X < 1$. Note the odd powers of X and the alternating addition and subtraction, both are required for this series. This series has been used in calculating the number pi = 4 * (4 * ATAN(1/5) – ATAN(1/239)) see more on this subject from "engert.us/erwin/miscellaneous/William Shanks 707 digits.pdf".

The fifth function is the Tangent function uses the odd powers of X 1, 3, 5, 7and so on. The terms for the series are for Now for Tan(X) use the relationship Tan(X) = Sin(X)/Cos(X) as the series for Tan(X) is very hard to deal with for the fun of it here is a very rare listing $tan(X^r) = 1/3 * X^1 + 2/15 * X^3 + 17/315 * X^5 + 62/2835 * X^7 + 1382/155925 * X^9 + 21844/6081075 * X^{11} + 929569/638512875 * X^{13} + 6404582/10854718875 * X^{15} + 443861162/1856156927625 * X^{17} + 18888466084/194896477400625 * X^{19}$ or $tan(X^r) = 1/3 * X^1 + 2/15 * X^3 + 17/315 *$

$X^5 + 62/2835 * X^7 + 1382/155925 * X^9 + 21844/6081075 * X^{11} + 929569/638512875 * X^{13} + 6404582/10854718875 * X^{15} + 443861162/1856156927625 * X^{17} + 18888466084/194896477400625 * X^{19.}$ Etc the value of X is -pi/4 < X < pi/4 ie "+-45°". Note the odd powers of X and only addition is required for this series. On pages 44 and 45 is a listing of the first 31 terms starting with X^3/3 of the Tangent function. The coefficients for the tangent function do not have a pattern that can be seen like the other series the numbers are 1/3, 2/15, 17/315, 62/2835. These numbers are based on another group of numbers called Bernoulli numbers and they are 1/6, 1/30, 1/42, 1/30 before you get excited the next few numbers are 5/66, 691/2730, 7/6, 3617/510 etc. The Tangent can be calculated by dividing the Sine by Cosine.

With the work on the following pages one could construct a trig table with an entry for each degree for each of the six trig functions. This would be a small table compared with the ones created as early as 1619 with seven digits tables to one ark minute entries. There were no computers or calculators at the time, all the calculations were done by hand. Now they have created tables with seven digit accuracy tables' trig angles stepping by one arc second for the first and last 6 degrees and the rest in 10 arc seconds increments, which were used for engineering, land surveying, astronomy and Mathematics. In the early 1950's there were three books created to 23 digits for the trig functions Hyperbolic functions and logarithms even thought there were computers at the time basic desk calculators were used. For the fun of it I have taken the values calculated to produce the trig table for each degree. Most people now a day's do not know how to use such a table as the calculator has replaced the tables. The top row is the label of the trig function for that column using the degree value of the left column 0° through 45°. The bottom row is the label of the trig function going up for that column using the degree values of the right hand column 45° through 90° reading up from the bottom, read more at the top of page 43.

Here is a sample of calculating the value of "e" by placing 1 into the Exponential function which is the sum of reciprocals of factorials. Remember 0! Is defined as 1 and of course 1^0 so the first term is just 1 for all cases. The third term starts with the second and divided by 2 and the fourth term divide by 3 which gives 1/6 and the next term is 1/24, and so on until no more terms will change the answer, for 8 digits it takes up to 11! to finish the job.

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The following are the Exponential function

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+0.6000000000000000^5/5!= +0.0006480000000000
Running Total= +1.8220480000000000
+0.6000000000000000^6/6!= +0.0000648000000000
Running Total= +1.8221128000000000
+0.6000000000000000^7/7!= +0.0000055542857143
Running Total= +1.8221183542857140
+0.6000000000000000^8/8!= +0.0000004165714286
Running Total= +1.8221187708571430
+0.6000000000000000^9/9!= +0.0000000277714286
Running Total= +1.8221187986285710
+0.6000000000000000^10/10!= +0.0000000016662857
Running Total= +1.8221188002948570
+0.6000000000000000^11/11!= +0.0000000000908883
Running Total= +1.8221188003857450
+0.6000000000000000^12/12!= +0.0000000000045444
Running Total= +1.8221188003902900
+0.6000000000000000^13/13!= +0.0000000000002097
Running Total= +1.8221188003904990
+0.6000000000000000^14/14!= +0.0000000000000090
Running Total= +1.8221188003905080
+0.6000000000000000^15/15!= +0.0000000000000004
Running Total= +1.8221188003905090
Exponential(+0.6000000000000000)=+1.8221188003905090
1/Exponential(+0.6000000000000000)=+0.5488116360940264

Calculate Exponential(+0.6500000000000000)
+0.6500000000000000^1/1!= +0.6500000000000000
Running Total= +1.6500000000000000
+0.6500000000000000^2/2!= +0.2112500000000000
Running Total= +1.8612500000000000
+0.6500000000000000^3/3!= +0.0457708333333333
Running Total= +1.9070208333333330
+0.6500000000000000^4/4!= +0.0074377604166667
Running Total= +1.9144585937500000
+0.6500000000000000^5/5!= +0.0009669088541667
Running Total= +1.9154255026041670
+0.6500000000000000^6/6!= +0.0001047484592014
Running Total= +1.9155302510633680
+0.6500000000000000^7/7!= +0.0000097266426401
Running Total= +1.9155399777060080
+0.6500000000000000^8/8!= +0.0000007902897145
Running Total= +1.9155407679957230
+0.6500000000000000^9/9!= +0.0000000570764794
Running Total= +1.9155408250722020
+0.6500000000000000^10/10!= +0.0000000037099712
Running Total= +1.9155408287821730
+0.6500000000000000^11/11!= +0.0000000002192256
Running Total= +1.9155408290013990
+0.6500000000000000^12/12!= +0.0000000000118747
Running Total= +1.9155408290132740
+0.6500000000000000^13/13!= +0.0000000000005937
Running Total= +1.9155408290138670
+0.6500000000000000^14/14!= +0.0000000000000276
Running Total= +1.9155408290138950
+0.6500000000000000^15/15!= +0.0000000000000012
Running Total= +1.9155408290138960
+0.6500000000000000^16/16!= +0.0000000000000000
Running Total= +1.9155408290138960
Exponential(+0.6500000000000000)=+1.9155408290138960
1/Exponential(+0.6500000000000000)=+0.5220457767610160

Calculate Exponential(+0.7000000000000000)
+0.7000000000000000^1/1!= +0.7000000000000000
Running Total= +1.7000000000000000
+0.7000000000000000^2/2!= +0.2450000000000000
Running Total= +1.9450000000000000
+0.7000000000000000^3/3!= +0.0571666666666667
Running Total= +2.0021666666666670
+0.7000000000000000^4/4!= +0.0100041666666667
Running Total= +2.0121708333333330
+0.7000000000000000^5/5!= +0.0014005833333333
Running Total= +2.0135714166666660
+0.7000000000000000^6/6!= +0.0001634013888889
Running Total= +2.0137348180555550
+0.7000000000000000^7/7!= +0.0000163401388889
Running Total= +2.0137511581944440
+0.7000000000000000^8/8!= +0.0000014297621528
Running Total= +2.0137525879565970
+0.7000000000000000^9/9!= +0.0000001112037230
Running Total= +2.0137526991603200
+0.7000000000000000^10/10!= +0.0000000077842606
Running Total= +2.0137527069445800
+0.7000000000000000^11/11!= +0.0000000004953620
Running Total= +2.0137527074399420
+0.7000000000000000^12/12!= +0.0000000000288961
Running Total= +2.0137527074688380
+0.7000000000000000^13/13!= +0.0000000000015559
Running Total= +2.0137527074703940
+0.7000000000000000^14/14!= +0.0000000000000778
Running Total= +2.0137527074704720
+0.7000000000000000^15/15!= +0.0000000000000036
Running Total= +2.0137527074704760
+0.7000000000000000^16/16!= +0.0000000000000002
Running Total= +2.0137527074704760
Exponential(+0.7000000000000000)=+2.0137527074704770
1/Exponential(+0.7000000000000000)=+0.4965853037914095

Calculate Exponential(+0.7500000000000000)
+0.7500000000000000^1/1!= +0.7500000000000000
Running Total= +1.7500000000000000
+0.7500000000000000^2/2!= +0.2812500000000000
Running Total= +2.0312500000000000
+0.7500000000000000^3/3!= +0.0703125000000000
Running Total= +2.1015625000000000
+0.7500000000000000^4/4!= +0.0131835937500000
Running Total= +2.1147460937500000
+0.7500000000000000^5/5!= +0.0019775390625000
Running Total= +2.1167236328125000
+0.7500000000000000^6/6!= +0.0002471923828125
Running Total= +2.1169708251953120
+0.7500000000000000^7/7!= +0.0000264848981585
Running Total= +2.1169973100934710
+0.7500000000000000^8/8!= +0.0000024829592024
Running Total= +2.1169997930526730
+0.7500000000000000^9/9!= +0.0000002069132669
Running Total= +2.1169999999659400
+0.7500000000000000^10/10!= +0.0000000155184950
Running Total= +2.1170000154844350
+0.7500000000000000^11/11!= +0.0000000010580792
Running Total= +2.1170000165425140
+0.7500000000000000^12/12!= +0.0000000000661300
Running Total= +2.1170000166086440
+0.7500000000000000^13/13!= +0.0000000000038152
Running Total= +2.1170000166124600
+0.7500000000000000^14/14!= +0.0000000000002044
Running Total= +2.1170000166126640
+0.7500000000000000^15/15!= +0.0000000000000102
Running Total= +2.1170000166126740
+0.7500000000000000^16/16!= +0.0000000000000005
Running Total= +2.1170000166126750
Exponential(+0.7500000000000000)=+2.1170000166126750
1/Exponential(+0.7500000000000000)=+0.4723665527410147

Calculate Exponential(+0.8000000000000000)
+0.8000000000000000^1/1!= +0.8000000000000000
Running Total= +1.8000000000000000
+0.8000000000000000^2/2!= +0.3200000000000001
Running Total= +2.1200000000000000
+0.8000000000000000^3/3!= +0.0853333333333334

Running Total= +2.2053333333333330
+0.8000000000000000^4/4!= +0.0170666666666667
Running Total= +2.2224000000000000
+0.8000000000000000^5/5!= +0.0027306666666667
Running Total= +2.2251306666666670
+0.8000000000000000^6/6!= +0.0003640888888889
Running Total= +2.2254947555555550
+0.8000000000000000^7/7!= +0.0000416101587302
Running Total= +2.2255363657142850
+0.8000000000000000^8/8!= +0.0000041610158730
Running Total= +2.2255405267301590
+0.8000000000000000^9/9!= +0.0000003698680776
Running Total= +2.2255408965982360
+0.8000000000000000^10/10!= +0.0000000295894462
Running Total= +2.2255409261876830
+0.8000000000000000^11/11!= +0.0000000021519597
Running Total= +2.2255409283396420
+0.8000000000000000^12/12!= +0.0000000001434640
Running Total= +2.2255409284831060
+0.8000000000000000^13/13!= +0.0000000000088286
Running Total= +2.2255409284919350
+0.8000000000000000^14/14!= +0.0000000000005045
Running Total= +2.2255409284924390
+0.8000000000000000^15/15!= +0.0000000000000269
Running Total= +2.2255409284924660
+0.8000000000000000^16/16!= +0.0000000000000013
Running Total= +2.2255409284924670
+0.8000000000000000^17/17!= +0.0000000000000001
Running Total= +2.2255409284924670
Exponential(+0.8000000000000000)=+2.2255409284924670
1/Exponential(+0.8000000000000000)=+0.4493289641172216

Calculate Exponential(+0.8500000000000000)
+0.8500000000000000^1/1!= +0.8500000000000000
Running Total= +1.8500000000000000
+0.8500000000000000^2/2!= +0.3612500000000000
Running Total= +2.2112500000000000
+0.8500000000000000^3/3!= +0.1023541666666666
Running Total= +2.3136041666666670
+0.8500000000000000^4/4!= +0.0217502604166667
Running Total= +2.3353544270833330
+0.8500000000000000^5/5!= +0.0036975442708333
Running Total= +2.3390519713541660
+0.8500000000000000^6/6!= +0.0005238187717014
Running Total= +2.3395757901258680
+0.8500000000000000^7/7!= +0.0000636065651352
Running Total= +2.3396393966910030
+0.8500000000000000^8/8!= +0.0000067581975456
Running Total= +2.3396461548885490
+0.8500000000000000^9/9!= +0.0000006382742126
Running Total= +2.3396467931627610
+0.8500000000000000^10/10!= +0.0000000542533081
Running Total= +2.3396468474160690
+0.8500000000000000^11/11!= +0.0000000041923011
Running Total= +2.3396468516083710
+0.8500000000000000^12/12!= +0.0000000002969547
Running Total= +2.3396468519053250
+0.8500000000000000^13/13!= +0.0000000000194163
Running Total= +2.3396468519247420
+0.8500000000000000^14/14!= +0.0000000000011788
Running Total= +2.3396468519259200
+0.8500000000000000^15/15!= +0.0000000000000668
Running Total= +2.3396468519259870
+0.8500000000000000^16/16!= +0.0000000000000035
Running Total= +2.3396468519259910
+0.8500000000000000^17/17!= +0.0000000000000002
Running Total= +2.3396468519259910
Exponential(+0.8500000000000000)=+2.3396468519259910
1/Exponential(+0.8500000000000000)=+0.4274149319487267

Calculate Exponential(+0.9000000000000000)
+0.9000000000000000^1/1!= +0.9000000000000000
Running Total= +1.9000000000000000
+0.9000000000000000^2/2!= +0.4050000000000000
Running Total= +2.3050000000000000
+0.9000000000000000^3/3!= +0.1215000000000000
Running Total= +2.4265000000000000
+0.9000000000000000^4/4!= +0.0273375000000000

Running Total= +2.4538375000000000
+0.9000000000000000^5/5!= +0.0049207500000000
Running Total= +2.4587582500000000
+0.9000000000000000^6/6!= +0.0007381125000000
Running Total= +2.4594963625000000
+0.9000000000000000^7/7!= +0.0000949001785714
Running Total= +2.4595912626785720
+0.9000000000000000^8/8!= +0.0000106762700893
Running Total= +2.4596019389486610
+0.9000000000000000^9/9!= +0.0000010676270089
Running Total= +2.4596030065756700
+0.9000000000000000^10/10!= +0.0000000960864308
Running Total= +2.4596031026621010
+0.9000000000000000^11/11!= +0.0000000078616171
Running Total= +2.4596031105237180
+0.9000000000000000^12/12!= +0.0000000005896213
Running Total= +2.4596031111133390
+0.9000000000000000^13/13!= +0.0000000000408199
Running Total= +2.4596031111541590
+0.9000000000000000^14/14!= +0.0000000000026241
Running Total= +2.4596031111567830
+0.9000000000000000^15/15!= +0.0000000000001574
Running Total= +2.4596031111569410
+0.9000000000000000^16/16!= +0.0000000000000089
Running Total= +2.4596031111569500
+0.9000000000000000^17/17!= +0.0000000000000005
Running Total= +2.4596031111569500
Exponential(+0.9000000000000000)=+2.4596031111569500
1/Exponential(+0.9000000000000000)=+0.4065696597405991

Calculate Exponential(+0.9500000000000000)
+0.9500000000000000^1/1!= +0.9500000000000000
Running Total= +1.9500000000000000
+0.9500000000000000^2/2!= +0.4512500000000000
Running Total= +2.4012500000000000
+0.9500000000000000^3/3!= +0.1428958333333333
Running Total= +2.5441458333333330
+0.9500000000000000^4/4!= +0.0339377604166667
Running Total= +2.5780835937500000
+0.9500000000000000^5/5!= +0.0064481744791667
Running Total= +2.5845317682291670
+0.9500000000000000^6/6!= +0.0010209609592014
Running Total= +2.5855527291883680
+0.9500000000000000^7/7!= +0.0001385589873202
Running Total= +2.5856912881756880
+0.9500000000000000^8/8!= +0.0000164538797443
Running Total= +2.5857077420554320
+0.9500000000000000^9/9!= +0.0000017367984175
Running Total= +2.5857094788538500
+0.9500000000000000^10/10!= +0.0000001649958497
Running Total= +2.5857096438496990
+0.9500000000000000^11/11!= +0.0000000142496416
Running Total= +2.5857096580993410
+0.9500000000000000^12/12!= +0.0000000011280966
Running Total= +2.5857096592274380
+0.9500000000000000^13/13!= +0.0000000000824378
Running Total= +2.5857096593098760
+0.9500000000000000^14/14!= +0.0000000000055940
Running Total= +2.5857096593154690
+0.9500000000000000^15/15!= +0.0000000000003543
Running Total= +2.5857096593158240
+0.9500000000000000^16/16!= +0.0000000000000210
Running Total= +2.5857096593158450
+0.9500000000000000^17/17!= +0.0000000000000012
Running Total= +2.5857096593158460
+0.9500000000000000^18/18!= +0.0000000000000001
Running Total= +2.5857096593158460
Exponential(+0.9500000000000000)=+2.5857096593158460
1/Exponential(+0.9500000000000000)=+0.3867410234545012

Calculate Exponential(+1.0000000000000000)
+1.0000000000000000^1/1!= +1.0000000000000000
Running Total= +2.0000000000000000
+1.0000000000000000^2/2!= +0.5000000000000000
Running Total= +2.5000000000000000
+1.0000000000000000^3/3!= +0.1666666666666667
Running Total= +2.6666666666666670
+1.0000000000000000^4/4!= +0.0416666666666667

Running Total=   +2.7083333333333330
+1.0000000000000000^5/5!=   +0.0083333333333333
Running Total=   +2.7166666666666670
+1.0000000000000000^6/6!=   +0.0013888888888889
Running Total=   +2.7180555555555560
+1.0000000000000000^7/7!=   +0.0001984126984127
Running Total=   +2.7182539682539680
+1.0000000000000000^8/8!=   +0.0000248015873016
Running Total=   +2.7182787698412700
+1.0000000000000000^9/9!=   +0.0000027557319224
Running Total=   +2.7182815255731920
+1.0000000000000000^10/10!=   +0.0000002755731922
Running Total=   +2.7182818011463850
+1.0000000000000000^11/11!=   +0.0000000250521084
Running Total=   +2.7182818261984930
+1.0000000000000000^12/12!=   +0.0000000020876757
Running Total=   +2.7182818282861690
+1.0000000000000000^13/13!=   +0.0000000001605904
Running Total=   +2.7182818284467590
+1.0000000000000000^14/14!=   +0.0000000000114707
Running Total=   +2.7182818284582300
+1.0000000000000000^15/15!=   +0.0000000000007647
Running Total=   +2.7182818284589950
+1.0000000000000000^16/16!=   +0.0000000000000478
Running Total=   +2.7182818284590420
+1.0000000000000000^17/17!=   +0.0000000000000028
Running Total=   +2.7182818284590460
+1.0000000000000000^18/18!=   +0.0000000000000002
Running Total=   +2.7182818284590460
Exponential(+1.0000000000000000)=+2.7182818284590450
1/Exponential(+1.0000000000000000)=+0.3678794411714423

Calculate Exponential(+1.0500000000000000)
+1.0500000000000000^1/1!=   +1.0500000000000000
Running Total=   +2.0500000000000000
+1.0500000000000000^2/2!=   +0.5512500000000000
Running Total=   +2.6012500000000000
+1.0500000000000000^3/3!=   +0.1929375000000000
Running Total=   +2.7941875000000000
+1.0500000000000000^4/4!=   +0.0506460937500000
Running Total=   +2.8448335937500000
+1.0500000000000000^5/5!=   +0.0106356796875000
Running Total=   +2.8554692734375000
+1.0500000000000000^6/6!=   +0.0018612439453125
Running Total=   +2.8573305173828120
+1.0500000000000000^7/7!=   +0.0002791865917969
Running Total=   +2.8576097039746090
+1.0500000000000000^8/8!=   +0.0000366432401733
Running Total=   +2.8576463472147830
+1.0500000000000000^9/9!=   +0.0000042750446869
Running Total=   +2.8576506222594690
+1.0500000000000000^10/10!=   +0.0000004488796921
Running Total=   +2.8576510711391620
+1.0500000000000000^11/11!=   +0.0000000428476070
Running Total=   +2.8576511139867690
+1.0500000000000000^12/12!=   +0.0000000037491656
Running Total=   +2.8576511177359340
+1.0500000000000000^13/13!=   +0.0000000003028172
Running Total=   +2.8576511180387520
+1.0500000000000000^14/14!=   +0.0000000000227113
Running Total=   +2.8576511180614630
+1.0500000000000000^15/15!=   +0.0000000000015898
Running Total=   +2.8576511180630530
+1.0500000000000000^16/16!=   +0.0000000000001043
Running Total=   +2.8576511180631570
+1.0500000000000000^17/17!=   +0.0000000000000064
Running Total=   +2.8576511180631630
+1.0500000000000000^18/18!=   +0.0000000000000004
Running Total=   +2.8576511180631640
Exponential(+1.0500000000000000)=+2.8576511180631640
1/Exponential(+1.0500000000000000)=+0.3499377491111553

Calculate Exponential(+1.1000000000000000)
+1.1000000000000000^1/1!=   +1.1000000000000000
Running Total=   +2.1000000000000000
+1.1000000000000000^2/2!=   +0.6050000000000001
Running Total=   +2.7050000000000000
+1.1000000000000000^3/3!=   +0.2218333333333334

Running Total=   +2.9268333333333340
+1.1000000000000000^4/4!=   +0.0610041666666667
Running Total=   +2.9878375000000000
+1.1000000000000000^5/5!=   +0.0134209166666667
Running Total=   +3.0012584166666670
+1.1000000000000000^6/6!=   +0.0024605013888889
Running Total=   +3.0037189180555560
+1.1000000000000000^7/7!=   +0.0003866502182540
Running Total=   +3.0041055682738100
+1.1000000000000000^8/8!=   +0.0000531644050099
Running Total=   +3.0041587326788200
+1.1000000000000000^9/9!=   +0.0000064978717234
Running Total=   +3.0041652305505430
+1.1000000000000000^10/10!=   +0.0000007147658896
Running Total=   +3.0041659453164330
+1.1000000000000000^11/11!=   +0.0000000714765890
Running Total=   +3.0041660167930220
+1.1000000000000000^12/12!=   +0.0000000065520207
Running Total=   +3.0041660233450420
+1.1000000000000000^13/13!=   +0.0000000005544017
Running Total=   +3.0041660238994440
+1.1000000000000000^14/14!=   +0.0000000000435601
Running Total=   +3.0041660239430050
+1.1000000000000000^15/15!=   +0.0000000000031944
Running Total=   +3.0041660239461990
+1.1000000000000000^16/16!=   +0.0000000000002196
Running Total=   +3.0041660239464190
+1.1000000000000000^17/17!=   +0.0000000000000142
Running Total=   +3.0041660239464330
+1.1000000000000000^18/18!=   +0.0000000000000009
Running Total=   +3.0041660239464340
Exponential(+1.1000000000000000)=+3.0041660239464330
1/Exponential(+1.1000000000000000)=+0.3328710836980796

Calculate Exponential(+1.1500000000000000)
+1.1500000000000000^1/1!=   +1.1500000000000000
Running Total=   +2.1500000000000000
+1.1500000000000000^2/2!=   +0.6612499999999999
Running Total=   +2.8112500000000000
+1.1500000000000000^3/3!=   +0.2534791666666666
Running Total=   +3.0647291666666670
+1.1500000000000000^4/4!=   +0.0728752604166666
Running Total=   +3.1376044270833330
+1.1500000000000000^5/5!=   +0.0167613098958333
Running Total=   +3.1543657369791660
+1.1500000000000000^6/6!=   +0.0032125843967014
Running Total=   +3.1575783213758680
+1.1500000000000000^7/7!=   +0.0005277817223152
Running Total=   +3.1581061030981830
+1.1500000000000000^8/8!=   +0.0000758686225828
Running Total=   +3.1581819717207660
+1.1500000000000000^9/9!=   +0.0000096943239967
Running Total=   +3.1581916660447630
+1.1500000000000000^10/10!=   +0.0000011148472596
Running Total=   +3.1581927808920220
+1.1500000000000000^11/11!=   +0.0000001165522135
Running Total=   +3.1581928974442360
+1.1500000000000000^12/12!=   +0.0000000111695871
Running Total=   +3.1581929086138230
+1.1500000000000000^13/13!=   +0.0000000009880789
Running Total=   +3.1581929096019020
+1.1500000000000000^14/14!=   +0.0000000000811636
Running Total=   +3.1581929096830650
+1.1500000000000000^15/15!=   +0.0000000000062225
Running Total=   +3.1581929096892880
+1.1500000000000000^16/16!=   +0.0000000000004472
Running Total=   +3.1581929096897350
+1.1500000000000000^17/17!=   +0.0000000000000303
Running Total=   +3.1581929096897650
+1.1500000000000000^18/18!=   +0.0000000000000019
Running Total=   +3.1581929096897670
+1.1500000000000000^19/19!=   +0.0000000000000001
Running Total=   +3.1581929096897670
Exponential(+1.1500000000000000)=+3.1581929096897680
1/Exponential(+1.1500000000000000)=+0.3166367693790532

Calculate Exponential(+1.2000000000000000)
+1.2000000000000000^1/1!=   +1.2000000000000000

Running Total=	+2.2000000000000000
+1.2000000000000000^2/2!=	+0.7200000000000000
Running Total=	+2.9200000000000000
+1.2000000000000000^3/3!=	+0.2880000000000000
Running Total=	+3.2080000000000000
+1.2000000000000000^4/4!=	+0.0864000000000000
Running Total=	+3.2944000000000000
+1.2000000000000000^5/5!=	+0.0207360000000000
Running Total=	+3.3151359999999990
+1.2000000000000000^6/6!=	+0.0041472000000000
Running Total=	+3.3192831999999990
+1.2000000000000000^7/7!=	+0.0007109485714286
Running Total=	+3.3199941485714280
+1.2000000000000000^8/8!=	+0.0001066422857143
Running Total=	+3.3201007908571420
+1.2000000000000000^9/9!=	+0.0000142189714286
Running Total=	+3.3201150098285710
+1.2000000000000000^10/10!=	+0.0000017062765714
Running Total=	+3.3201167161051420
+1.2000000000000000^11/11!=	+0.0000001861392623
Running Total=	+3.3201169022444050
+1.2000000000000000^12/12!=	+0.0000000186139262
Running Total=	+3.3201169208583310
+1.2000000000000000^13/13!=	+0.0000000017182086
Running Total=	+3.3201169225765400
+1.2000000000000000^14/14!=	+0.0000000001472750
Running Total=	+3.3201169227238150
+1.2000000000000000^15/15!=	+0.0000000000117820
Running Total=	+3.3201169227355970
+1.2000000000000000^16/16!=	+0.0000000000008837
Running Total=	+3.3201169227364810
+1.2000000000000000^17/17!=	+0.0000000000000624
Running Total=	+3.3201169227365430
+1.2000000000000000^18/18!=	+0.0000000000000042
Running Total=	+3.3201169227365470
+1.2000000000000000^19/19!=	+0.0000000000000003
Running Total=	+3.3201169227365470

Exponential(+1.2000000000000000)=+3.3201169227365480
1/Exponential(+1.2000000000000000)=+0.3011942119122021

Calculate Exponential(+1.2500000000000000)

+1.2500000000000000^1/1!=	+1.2500000000000000
Running Total=	+2.2500000000000000
+1.2500000000000000^2/2!=	+0.7812500000000000
Running Total=	+3.0312500000000000
+1.2500000000000000^3/3!=	+0.3255208333333333
Running Total=	+3.3567708333333330
+1.2500000000000000^4/4!=	+0.1017252604166667
Running Total=	+3.4584960937500000
+1.2500000000000000^5/5!=	+0.0254313151041667
Running Total=	+3.4839274088541670
+1.2500000000000000^6/6!=	+0.0052981906467014
Running Total=	+3.4892255995008680
+1.2500000000000000^7/7!=	+0.0009461054726252
Running Total=	+3.4901717049734930
+1.2500000000000000^8/8!=	+0.0001478289800977
Running Total=	+3.4903195339535910
+1.2500000000000000^9/9!=	+0.0000205318027913
Running Total=	+3.4903400657563820
+1.2500000000000000^10/10!=	+0.0000025664753489
Running Total=	+3.4903426322317310
+1.2500000000000000^11/11!=	+0.0000002916449260
Running Total=	+3.4903429238766570
+1.2500000000000000^12/12!=	+0.0000000303796798
Running Total=	+3.4903429542563370
+1.2500000000000000^13/13!=	+0.0000000029211231
Running Total=	+3.4903429571774600
+1.2500000000000000^14/14!=	+0.0000000002608146
Running Total=	+3.4903429574382740
+1.2500000000000000^15/15!=	+0.0000000000217345
Running Total=	+3.4903429574600090
+1.2500000000000000^16/16!=	+0.0000000000016980
Running Total=	+3.4903429574617070
+1.2500000000000000^17/17!=	+0.0000000000001249
Running Total=	+3.4903429574618320
+1.2500000000000000^18/18!=	+0.0000000000000087
Running Total=	+3.4903429574618410
+1.2500000000000000^19/19!=	+0.0000000000000006
Running Total=	+3.4903429574618410

Exponential(+1.2500000000000000)=+3.4903429574618410
1/Exponential(+1.2500000000000000)=+0.2865047968601901

Calculate Exponential(+1.3000000000000000)

+1.3000000000000000^1/1!=	+1.3000000000000000
Running Total=	+2.3000000000000000
+1.3000000000000000^2/2!=	+0.8450000000000001
Running Total=	+3.1450000000000000
+1.3000000000000000^3/3!=	+0.3661666666666667
Running Total=	+3.5111666666666670
+1.3000000000000000^4/4!=	+0.1190041666666667
Running Total=	+3.6301708333333330
+1.3000000000000000^5/5!=	+0.0309410833333333
Running Total=	+3.6611119166666670
+1.3000000000000000^6/6!=	+0.0067039013888889
Running Total=	+3.6678158180555550
+1.3000000000000000^7/7!=	+0.0012450102579365
Running Total=	+3.6690608283134920
+1.3000000000000000^8/8!=	+0.0002023141669147
Running Total=	+3.6692631424804070
+1.3000000000000000^9/9!=	+0.0000292231574432
Running Total=	+3.6692923656378500
+1.3000000000000000^10/10!=	+0.0000037990104676
Running Total=	+3.6692961646483170
+1.3000000000000000^11/11!=	+0.0000004489739644
Running Total=	+3.6692966136222820
+1.3000000000000000^12/12!=	+0.0000000486388461
Running Total=	+3.6692966622611280
+1.3000000000000000^13/13!=	+0.0000000048638846
Running Total=	+3.6692966671250120
+1.3000000000000000^14/14!=	+0.0000000004516464
Running Total=	+3.6692966675766590
+1.3000000000000000^15/15!=	+0.0000000000391427
Running Total=	+3.6692966676158010
+1.3000000000000000^16/16!=	+0.0000000000031803
Running Total=	+3.6692966676189820
+1.3000000000000000^17/17!=	+0.0000000000002432
Running Total=	+3.6692966676192250
+1.3000000000000000^18/18!=	+0.0000000000000176
Running Total=	+3.6692966676192430
+1.3000000000000000^19/19!=	+0.0000000000000012
Running Total=	+3.6692966676192440
+1.3000000000000000^20/20!=	+0.0000000000000001
Running Total=	+3.6692966676192440

Exponential(+1.3000000000000000)=+3.6692966676192440
1/Exponential(+1.3000000000000000)=+0.2725317930340126

Calculate Exponential(+1.3500000000000000)

+1.3500000000000000^1/1!=	+1.3500000000000000
Running Total=	+2.3500000000000000
+1.3500000000000000^2/2!=	+0.9112500000000001
Running Total=	+3.2612500000000000
+1.3500000000000000^3/3!=	+0.4100625000000001
Running Total=	+3.6713125000000000
+1.3500000000000000^4/4!=	+0.1383960937500000
Running Total=	+3.8097085937500000
+1.3500000000000000^5/5!=	+0.0373669453125000
Running Total=	+3.8470755390625000
+1.3500000000000000^6/6!=	+0.0084075626953125
Running Total=	+3.8554831017578130
+1.3500000000000000^7/7!=	+0.0016214585198103
Running Total=	+3.8571045602776230
+1.3500000000000000^8/8!=	+0.0002736211252180
Running Total=	+3.8573781814028410
+1.3500000000000000^9/9!=	+0.0000410431687827
Running Total=	+3.8574192245716240
+1.3500000000000000^10/10!=	+0.0000055408277857
Running Total=	+3.8574247653994090
+1.3500000000000000^11/11!=	+0.0000006800106828
Running Total=	+3.8574254454100920
+1.3500000000000000^12/12!=	+0.0000000765012018
Running Total=	+3.8574255219112940
+1.3500000000000000^13/13!=	+0.0000000079443556
Running Total=	+3.8574255298556490
+1.3500000000000000^14/14!=	+0.0000000007660629
Running Total=	+3.8574255306217120
+1.3500000000000000^15/15!=	+0.0000000000689457

Running Total=   +3.8574255306906580
+1.3500000000000000^16/16!=   +0.0000000000058173
Running Total=   +3.8574255306964750
+1.3500000000000000^17/17!=   +0.0000000000004620
Running Total=   +3.8574255306969370
+1.3500000000000000^18/18!=   +0.0000000000000346
Running Total=   +3.8574255306969710
+1.3500000000000000^19/19!=   +0.0000000000000025
Running Total=   +3.8574255306969740
+1.3500000000000000^20/20!=   +0.0000000000000002
Running Total=   +3.8574255306969740
Exponential(+1.3500000000000000)=+3.8574255306969740
1/Exponential(+1.3500000000000000)=+0.2592402606458915

Calculate Exponential(+1.4000000000000000)
+1.4000000000000000^1/1!=   +1.4000000000000000
Running Total=   +2.4000000000000000
+1.4000000000000000^2/2!=   +0.9799999999999999
Running Total=   +3.3800000000000000
+1.4000000000000000^3/3!=   +0.4573333333333333
Running Total=   +3.8373333333333330
+1.4000000000000000^4/4!=   +0.1600666666666666
Running Total=   +3.9974000000000000
+1.4000000000000000^5/5!=   +0.0448186666666667
Running Total=   +4.0422186666666670
+1.4000000000000000^6/6!=   +0.0104576888888889
Running Total=   +4.0526763555555550
+1.4000000000000000^7/7!=   +0.0020915377777778
Running Total=   +4.0547678933333330
+1.4000000000000000^8/8!=   +0.0003660191111111
Running Total=   +4.0551339124444440
+1.4000000000000000^9/9!=   +0.0000569363061728
Running Total=   +4.0551908487506170
+1.4000000000000000^10/10!=   +0.0000079710828642
Running Total=   +4.0551988198334810
+1.4000000000000000^11/11!=   +0.0000010145014554
Running Total=   +4.0551998343349360
+1.4000000000000000^12/12!=   +0.0000001183585031
Running Total=   +4.0551999526934390
+1.4000000000000000^13/13!=   +0.0000000127463003
Running Total=   +4.0551999654397400
+1.4000000000000000^14/14!=   +0.0000000012746300
Running Total=   +4.0551999667143700
+1.4000000000000000^15/15!=   +0.0000000001189655
Running Total=   +4.0551999668333350
+1.4000000000000000^16/16!=   +0.0000000000104095
Running Total=   +4.0551999668437450
+1.4000000000000000^17/17!=   +0.0000000000008573
Running Total=   +4.0551999668446020
+1.4000000000000000^18/18!=   +0.0000000000000667
Running Total=   +4.0551999668446680
+1.4000000000000000^19/19!=   +0.0000000000000049
Running Total=   +4.0551999668446740
+1.4000000000000000^20/20!=   +0.0000000000000003
Running Total=   +4.0551999668446740
Exponential(+1.4000000000000000)=+4.0551999668446750
1/Exponential(+1.4000000000000000)=+0.2465969639416065

Calculate Exponential(+1.4500000000000000)
+1.4500000000000000^1/1!=   +1.4500000000000000
Running Total=   +2.4500000000000000
+1.4500000000000000^2/2!=   +1.0512500000000000
Running Total=   +3.5012500000000000
+1.4500000000000000^3/3!=   +0.5081041666666667
Running Total=   +4.0093541666666660
+1.4500000000000000^4/4!=   +0.1841877604166667
Running Total=   +4.1935419270833330
+1.4500000000000000^5/5!=   +0.0534144505208333
Running Total=   +4.2469563776041660
+1.4500000000000000^6/6!=   +0.0129084922092014
Running Total=   +4.2598648698133670
+1.4500000000000000^7/7!=   +0.0026739019576203
Running Total=   +4.2625387717709880
+1.4500000000000000^8/8!=   +0.0004846447298187
Running Total=   +4.2630234165008060
+1.4500000000000000^9/9!=   +0.0000780816509152
Running Total=   +4.2631014981517210
+1.4500000000000000^10/10!=   +0.0000113218393827

Running Total=   +4.2631128199911040
+1.4500000000000000^11/11!=   +0.0000014924242823
Running Total=   +4.2631143124153870
+1.4500000000000000^12/12!=   +0.0000001803346008
Running Total=   +4.2631144927499870
+1.4500000000000000^13/13!=   +0.0000000201142439
Running Total=   +4.2631145128642310
+1.4500000000000000^14/14!=   +0.0000000020832610
Running Total=   +4.2631145149474920
+1.4500000000000000^15/15!=   +0.0000000002013819
Running Total=   +4.2631145151488750
+1.4500000000000000^16/16!=   +0.0000000000182502
Running Total=   +4.2631145151671250
+1.4500000000000000^17/17!=   +0.0000000000015566
Running Total=   +4.2631145151686810
+1.4500000000000000^18/18!=   +0.0000000000001254
Running Total=   +4.2631145151688070
+1.4500000000000000^19/19!=   +0.0000000000000096
Running Total=   +4.2631145151688160
+1.4500000000000000^20/20!=   +0.0000000000000007
Running Total=   +4.2631145151688180
Exponential(+1.4500000000000000)=+4.2631145151688180
1/Exponential(+1.4500000000000000)=+0.2345702880937977

Calculate Exponential(+1.5000000000000000)
+1.5000000000000000^1/1!=   +1.5000000000000000
Running Total=   +2.5000000000000000
+1.5000000000000000^2/2!=   +1.1250000000000000
Running Total=   +3.6250000000000000
+1.5000000000000000^3/3!=   +0.5625000000000000
Running Total=   +4.1875000000000000
+1.5000000000000000^4/4!=   +0.2109375000000000
Running Total=   +4.3984375000000000
+1.5000000000000000^5/5!=   +0.0632812500000000
Running Total=   +4.4617187500000000
+1.5000000000000000^6/6!=   +0.0158203125000000
Running Total=   +4.4775390625000000
+1.5000000000000000^7/7!=   +0.0033900669642857
Running Total=   +4.4809291294642860
+1.5000000000000000^8/8!=   +0.0006356375558036
Running Total=   +4.4815647670200890
+1.5000000000000000^9/9!=   +0.0001059395926339
Running Total=   +4.4816707066127230
+1.5000000000000000^10/10!=   +0.0000158909388951
Running Total=   +4.4816865975516190
+1.5000000000000000^11/11!=   +0.0000021669462130
Running Total=   +4.4816887644978310
+1.5000000000000000^12/12!=   +0.0000002708682766
Running Total=   +4.4816890353661080
+1.5000000000000000^13/13!=   +0.0000000312540319
Running Total=   +4.4816890666201400
+1.5000000000000000^14/14!=   +0.0000000033486463
Running Total=   +4.4816890699687860
+1.5000000000000000^15/15!=   +0.0000000003348646
Running Total=   +4.4816890703036500
+1.5000000000000000^16/16!=   +0.0000000000313936
Running Total=   +4.4816890703350440
+1.5000000000000000^17/17!=   +0.0000000000027700
Running Total=   +4.4816890703378150
+1.5000000000000000^18/18!=   +0.0000000000002308
Running Total=   +4.4816890703380460
+1.5000000000000000^19/19!=   +0.0000000000000182
Running Total=   +4.4816890703380640
+1.5000000000000000^20/20!=   +0.0000000000000014
Running Total=   +4.4816890703380650
+1.5000000000000000^21/21!=   +0.0000000000000001
Running Total=   +4.4816890703380650
Exponential(+1.5000000000000000)=+4.4816890703380650
1/Exponential(+1.5000000000000000)=+0.2231301601484298

Calculate Exponential(+1.5500000000000000)
+1.5500000000000000^1/1!=   +1.5500000000000000
Running Total=   +2.5500000000000000
+1.5500000000000000^2/2!=   +1.2012500000000000
Running Total=   +3.7512500000000000
+1.5500000000000000^3/3!=   +0.6206458333333335
Running Total=   +4.3718958333333330
+1.5500000000000000^4/4!=   +0.2405002604166667

Running Total=   +4.6123960937500000
+1.5500000000000000^5/5!=   +0.0745550807291667
Running Total=   +4.6869511744791680
+1.5500000000000000^6/6!=   +0.0192600625217014
Running Total=   +4.7062112370008680
+1.5500000000000000^7/7!=   +0.0042647281298053
Running Total=   +4.7104759651306740
+1.5500000000000000^8/8!=   +0.0008262910751498
Running Total=   +4.7113022562058240
+1.5500000000000000^9/9!=   +0.0001423056851647
Running Total=   +4.7114445618909880
+1.5500000000000000^10/10!=   +0.0000220573812005
Running Total=   +4.7114666192721890
+1.5500000000000000^11/11!=   +0.0000031080855328
Running Total=   +4.7114697273577220
+1.5500000000000000^12/12!=   +0.0000004014610480
Running Total=   +4.7114701288187690
+1.5500000000000000^13/13!=   +0.0000000478665096
Running Total=   +4.7114701766852790
+1.5500000000000000^14/14!=   +0.0000000052995064
Running Total=   +4.7114701819847860
+1.5500000000000000^15/15!=   +0.0000000005476157
Running Total=   +4.7114701825324020
+1.5500000000000000^16/16!=   +0.0000000000530503
Running Total=   +4.7114701825854520
+1.5500000000000000^17/17!=   +0.0000000000048369
Running Total=   +4.7114701825902890
+1.5500000000000000^18/18!=   +0.0000000000004165
Running Total=   +4.7114701825907050
+1.5500000000000000^19/19!=   +0.0000000000000340
Running Total=   +4.7114701825907390
+1.5500000000000000^20/20!=   +0.0000000000000026
Running Total=   +4.7114701825907430
+1.5500000000000000^21/21!=   +0.0000000000000002
Running Total=   +4.7114701825907430
Exponential(+1.5500000000000000)=+4.7114701825907410
1/Exponential(+1.5500000000000000)=+0.2122479738267431

Calculate Exponential(+1.6000000000000000)
+1.6000000000000000^1/1!=   +1.6000000000000000
Running Total=   +2.6000000000000000
+1.6000000000000000^2/2!=   +1.2800000000000000
Running Total=   +3.8800000000000000
+1.6000000000000000^3/3!=   +0.6826666666666669
Running Total=   +4.5626666666666670
+1.6000000000000000^4/4!=   +0.2730666666666667
Running Total=   +4.8357333333333340
+1.6000000000000000^5/5!=   +0.0873813333333334
Running Total=   +4.9231146666666680
+1.6000000000000000^6/6!=   +0.0233016888888889
Running Total=   +4.9464163555555570
+1.6000000000000000^7/7!=   +0.0053261003174603
Running Total=   +4.9517424558730170
+1.6000000000000000^8/8!=   +0.0010652200634921
Running Total=   +4.9528076759365090
+1.6000000000000000^9/9!=   +0.0001893724557319
Running Total=   +4.9529970483922410
+1.6000000000000000^10/10!=   +0.0000302995929171
Running Total=   +4.9530273479851580
+1.6000000000000000^11/11!=   +0.0000044072135152
Running Total=   +4.9530317551986730
+1.6000000000000000^12/12!=   +0.0000005876284687
Running Total=   +4.9530323428271410
+1.6000000000000000^13/13!=   +0.0000000723235038
Running Total=   +4.9530324151506450
+1.6000000000000000^14/14!=   +0.0000000082655433
Running Total=   +4.9530324234161880
+1.6000000000000000^15/15!=   +0.0000000008816580
Running Total=   +4.9530324242978460
+1.6000000000000000^16/16!=   +0.0000000000881658
Running Total=   +4.9530324243860120
+1.6000000000000000^17/17!=   +0.0000000000082980
Running Total=   +4.9530324243943100
+1.6000000000000000^18/18!=   +0.0000000000007376
Running Total=   +4.9530324243950470
+1.6000000000000000^19/19!=   +0.0000000000000621
Running Total=   +4.9530324243951100
+1.6000000000000000^20/20!=   +0.0000000000000050

Running Total=   +4.9530324243951150
+1.6000000000000000^21/21!=   +0.0000000000000004
Running Total=   +4.9530324243951150
Exponential(+1.6000000000000000)=+4.9530324243951150
1/Exponential(+1.6000000000000000)=+0.2018965179946554

Calculate Exponential(+1.6500000000000000)
+1.6500000000000000^1/1!=   +1.6500000000000000
Running Total=   +2.6500000000000000
+1.6500000000000000^2/2!=   +1.3612500000000000
Running Total=   +4.0112500000000000
+1.6500000000000000^3/3!=   +0.7486874999999998
Running Total=   +4.7599374999999990
+1.6500000000000000^4/4!=   +0.3088335937499999
Running Total=   +5.0687710937500000
+1.6500000000000000^5/5!=   +0.1019150859375000
Running Total=   +5.1706861796874990
+1.6500000000000000^6/6!=   +0.0280266486328125
Running Total=   +5.1987128283203120
+1.6500000000000000^7/7!=   +0.0066062814634487
Running Total=   +5.2053191097837610
+1.6500000000000000^8/8!=   +0.0013625455518363
Running Total=   +5.2066816553355970
+1.6500000000000000^9/9!=   +0.0002498000178367
Running Total=   +5.2069314553534340
+1.6500000000000000^10/10!=   +0.0000412170029430
Running Total=   +5.2069726723563770
+1.6500000000000000^11/11!=   +0.0000061825504415
Running Total=   +5.2069788549068190
+1.6500000000000000^12/12!=   +0.0000008501006857
Running Total=   +5.2069797050075040
+1.6500000000000000^13/13!=   +0.0000001078973947
Running Total=   +5.2069798129048990
+1.6500000000000000^14/14!=   +0.0000000127164787
Running Total=   +5.2069798256213780
+1.6500000000000000^15/15!=   +0.0000000013988127
Running Total=   +5.2069798270201910
+1.6500000000000000^16/16!=   +0.0000000001442526
Running Total=   +5.2069798271644430
+1.6500000000000000^17/17!=   +0.0000000000140010
Running Total=   +5.2069798271784440
+1.6500000000000000^18/18!=   +0.0000000000012834
Running Total=   +5.2069798271797280
+1.6500000000000000^19/19!=   +0.0000000000001115
Running Total=   +5.2069798271798390
+1.6500000000000000^20/20!=   +0.0000000000000092
Running Total=   +5.2069798271798480
+1.6500000000000000^21/21!=   +0.0000000000000007
Running Total=   +5.2069798271798490
Exponential(+1.6500000000000000)=+5.2069798271798490
1/Exponential(+1.6500000000000000)=+0.1920499086207541

Calculate Exponential(+1.7000000000000000)
+1.7000000000000000^1/1!=   +1.7000000000000000
Running Total=   +2.7000000000000000
+1.7000000000000000^2/2!=   +1.4450000000000000
Running Total=   +4.1450000000000000
+1.7000000000000000^3/3!=   +0.8188333333333332
Running Total=   +4.9638333333333330
+1.7000000000000000^4/4!=   +0.3480041666666666
Running Total=   +5.3118374999999990
+1.7000000000000000^5/5!=   +0.1183214166666667
Running Total=   +5.4301589166666660
+1.7000000000000000^6/6!=   +0.0335244013888889
Running Total=   +5.4636833180555550
+1.7000000000000000^7/7!=   +0.0081416403373016
Running Total=   +5.4718249583928560
+1.7000000000000000^8/8!=   +0.0017300985716766
Running Total=   +5.4735550569645330
+1.7000000000000000^9/9!=   +0.0003267963968722
Running Total=   +5.4738818533614050
+1.7000000000000000^10/10!=   +0.0000555553874683
Running Total=   +5.4739374087488730
+1.7000000000000000^11/11!=   +0.0000085858326087
Running Total=   +5.4739459945814820
+1.7000000000000000^12/12!=   +0.0000012163262862
Running Total=   +5.4739472109077680
+1.7000000000000000^13/13!=   +0.0000001590580528

```
Running Total=                              +5.4739473699658210      Running Total=                               +5.8294000000000010
+1.7000000000000000^14/14!=                 +0.0000000193141921      +1.8000000000000000^5/5!=                    +0.1574640000000000
Running Total=                              +5.4739473892800130      Running Total=                               +5.9868640000000010
+1.7000000000000000^15/15!=                 +0.0000000021889418      +1.8000000000000000^6/6!=                    +0.0472392000000000
Running Total=                              +5.4739473914689540      Running Total=                               +6.0341032000000010
+1.7000000000000000^16/16!=                 +0.0000000002325751      +1.8000000000000000^7/7!=                    +0.0121472228571429
Running Total=                              +5.4739473917015290
+1.7000000000000000^17/17!=                 +0.0000000000232575
Running Total=                              +5.4739473917247870
+1.7000000000000000^18/18!=                 +0.0000000000021965
Running Total=                              +5.4739473917269830
+1.7000000000000000^19/19!=                 +0.0000000000001965
Running Total=                              +5.4739473917271790
+1.7000000000000000^20/20!=                 +0.0000000000000167
Running Total=                              +5.4739473917271960
+1.7000000000000000^21/21!=                 +0.0000000000000014
Running Total=                              +5.4739473917271980
+1.7000000000000000^22/22!=                 +0.0000000000000001
Running Total=                              +5.4739473917271980
Exponential(+1.7000000000000000)=+5.4739473917272000
1/Exponential(+1.7000000000000000)=+0.1826835240527347

Calculate Exponential(+1.7500000000000000)
+1.7500000000000000^1/1!=                    +1.7500000000000000
Running Total=                               +2.7500000000000000
+1.7500000000000000^2/2!=                     +1.5312500000000000
Running Total=                               +4.2812500000000000
+1.7500000000000000^3/3!=                     +0.8932291666666666
Running Total=                               +5.1744791666666670
+1.7500000000000000^4/4!=                     +0.3907877604166666
Running Total=                               +5.5652669270833340
+1.7500000000000000^5/5!=                     +0.1367757161458333
Running Total=                               +5.7020426432291670
+1.7500000000000000^6/6!=                     +0.0398929172092014
Running Total=                               +5.7419355604383680
+1.7500000000000000^7/7!=                     +0.0099732293023003
Running Total=                               +5.7519087897406690
+1.7500000000000000^8/8!=                     +0.0021816439098782
Running Total=                               +5.7540904336505470
+1.7500000000000000^9/9!=                     +0.0004242085380319
Running Total=                               +5.7545146421885790
+1.7500000000000000^10/10!=                   +0.0000742364941556
Running Total=                               +5.7545888786827350
+1.7500000000000000^11/11!=                   +0.0000118103513429
Running Total=                               +5.7546006890340780
+1.7500000000000000^12/12!=                   +0.0000017223429042
Running Total=                               +5.7546024113769820
+1.7500000000000000^13/13!=                   +0.0000002318538525
Running Total=                               +5.7546026432308340
+1.7500000000000000^14/14!=                   +0.0000000289817316
Running Total=                               +5.7546026722125660
+1.7500000000000000^15/15!=                   +0.0000000033812020
Running Total=                               +5.7546026755937680
+1.7500000000000000^16/16!=                   +0.0000000003698190
Running Total=                               +5.7546026759635870
+1.7500000000000000^17/17!=                   +0.0000000000380696
Running Total=                               +5.7546026760016570
+1.7500000000000000^18/18!=                   +0.0000000000037012
Running Total=                               +5.7546026760053580
+1.7500000000000000^19/19!=                   +0.0000000000003409
Running Total=                               +5.7546026760056990
+1.7500000000000000^20/20!=                   +0.0000000000000298
Running Total=                               +5.7546026760057290
+1.7500000000000000^21/21!=                   +0.0000000000000025
Running Total=                               +5.7546026760057320
+1.7500000000000000^22/22!=                   +0.0000000000000002
Running Total=                               +5.7546026760057320
Exponential(+1.7500000000000000)=+5.7546026760057310
1/Exponential(+1.7500000000000000)=+0.1737739434504451

Calculate Exponential(+1.8000000000000000)
+1.8000000000000000^1/1!=                    +1.8000000000000000
Running Total=                               +2.8000000000000000
+1.8000000000000000^2/2!=                     +1.6200000000000000
Running Total=                               +4.4200000000000000
+1.8000000000000000^3/3!=                     +0.9720000000000001
Running Total=                               +5.3920000000000000
+1.8000000000000000^4/4!=                     +0.4374000000000001
```

Running Total=   +6.3598195226017320
+1.8500000000000000^20/20!=   +0.0000000000000906
Running Total=   +6.3598195226018230
+1.8500000000000000^21/21!=   +0.0000000000000080
Running Total=   +6.3598195226018310
+1.8500000000000000^22/22!=   +0.0000000000000007
Running Total=   +6.3598195226018320
Exponential(+1.8500000000000000)=+6.3598195226018320
1/Exponential(+1.8500000000000000)=+0.1572371663136276

Calculate Exponential(+1.9000000000000000)
+1.9000000000000000^1/1!=   +1.9000000000000000
Running Total=   +2.9000000000000000
+1.9000000000000000^2/2!=   +1.8050000000000000
Running Total=   +4.7050000000000000
+1.9000000000000000^3/3!=   +1.1431666666666670
Running Total=   +5.8481666666666670
+1.9000000000000000^4/4!=   +0.5430041666666666
Running Total=   +6.3911708333333340
+1.9000000000000000^5/5!=   +0.2063415833333333
Running Total=   +6.5975124166666670
+1.9000000000000000^6/6!=   +0.0653415013888889
Running Total=   +6.6628539180555560
+1.9000000000000000^7/7!=   +0.0177355503769841
Running Total=   +6.6805894684325400
+1.9000000000000000^8/8!=   +0.0042121932145337
Running Total=   +6.6848016616470740
+1.9000000000000000^9/9!=   +0.0008892407897349
Running Total=   +6.6856909024368090
+1.9000000000000000^10/10!=   +0.0001689557500496
Running Total=   +6.6858598581868580
+1.9000000000000000^11/11!=   +0.0000291832659177
Running Total=   +6.6858890414527760
+1.9000000000000000^12/12!=   +0.0000046206837703
Running Total=   +6.6858936621365470
+1.9000000000000000^13/13!=   +0.0000006753307049
Running Total=   +6.6858943374672520
+1.9000000000000000^14/14!=   +0.0000000916523042
Running Total=   +6.6858944291192760
+1.9000000000000000^15/15!=   +0.0000000116092564
Running Total=   +6.6858944407285330
+1.9000000000000000^16/16!=   +0.0000000013785992
Running Total=   +6.6858944421071320
+1.9000000000000000^17/17!=   +0.0000000001540787
Running Total=   +6.6858944422612110
+1.9000000000000000^18/18!=   +0.0000000000162639
Running Total=   +6.6858944422774740
+1.9000000000000000^19/19!=   +0.0000000000016264
Running Total=   +6.6858944422791010
+1.9000000000000000^20/20!=   +0.0000000000001545
Running Total=   +6.6858944422792550
+1.9000000000000000^21/21!=   +0.0000000000000140
Running Total=   +6.6858944422792690
+1.9000000000000000^22/22!=   +0.0000000000000012
Running Total=   +6.6858944422792700
+1.9000000000000000^23/23!=   +0.0000000000000001
Running Total=   +6.6858944422792700
Exponential(+1.9000000000000000)=+6.6858944422792690
1/Exponential(+1.9000000000000000)=+0.1495686192226351

Calculate Exponential(+1.9500000000000000)
+1.9500000000000000^1/1!=   +1.9500000000000000
Running Total=   +2.9500000000000000
+1.9500000000000000^2/2!=   +1.9012500000000000
Running Total=   +4.8512500000000000
+1.9500000000000000^3/3!=   +1.2358125000000000
Running Total=   +6.0870625000000000
+1.9500000000000000^4/4!=   +0.6024585937500000
Running Total=   +6.6895210937500000
+1.9500000000000000^5/5!=   +0.2349588515625000
Running Total=   +6.9244799453125000
+1.9500000000000000^6/6!=   +0.0763616267578125
Running Total=   +7.0008415720703120
+1.9500000000000000^7/7!=   +0.0212721674539621
Running Total=   +7.0221137395242750
+1.9500000000000000^8/8!=   +0.0051850908169033
Running Total=   +7.0272988303411780
+1.9500000000000000^9/9!=   +0.0011234363436624

Running Total=   +7.0284222666848400
+1.9500000000000000^10/10!=   +0.0002190700870142
Running Total=   +7.0286413367718540
+1.9500000000000000^11/11!=   +0.0000388351517889
Running Total=   +7.0286801719236430
+1.9500000000000000^12/12!=   +0.0000063107121657
Running Total=   +7.0286864826358080
+1.9500000000000000^13/13!=   +0.0000009466068249
Running Total=   +7.0286874292426330
+1.9500000000000000^14/14!=   +0.0000001318488077
Running Total=   +7.0286875610914410
+1.9500000000000000^15/15!=   +0.0000000171403450
Running Total=   +7.0286875782317860
+1.9500000000000000^16/16!=   +0.0000000020889795
Running Total=   +7.0286875803207650
+1.9500000000000000^17/17!=   +0.0000000002396182
Running Total=   +7.0286875805603830
+1.9500000000000000^18/18!=   +0.0000000000259586
Running Total=   +7.0286875805863420
+1.9500000000000000^19/19!=   +0.0000000000026642
Running Total=   +7.0286875805890070
+1.9500000000000000^20/20!=   +0.0000000000002598
Running Total=   +7.0286875805892660
+1.9500000000000000^21/21!=   +0.0000000000000241
Running Total=   +7.0286875805892900
+1.9500000000000000^22/22!=   +0.0000000000000021
Running Total=   +7.0286875805892920
+1.9500000000000000^23/23!=   +0.0000000000000002
Running Total=   +7.0286875805892920
Exponential(+1.9500000000000000)=+7.0286875805892940
1/Exponential(+1.9500000000000000)=+0.1422740715865136

Calculate Exponential(+2.0000000000000000)
+2.0000000000000000^1/1!=   +2.0000000000000000
Running Total=   +3.0000000000000000
+2.0000000000000000^2/2!=   +2.0000000000000000
Running Total=   +5.0000000000000000
+2.0000000000000000^3/3!=   +1.3333333333333330
Running Total=   +6.3333333333333330
+2.0000000000000000^4/4!=   +0.6666666666666666
Running Total=   +7.0000000000000000
+2.0000000000000000^5/5!=   +0.2666666666666667
Running Total=   +7.2666666666666670
+2.0000000000000000^6/6!=   +0.0888888888888889
Running Total=   +7.3555555555555550
+2.0000000000000000^7/7!=   +0.0253968253968254
Running Total=   +7.3809523809523800
+2.0000000000000000^8/8!=   +0.0063492063492063
Running Total=   +7.3873015873015870
+2.0000000000000000^9/9!=   +0.0014109347442681
Running Total=   +7.3887125220458540
+2.0000000000000000^10/10!=   +0.0002821869488536
Running Total=   +7.3889947089947080
+2.0000000000000000^11/11!=   +0.0000513067179734
Running Total=   +7.3890460157126810
+2.0000000000000000^12/12!=   +0.0000085511196622
Running Total=   +7.3890545668323440
+2.0000000000000000^13/13!=   +0.0000013155568711
Running Total=   +7.3890558823892150
+2.0000000000000000^14/14!=   +0.0000001879366959
Running Total=   +7.3890560703259100
+2.0000000000000000^15/15!=   +0.0000000250582261
Running Total=   +7.3890560953841360
+2.0000000000000000^16/16!=   +0.0000000031322783
Running Total=   +7.3890560985164150
+2.0000000000000000^17/17!=   +0.0000000003685033
Running Total=   +7.3890560988849180
+2.0000000000000000^18/18!=   +0.0000000000409448
Running Total=   +7.3890560989258630
+2.0000000000000000^19/19!=   +0.0000000000043100
Running Total=   +7.3890560989301730
+2.0000000000000000^20/20!=   +0.0000000000004310
Running Total=   +7.3890560989306040
+2.0000000000000000^21/21!=   +0.0000000000000410
Running Total=   +7.3890560989306450
+2.0000000000000000^22/22!=   +0.0000000000000037
Running Total=   +7.3890560989306490
+2.0000000000000000^23/23!=   +0.0000000000000003

Running Total=   +7.3890560989306490
Exponential(+2.0000000000000000)=+7.3890560989306500
1/Exponential(+2.0000000000000000)=+0.1353352832366127

The following are the Sine function

 1 degrees=0.0174532925199433 radians
Calculate Sine(+0.0174532925199433)
+0.0174532925199433^1/1!=   +0.0174532925199433
Running Total=   +0.0174532925199433
-0.0174532925199433^3/3!=   -0.0000008860961557
Running Total=   +0.0174524064237876
+0.0174532925199433^5/5!=   +0.0000000000134960
Running Total=   +0.0174524064372836
-0.0174532925199433^7/7!=   -0.0000000000000001
Running Total=   +0.0174524064372835
Sine(+1.0000000000000000)=+0.0174524064372835
Coseacant(+1.0000000000000000)=+57.2986884985501800

 2 degrees=0.0349065850398866 radians
Calculate Sine(+0.0349065850398866)
+0.0349065850398866^1/1!=   +0.0349065850398866
Running Total=   +0.0349065850398866
-0.0349065850398866^3/3!=   -0.0000070887692456
Running Total=   +0.0348994962706410
+0.0349065850398866^5/5!=   +0.0000000004318725
Running Total=   +0.0348994967025135
-0.0349065850398866^7/7!=   -0.0000000000000125
Running Total=   +0.0348994967025010
+0.0349065850398866^9/9!=   +0.0000000000000000
Running Total=   +0.0348994967025010
Sine(+2.0000000000000000)=+0.0348994967025010
Coseacant(+2.0000000000000000)=+28.6537083478438200

 3 degrees=0.0523598775598299 radians
Calculate Sine(+0.0523598775598299)
+0.0523598775598299^1/1!=   +0.0523598775598299
Running Total=   +0.0523598775598299
-0.0523598775598299^3/3!=   -0.0000239245962039
Running Total=   +0.0523359529636260
+0.0523598775598299^5/5!=   +0.0000000032795319
Running Total=   +0.0523359562431579
-0.0523598775598299^7/7!=   -0.0000000000002141
Running Total=   +0.0523359562429438
+0.0523598775598299^9/9!=   +0.0000000000000000
Running Total=   +0.0523359562429438
Sine(+3.0000000000000000)=+0.0523359562429438
Coseacant(+3.0000000000000000)=+19.1073226092974000

 4 degrees=0.0698131700797732 radians
Calculate Sine(+0.0698131700797732)
+0.0698131700797732^1/1!=   +0.0698131700797732
Running Total=   +0.0698131700797732
-0.0698131700797732^3/3!=   -0.0000567101539649
Running Total=   +0.0697564599258083
+0.0698131700797732^5/5!=   +0.0000000138199206
Running Total=   +0.0697564737457289
-0.0698131700797732^7/7!=   -0.0000000000016037
Running Total=   +0.0697564737441252
+0.0698131700797732^9/9!=   +0.0000000000000001
Running Total=   +0.0697564737441253
Sine(+4.0000000000000000)=+0.0697564737441253
Coseacant(+4.0000000000000000)=+14.3355870262036800

 5 degrees=0.0872664625997165 radians
Calculate Sine(+0.0872664625997165)
+0.0872664625997165^1/1!=   +0.0872664625997165
Running Total=   +0.0872664625997165
-0.0872664625997165^3/3!=   -0.0001107620194627
Running Total=   +0.0871557005802538
+0.0872664625997165^5/5!=   +0.0000000421750507
Running Total=   +0.0871557427553045
-0.0872664625997165^7/7!=   -0.0000000000076472
Running Total=   +0.0871557427476574
+0.0872664625997165^9/9!=   +0.0000000000000008
Running Total=   +0.0871557427476582
Sine(+5.0000000000000000)=+0.0871557427476582

Coseacant(+5.0000000000000000)=+11.4737132456698600

 6 degrees=0.1047197551196598 radians
Calculate Sine(+0.1047197551196598)
+0.1047197551196598^1/1!=   +0.1047197551196598
Running Total=   +0.1047197551196598
-0.1047197551196598^3/3!=   -0.0001913967696315
Running Total=   +0.1045283583500283
+0.1047197551196598^5/5!=   +0.0000001049450222
Running Total=   +0.1045284632950505
-0.1047197551196598^7/7!=   -0.0000000000274012
Running Total=   +0.1045284632676493
+0.1047197551196598^9/9!=   +0.0000000000000042
Running Total=   +0.1045284632676535
-0.1047197551196598^11/11!=   -0.0000000000000000
Running Total=   +0.1045284632676535
Sine(+6.0000000000000000)=+0.1045284632676535
Coseacant(+6.0000000000000000)=+9.5667722335056260

 7 degrees=0.1221730476396031 radians
Calculate Sine(+0.1221730476396031)
+0.1221730476396031^1/1!=   +0.1221730476396031
Running Total=   +0.1221730476396031
-0.1221730476396031^3/3!=   -0.0003039309814055
Running Total=   +0.1218691166581975
+0.1221730476396031^5/5!=   +0.0000002268275448
Running Total=   +0.1218693434857423
-0.1221730476396031^7/7!=   -0.0000000000806116
Running Total=   +0.1218693434051308
+0.1221730476396031^9/9!=   +0.0000000000000167
Running Total=   +0.1218693434051475
-0.1221730476396031^11/11!=   -0.0000000000000000
Running Total=   +0.1218693434051475
Sine(+7.0000000000000000)=+0.1218693434051475
Coseacant(+7.0000000000000000)=+8.2055090481250780

 8 degrees=0.1396263401595464 radians
Calculate Sine(+0.1396263401595464)
+0.1396263401595464^1/1!=   +0.1396263401595464
Running Total=   +0.1396263401595464
-0.1396263401595464^3/3!=   -0.0004536812317191
Running Total=   +0.1391726589278273
+0.1396263401595464^5/5!=   +0.0000004422374599
Running Total=   +0.1391731011652872
-0.1396263401595464^7/7!=   -0.0000000002052773
Running Total=   +0.1391731009600099
+0.1396263401595464^9/9!=   +0.0000000000000556
Running Total=   +0.1391731009600655
-0.1396263401595464^11/11!=   -0.0000000000000000
Running Total=   +0.1391731009600655
Sine(+8.0000000000000000)=+0.1391731009600654
Coseacant(+8.0000000000000000)=+7.1852965343277190

 9 degrees=0.1570796326794897 radians
Calculate Sine(+0.1570796326794897)
+0.1570796326794897^1/1!=   +0.1570796326794897
Running Total=   +0.1570796326794897
-0.1570796326794897^3/3!=   -0.0006459640975062
Running Total=   +0.1564336685819834
+0.1570796326794897^5/5!=   +0.0000007969262625
Running Total=   +0.1564344655082459
-0.1570796326794897^7/7!=   -0.0000000004681754
Running Total=   +0.1564344650400704
+0.1570796326794897^9/9!=   +0.0000000000001604
Running Total=   +0.1564344650402309
-0.1570796326794897^11/11!=   -0.0000000000000000
Running Total=   +0.1564344650402309
Sine(+9.0000000000000000)=+0.1564344650402309
Coseacant(+9.0000000000000000)=+6.3924532214996620

10 degrees=0.1745329251994329 radians
Calculate Sine(+0.1745329251994329)
+0.1745329251994329^1/1!=   +0.1745329251994329
Running Total=   +0.1745329251994329
-0.1745329251994329^3/3!=   -0.0008860961557013
Running Total=   +0.1736468290437317
+0.1745329251994329^5/5!=   +0.0000013496016232
Running Total=   +0.1736481786453548

-0.1745329251994329^7/7!=	-0.0000000009788385
Running Total=	+0.1736481776665163
+0.1745329251994329^9/9!=	+0.0000000000004141
Running Total=	+0.1736481776669304
-0.1745329251994329^11/11!=	-0.0000000000000001
Running Total=	+0.1736481776669303
Sine(+10.0000000000000000)=+0.1736481776669304	
Coseacant(+10.0000000000000000)=+5.7587704831436340	

11 degrees=0.1919862177193762 radians
Calculate Sine(+0.1919862177193762)

+0.1919862177193762^1/1!=	+0.1919862177193762
Running Total=	+0.1919862177193762
-0.1919862177193762^3/3!=	-0.0011793939832384
Running Total=	+0.1908068237361378
+0.1919862177193762^5/5!=	+0.0000021735469101
Running Total=	+0.1908089972830479
-0.1919862177193762^7/7!=	-0.0000000019074793
Running Total=	+0.1908089953755686
+0.1919862177193762^9/9!=	+0.0000000000009765
Running Total=	+0.1908089953765451
-0.1919862177193762^11/11!=	-0.0000000000000003
Running Total=	+0.1908089953765448
Sine(+11.0000000000000000)=+0.1908089953765448	
Coseacant(+11.0000000000000000)=+5.2408430641678490	

12 degrees=0.2094395102393196 radians
Calculate Sine(+0.2094395102393196)

+0.2094395102393196^1/1!=	+0.2094395102393196
Running Total=	+0.2094395102393196
-0.2094395102393196^3/3!=	-0.0015311741570518
Running Total=	+0.2079083360822677
+0.2094395102393196^5/5!=	+0.0000033582407109
Running Total=	+0.2079116943229787
-0.2094395102393196^7/7!=	-0.0000000035073553
Running Total=	+0.2079116908156234
+0.2094395102393196^9/9!=	+0.0000000000021368
Running Total=	+0.2079116908177602
-0.2094395102393196^11/11!=	-0.0000000000000009
Running Total=	+0.2079116908177593
Sine(+12.0000000000000000)=+0.2079116908177593	
Coseacant(+12.0000000000000000)=+4.8097343447441310	

13 degrees=0.2268928027592629 radians
Calculate Sine(+0.2268928027592629)

+0.2268928027592629^1/1!=	+0.2268928027592629
Running Total=	+0.2268928027592629
-0.2268928027592629^3/3!=	-0.0019467532540758
Running Total=	+0.2249460495051871
+0.2268928027592629^5/5!=	+0.0000050109763547
Running Total=	+0.2249510604815418
-0.2268928027592629^7/7!=	-0.0000000061420663
Running Total=	+0.2249510543394755
+0.2268928027592629^9/9!=	+0.0000000000043916
Running Total=	+0.2249510543438671
-0.2268928027592629^11/11!=	-0.0000000000000021
Running Total=	+0.2249510543438650
+0.2268928027592629^13/13!=	+0.0000000000000000
Running Total=	+0.2249510543438650
Sine(+13.0000000000000000)=+0.2249510543438650	
Coseacant(+13.0000000000000000)=+4.4454114825858020	

14 degrees=0.2443460952792061 radians
Calculate Sine(+0.2443460952792061)

+0.2443460952792061^1/1!=	+0.2443460952792061
Running Total=	+0.2443460952792061
-0.2443460952792061^3/3!=	-0.0024314478512444
Running Total=	+0.2419146474279618
+0.2443460952792061^5/5!=	+0.0000072584814338
Running Total=	+0.2419219059093956
-0.2443460952792061^7/7!=	-0.0000000103182795
Running Total=	+0.2419218955911161
+0.2443460952792061^9/9!=	+0.0000000000085563
Running Total=	+0.2419218955996724
-0.2443460952792061^11/11!=	-0.0000000000000046
Running Total=	+0.2419218955996677
+0.2443460952792061^13/13!=	+0.0000000000000000
Running Total=	+0.2419218955996677

Sine(+14.0000000000000000)=+0.2419218955996677	
Coseacant(+14.0000000000000000)=+4.1335654944387490	

15 degrees=0.2617993877991494 radians
Calculate Sine(+0.2617993877991494)

+0.2617993877991494^1/1!=	+0.2617993877991494
Running Total=	+0.2617993877991494
-0.2617993877991494^3/3!=	-0.0029905745254919
Running Total=	+0.2588088132736575
+0.2617993877991494^5/5!=	+0.0000102485373259
Running Total=	+0.2588190618109834
-0.2617993877991494^7/7!=	-0.0000000167243732
Running Total=	+0.2588190450866102
+0.2617993877991494^9/9!=	+0.0000000000159204
Running Total=	+0.2588190451025306
-0.2617993877991494^11/11!=	-0.0000000000000099
Running Total=	+0.2588190451025207
+0.2617993877991494^13/13!=	+0.0000000000000000
Running Total=	+0.2588190451025207
Sine(+15.0000000000000000)=+0.2588190451025207	
Coseacant(+15.0000000000000000)=+3.8637033051562730	

16 degrees=0.2792526803190927 radians
Calculate Sine(+0.2792526803190927)

+0.2792526803190927^1/1!=	+0.2792526803190927
Running Total=	+0.2792526803190927
-0.2792526803190927^3/3!=	-0.0036294498537525
Running Total=	+0.2756232304653402
+0.2792526803190927^5/5!=	+0.0000141515987161
Running Total=	+0.2756373820640563
-0.2792526803190927^7/7!=	-0.0000000262754955
Running Total=	+0.2756373557885607
+0.2792526803190927^9/9!=	+0.0000000000284586
Running Total=	+0.2756373558170193
-0.2792526803190927^11/11!=	-0.0000000000000202
Running Total=	+0.2756373558169992
+0.2792526803190927^13/13!=	+0.0000000000000000
Running Total=	+0.2756373558169992
Sine(+16.0000000000000000)=+0.2756373558169992	
Coseacant(+16.0000000000000000)=+3.6279552785433000	

17 degrees=0.2967059728390360 radians
Calculate Sine(+0.2967059728390360)

+0.2967059728390360^1/1!=	+0.2967059728390360
Running Total=	+0.2967059728390360
-0.2967059728390360^3/3!=	-0.0043533904129605
Running Total=	+0.2923525824260756
+0.2967059728390360^5/5!=	+0.0000191624131186
Running Total=	+0.2923717448391942
-0.2967059728390360^7/7!=	-0.0000000401655285
Running Total=	+0.2923717046736656
+0.2967059728390360^9/9!=	+0.0000000000491104
Running Total=	+0.2923717047227761
-0.2967059728390360^11/11!=	-0.0000000000000393
Running Total=	+0.2923717047227368
+0.2967059728390360^13/13!=	+0.0000000000000000
Running Total=	+0.2923717047227368
Sine(+17.0000000000000000)=+0.2923717047227367	
Coseacant(+17.0000000000000000)=+3.4203036198332690	

18 degrees=0.3141592653589793 radians
Calculate Sine(+0.3141592653589793)

+0.3141592653589793^1/1!=	+0.3141592653589793
Running Total=	+0.3141592653589793
-0.3141592653589793^3/3!=	-0.0051677127800500
Running Total=	+0.3089915525789294
+0.3141592653589793^5/5!=	+0.0000255016403988
Running Total=	+0.3090170542193281
-0.3141592653589793^7/7!=	-0.0000000599264529
Running Total=	+0.3090169942928752
+0.3141592653589793^9/9!=	+0.0000000000821459
Running Total=	+0.3090169943750211
-0.3141592653589793^11/11!=	-0.0000000000000737
Running Total=	+0.3090169943749474
+0.3141592653589793^13/13!=	+0.0000000000000000
Running Total=	+0.3090169943749475
Sine(+18.0000000000000000)=+0.3090169943749474	
Coseacant(+18.0000000000000000)=+3.2360679774997900	

19 degrees=0.3316125578789226 radians
Calculate Sine(+0.3316125578789226)
+0.3316125578789226^1/1!=   +0.3316125578789226
Running Total=   +0.3316125578789226
-0.3316125578789226^3/3!=   -0.0060777335319552
Running Total=   +0.3255348243469675
+0.3316125578789226^5/5!=   +0.0000334174722951
Running Total=   +0.3255682418192626
-0.3316125578789226^7/7!=   -0.0000000874956060
Running Total=   +0.3255681543236566
+0.3316125578789226^9/9!=   +0.0000000001336336
Running Total=   +0.3255681544572902
-0.3316125578789226^11/11!=   -0.0000000000001336
Running Total=   +0.3255681544571566
+0.3316125578789226^13/13!=   +0.0000000000000001
Running Total=   +0.3255681544571567
Sine(+19.0000000000000000)=+0.3255681544571566
Coseacant(+19.0000000000000000)=+3.0715534867572420

20 degrees=0.3490658503988659 radians
Calculate Sine(+0.3490658503988659)
+0.3490658503988659^1/1!=   +0.3490658503988659
Running Total=   +0.3490658503988659
-0.3490658503988659^3/3!=   -0.0070887692456104
Running Total=   +0.3419770811532555
+0.3490658503988659^5/5!=   +0.0000431872519412
Running Total=   +0.3420202684051968
-0.3490658503988659^7/7!=   -0.0000001252913262
Running Total=   +0.3420201431138706
+0.3490658503988659^9/9!=   +0.0000000002120329
Running Total=   +0.3420201433259035
-0.3490658503988659^11/11!=   -0.0000000000002349
Running Total=   +0.3420201433256686
+0.3490658503988659^13/13!=   +0.0000000000000002
Running Total=   +0.3420201433256688
Sine(+20.0000000000000000)=+0.3420201433256687
Coseacant(+20.0000000000000000)=+2.9238044001630870

21 degrees=0.3665191429188092 radians
Calculate Sine(+0.3665191429188092)
+0.3665191429188092^1/1!=   +0.3665191429188092
Running Total=   +0.3665191429188092
-0.3665191429188092^3/3!=   -0.0082061364979497
Running Total=   +0.3583130064208595
+0.3665191429188092^5/5!=   +0.0000551190933876
Running Total=   +0.3583681255142471
-0.3665191429188092^7/7!=   -0.0000001762974781
Running Total=   +0.3583679492167690
+0.3665191429188092^9/9!=   +0.0000000003289326
Running Total=   +0.3583679495457016
-0.3665191429188092^11/11!=   -0.0000000000004017
Running Total=   +0.3583679495452999
+0.3665191429188092^13/13!=   +0.0000000000000003
Running Total=   +0.3583679495453003
Sine(+21.0000000000000000)=+0.3583679495453003
Coseacant(+21.0000000000000000)=+2.7904281096253360

22 degrees=0.3839724354387525 radians
Calculate Sine(+0.3839724354387525)
+0.3839724354387525^1/1!=   +0.3839724354387525
Running Total=   +0.3839724354387525
-0.3839724354387525^3/3!=   -0.0094351518659074
Running Total=   +0.3745372835728450
+0.3839724354387525^5/5!=   +0.0000695535011239
Running Total=   +0.3746068370739689
-0.3839724354387525^7/7!=   -0.0000002441573499
Running Total=   +0.3746065929166190
+0.3839724354387525^9/9!=   +0.0000000004999625
Running Total=   +0.3746065934165815
-0.3839724354387525^11/11!=   -0.0000000000006701
Running Total=   +0.3746065934159113
+0.3839724354387525^13/13!=   +0.0000000000000006
Running Total=   +0.3746065934159120
Sine(+22.0000000000000000)=+0.3746065934159120
Coseacant(+22.0000000000000000)=+2.6694671625540140

23 degrees=0.4014257279586958 radians
Calculate Sine(+0.4014257279586958)
+0.4014257279586958^1/1!=   +0.4014257279586958
Running Total=   +0.4014257279586958
-0.4014257279586958^3/3!=   -0.0107811319264177
Running Total=   +0.3906445960322781
+0.4014257279586958^5/5!=   +0.0000868649896004
Running Total=   +0.3907314610218784
-0.4014257279586958^7/7!=   -0.0000003332774186
Running Total=   +0.3907311277444598
+0.4014257279586958^9/9!=   +0.0000000007459055
Running Total=   +0.3907311284903653
-0.4014257279586958^11/11!=   -0.0000000000010927
Running Total=   +0.3907311284892727
+0.4014257279586958^13/13!=   +0.0000000000000011
Running Total=   +0.3907311284892738
-0.4014257279586958^15/15!=   -0.0000000000000000
Running Total=   +0.3907311284892738
Sine(+23.0000000000000000)=+0.3907311284892738
Coseacant(+23.0000000000000000)=+2.5593046652474520

24 degrees=0.4188790204786391 radians
Calculate Sine(+0.4188790204786391)
+0.4188790204786391^1/1!=   +0.4188790204786391
Running Total=   +0.4188790204786391
-0.4188790204786391^3/3!=   -0.0122493932564147
Running Total=   +0.4066296272222244
+0.4188790204786391^5/5!=   +0.0001074637027504
Running Total=   +0.4067370909249748
-0.4188790204786391^7/7!=   -0.0000004489414745
Running Total=   +0.4067366419835002
+0.4188790204786391^9/9!=   +0.0000000010940431
Running Total=   +0.4067366430775434
-0.4188790204786391^11/11!=   -0.0000000000017451
Running Total=   +0.4067366430757983
+0.4188790204786391^13/13!=   +0.0000000000000020
Running Total=   +0.4067366430758002
-0.4188790204786391^15/15!=   -0.0000000000000000
Running Total=   +0.4067366430758002
Sine(+24.0000000000000000)=+0.4067366430758002
Coseacant(+24.0000000000000000)=+2.4585933355742380

25 degrees=0.4363323129985824 radians
Calculate Sine(+0.4363323129985824)
+0.4363323129985824^1/1!=   +0.4363323129985824
Running Total=   +0.4363323129985824
-0.4363323129985824^3/3!=   -0.0138452524328328
Running Total=   +0.4224870605657496
+0.4363323129985824^5/5!=   +0.0001317970335120
Running Total=   +0.4226188575992616
-0.4363323129985824^7/7!=   -0.0000005974355995
Running Total=   +0.4226182601636622
+0.4363323129985824^9/9!=   +0.0000000015797681
Running Total=   +0.4226182617434303
-0.4363323129985824^11/11!=   -0.0000000000027342
Running Total=   +0.4226182617406961
+0.4363323129985824^13/13!=   +0.0000000000000033
Running Total=   +0.4226182617406994
-0.4363323129985824^15/15!=   -0.0000000000000000
Running Total=   +0.4226182617406994
Sine(+25.0000000000000000)=+0.4226182617406994
Coseacant(+25.0000000000000000)=+2.3662015831524990

26 degrees=0.4537856055185257 radians
Calculate Sine(+0.4537856055185257)
+0.4537856055185257^1/1!=   +0.4537856055185257
Running Total=   +0.4537856055185257
-0.4537856055185257^3/3!=   -0.0155740260326060
Running Total=   +0.4382115794859197
+0.4537856055185257^5/5!=   +0.0001603512433501
Running Total=   +0.4383719307292698
-0.4537856055185257^7/7!=   -0.0000007861844914
Running Total=   +0.4383711445447784
+0.4537856055185257^9/9!=   +0.0000000022485027
Running Total=   +0.4383711467932811
-0.4537856055185257^11/11!=   -0.0000000000042092
Running Total=   +0.4383711467890719
+0.4537856055185257^13/13!=   +0.0000000000000056
Running Total=   +0.4383711467890774

-0.4537856055185257^15/15!=   -0.0000000000000000
Running Total=   +0.4383711467890774
Sine(+26.0000000000000000)=+0.4383711467890774
Coseacant(+26.0000000000000000)=+2.2811720327048590

27 degrees=0.4712388980384690 radians
Calculate Sine(+0.4712388980384690)
+0.4712388980384690^1/1!=   +0.4712388980384690
Running Total=   +0.4712388980384690
-0.4712388980384690^3/3!=   -0.0174410306326687
Running Total=   +0.4537978674058003
+0.4712388980384690^5/5!=   +0.0001936530817782
Running Total=   +0.4539915204875785
-0.4712388980384690^7/7!=   -0.0000010238996294
Running Total=   +0.4539904965879491
+0.4712388980384690^9/9!=   +0.0000000031579638
Running Total=   +0.4539904997459129
-0.4712388980384690^11/11!=   -0.0000000000063752
Running Total=   +0.4539904997395377
+0.4712388980384690^13/13!=   +0.0000000000000091
Running Total=   +0.4539904997395467
-0.4712388980384690^15/15!=   -0.0000000000000000
Running Total=   +0.4539904997395467
Sine(+27.0000000000000000)=+0.4539904997395468
Coseacant(+27.0000000000000000)=+2.2026892645852660

28 degrees=0.4886921905584123 radians
Calculate Sine(+0.4886921905584123)
+0.4886921905584123^1/1!=   +0.4886921905584123
Running Total=   +0.4886921905584123
-0.4886921905584123^3/3!=   -0.0194515828099549
Running Total=   +0.4692406077484574
+0.4886921905584123^5/5!=   +0.0002322714058804
Running Total=   +0.4694728791543378
-0.4886921905584123^7/7!=   -0.0000013207397719
Running Total=   +0.4694715584145659
+0.4886921905584123^9/9!=   +0.0000000043808215
Running Total=   +0.4694715627953874
-0.4886921905584123^11/11!=   -0.0000000000095112
Running Total=   +0.4694715627858762
+0.4886921905584123^13/13!=   +0.0000000000000146
Running Total=   +0.4694715627858908
-0.4886921905584123^15/15!=   -0.0000000000000000
Running Total=   +0.4694715627858908
Sine(+28.0000000000000000)=+0.4694715627858908
Coseacant(+28.0000000000000000)=+2.1300544681895130

29 degrees=0.5061454830783556 radians
Calculate Sine(+0.5061454830783556)
+0.5061454830783556^1/1!=   +0.5061454830783556
Running Total=   +0.5061454830783556
-0.5061454830783556^3/3!=   -0.0216109991413990
Running Total=   +0.4845344839369566
+0.5061454830783556^5/5!=   +0.0002768187998334
Running Total=   +0.4848113027367901
-0.5061454830783556^7/7!=   -0.0000016884842813
Running Total=   +0.4848096142525088
+0.5061454830783556^9/9!=   +0.0000000060077971
Running Total=   +0.4848096202603059
-0.5061454830783556^11/11!=   -0.0000000000139918
Running Total=   +0.4848096202463141
+0.5061454830783556^13/13!=   +0.0000000000000230
Running Total=   +0.4848096202463371
-0.5061454830783556^15/15!=   -0.0000000000000000
Running Total=   +0.4848096202463370
Sine(+29.0000000000000000)=+0.4848096202463370
Coseacant(+29.0000000000000000)=+2.0626653396273140

30 degrees=0.5235987755982988 radians
Calculate Sine(+0.5235987755982988)
+0.5235987755982988^1/1!=   +0.5235987755982988
Running Total=   +0.5235987755982988
-0.5235987755982988^3/3!=   -0.0239245962039350
Running Total=   +0.4996741793943638
+0.5235987755982988^5/5!=   +0.0003279531944287
Running Total=   +0.5000021325887924
-0.5235987755982988^7/7!=   -0.0000021407197692
Running Total=   +0.4999999918690232

+0.5235987755982988^9/9!=   +0.0000000081512567
Running Total=   +0.5000000000202799
-0.5235987755982988^11/11!=   -0.0000000000203156
Running Total=   +0.4999999999999643
+0.5235987755982988^13/13!=   +0.0000000000000357
Running Total=   +0.5000000000000000
-0.5235987755982988^15/15!=   -0.0000000000000000
Running Total=   +0.4999999999999999
Sine(+30.0000000000000000)=+0.5000000000000000
Coseacant(+30.0000000000000000)=+2.0000000000000000

31 degrees=0.5410520681182421 radians
Calculate Sine(+0.5410520681182421)
+0.5410520681182421^1/1!=   +0.5410520681182421
Running Total=   +0.5410520681182421
-0.5410520681182421^3/3!=   -0.0263976905744974
Running Total=   +0.5146543775437448
+0.5410520681182421^5/5!=   +0.0003863794865939
Running Total=   +0.5150407570303386
-0.5410520681182421^7/7!=   -0.0000026930405547
Running Total=   +0.5150380639897839
+0.5410520681182421^9/9!=   +0.0000000109493546
Running Total=   +0.5150380749391384
-0.5410520681182421^11/11!=   -0.0000000000291390
Running Total=   +0.5150380749099995
+0.5410520681182421^13/13!=   +0.0000000000000547
Running Total=   +0.5150380749100543
-0.5410520681182421^15/15!=   -0.0000000000000001
Running Total=   +0.5150380749100542
Sine(+31.0000000000000000)=+0.5150380749100542
Coseacant(+31.0000000000000000)=+1.9416040264103560

32 degrees=0.5585053606381855 radians
Calculate Sine(+0.5585053606381855)
+0.5585053606381855^1/1!=   +0.5585053606381855
Running Total=   +0.5585053606381855
-0.5585053606381855^3/3!=   -0.0290355988300201
Running Total=   +0.5294697618081653
+0.5585053606381855^5/5!=   +0.0004528511589152
Running Total=   +0.5299226129670805
-0.5585053606381855^7/7!=   -0.0000033632634289
Running Total=   +0.5299192497036517
+0.5585053606381855^9/9!=   +0.0000000145707894
Running Total=   +0.5299192642744410
-0.5585053606381855^11/11!=   -0.0000000000413186
Running Total=   +0.5299192642331225
+0.5585053606381855^13/13!=   +0.0000000000000826
Running Total=   +0.5299192642332051
-0.5585053606381855^15/15!=   -0.0000000000000001
Running Total=   +0.5299192642332050
Sine(+32.0000000000000000)=+0.5299192642332049
Coseacant(+32.0000000000000000)=+1.8870799147998580

33 degrees=0.5759586531581288 radians
Calculate Sine(+0.5759586531581288)
+0.5759586531581288^1/1!=   +0.5759586531581288
Running Total=   +0.5759586531581288
-0.5759586531581288^3/3!=   -0.0318436375474376
Running Total=   +0.5441150156106912
+0.5759586531581288^5/5!=   +0.0005281718991593
Running Total=   +0.5446431875098505
-0.5759586531581288^7/7!=   -0.0000041716572206
Running Total=   +0.5446390158526299
+0.5759586531581288^9/9!=   +0.0000000192202368
Running Total=   +0.5446390350728667
-0.5759586531581288^11/11!=   -0.0000000000579627
Running Total=   +0.5446390350149040
+0.5759586531581288^13/13!=   +0.0000000000001233
Running Total=   +0.5446390350150272
-0.5759586531581288^15/15!=   -0.0000000000000002
Running Total=   +0.5446390350150270
Sine(+33.0000000000000000)=+0.5446390350150271
Coseacant(+33.0000000000000000)=+1.8360784587766630

34 degrees=0.5934119456780721 radians
Calculate Sine(+0.5934119456780721)
+0.5934119456780721^1/1!=   +0.5934119456780721
Running Total=   +0.5934119456780721

-0.5934119456780721^3/3!=   -0.0348271233036838
Running Total=   +0.5585848223743882
+0.5934119456780721^5/5!=   +0.00006131972197951
Running Total=   +0.5591980195941834
-0.5934119456780721^7/7!=   -0.0000051411876543
Running Total=   +0.5591928784065291
+0.5934119456780721^9/9!=   +0.000000251445304
Running Total=   +0.5591929035510594
-0.5934119456780721^11/11!=   -0.0000000000804940
Running Total=   +0.5591929034705655
+0.5934119456780721^13/13!=   +0.0000000000001817
Running Total=   +0.5591929034707472
-0.5934119456780721^15/15!=   -0.0000000000000003
Running Total=   +0.5591929034707469
Sine(+34.0000000000000000)=+0.5591929034707468
Coseacant(+34.0000000000000000)=+1.7882916499714010

35 degrees=0.6108652381980153 radians
Calculate Sine(+0.6108652381980153)
+0.6108652381980153^1/1!=   +0.6108652381980153
Running Total=   +0.6108652381980153
-0.6108652381980153^3/3!=   -0.0379913726756931
Running Total=   +0.5728738655223221
+0.6108652381980153^5/5!=   +0.0007088360775158
Running Total=   +0.5735827015998379
-0.6108652381980153^7/7!=   -0.0000062977779954
Running Total=   +0.5735764038218425
+0.6108652381980153^9/9!=   +0.0000000326396636
Running Total=   +0.5735764364615061
-0.6108652381980153^11/11!=   -0.0000000001107245
Running Total=   +0.5735764363507816
+0.6108652381980153^13/13!=   +0.0000000000002649
Running Total=   +0.5735764363510465
-0.6108652381980153^15/15!=   -0.0000000000000005
Running Total=   +0.5735764363510460
Sine(+35.0000000000000000)=+0.5735764363510460
Coseacant(+35.0000000000000000)=+1.7434467956210980

36 degrees=0.6283185307179586 radians
Calculate Sine(+0.6283185307179586)
+0.6283185307179586^1/1!=   +0.6283185307179586
Running Total=   +0.6283185307179586
-0.6283185307179586^3/3!=   -0.0413417022403998
Running Total=   +0.5869768284775588
+0.6283185307179586^5/5!=   +0.0008160524927608
Running Total=   +0.5877928809703196
-0.6283185307179586^7/7!=   -0.0000076705859753
Running Total=   +0.5877852103843443
+0.6283185307179586^9/9!=   +0.0000000420586939
Running Total=   +0.5877852524430383
-0.6283185307179586^11/11!=   -0.0000000001509464
Running Total=   +0.5877852522920918
+0.6283185307179586^13/13!=   +0.0000000000003820
Running Total=   +0.5877852522924738
-0.6283185307179586^15/15!=   -0.0000000000000007
Running Total=   +0.5877852522924731
Sine(+36.0000000000000000)=+0.5877852522924731
Coseacant(+36.0000000000000000)=+1.7013016167040800

37 degrees=0.6457718232379019 radians
Calculate Sine(+0.6457718232379019)
+0.6457718232379019^1/1!=   +0.6457718232379019
Running Total=   +0.6457718232379019
-0.6457718232379019^3/3!=   -0.0448834285747379
Running Total=   +0.6008883946631641
+0.6457718232379019^5/5!=   +0.0009358671692376
Running Total=   +0.6018242618324018
-0.6457718232379019^7/7!=   -0.0000092922974901
Running Total=   +0.6018149695349116
+0.6457718232379019^9/9!=   +0.0000000538206319
Running Total=   +0.6018150233555435
-0.6457718232379019^11/11!=   -0.0000000002040395
Running Total=   +0.6018150231515039
+0.6457718232379019^13/13!=   +0.0000000000005454
Running Total=   +0.6018150231520494
-0.6457718232379019^15/15!=   -0.0000000000000011
Running Total=   +0.6018150231520483
+0.6457718232379019^17/17!=   +0.0000000000000000

Running Total=   +0.6018150231520483
Sine(+37.0000000000000000)=+0.6018150231520483
Coseacant(+37.0000000000000000)=+1.6616401411224830

38 degrees=0.6632251157578453 radians
Calculate Sine(+0.6632251157578453)
+0.6632251157578453^1/1!=   +0.6632251157578453
Running Total=   +0.6632251157578453
-0.6632251157578453^3/3!=   -0.0486218682556416
Running Total=   +0.6146032475022036
+0.6632251157578453^5/5!=   +0.0010693591134441
Running Total=   +0.6156726066156477
-0.6632251157578453^7/7!=   -0.0000111994375658
Running Total=   +0.6156614071780819
+0.6632251157578453^9/9!=   +0.0000000684204057
Running Total=   +0.6156614755984876
-0.6632251157578453^11/11!=   -0.0000000002735992
Running Total=   +0.6156614753248884
+0.6632251157578453^13/13!=   +0.0000000000007715
Running Total=   +0.6156614753256598
-0.6632251157578453^15/15!=   -0.0000000000000016
Running Total=   +0.6156614753256582
+0.6632251157578453^17/17!=   +0.0000000000000000
Running Total=   +0.6156614753256582
Sine(+38.0000000000000000)=+0.6156614753256583
Coseacant(+38.0000000000000000)=+1.6242692454827440

39 degrees=0.6806784082777885 radians
Calculate Sine(+0.6806784082777885)
+0.6806784082777885^1/1!=   +0.6806784082777885
Running Total=   +0.6806784082777885
-0.6806784082777885^3/3!=   -0.0525623378600453
Running Total=   +0.6281160704177432
+0.6806784082777885^5/5!=   +0.0012176672541900
Running Total=   +0.6293337376719332
-0.6806784082777885^7/7!=   -0.0000134326990832
Running Total=   +0.6293203049728501
+0.6806784082777885^9/9!=   +0.0000000864399961
Running Total=   +0.6293203914128462
-0.6806784082777885^11/11!=   -0.0000000003640877
Running Total=   +0.6293203910487586
+0.6806784082777885^13/13!=   +0.0000000000010813
Running Total=   +0.6293203910498399
-0.6806784082777885^15/15!=   -0.0000000000000024
Running Total=   +0.6293203910498376
+0.6806784082777885^17/17!=   +0.0000000000000000
Running Total=   +0.6293203910498376
Sine(+39.0000000000000000)=+0.6293203910498374
Coseacant(+39.0000000000000000)=+1.5890157290657490

40 degrees=0.6981317007977318 radians
Calculate Sine(+0.6981317007977318)
+0.6981317007977318^1/1!=   +0.6981317007977318
Running Total=   +0.6981317007977318
-0.6981317007977318^3/3!=   -0.0567101539648831
Running Total=   +0.6414215468328487
+0.6981317007977318^5/5!=   +0.0013819920621192
Running Total=   +0.6428035388949679
-0.6981317007977318^7/7!=   -0.0000160372897573
Running Total=   +0.6427875016052106
+0.6981317007977318^9/9!=   +0.0000001085608406
Running Total=   +0.6427876101660511
-0.6981317007977318^11/11!=   -0.000000004810112
Running Total=   +0.6427876096850399
+0.6981317007977318^13/13!=   +0.0000000000015028
Running Total=   +0.6427876096865427
-0.6981317007977318^15/15!=   -0.0000000000000035
Running Total=   +0.6427876096865393
+0.6981317007977318^17/17!=   +0.0000000000000000
Running Total=   +0.6427876096865393
Sine(+40.0000000000000000)=+0.6427876096865394
Coseacant(+40.0000000000000000)=+1.5557238268604120

41 degrees=0.7155849933176751 radians
Calculate Sine(+0.7155849933176751)
+0.7155849933176751^1/1!=   +0.7155849933176751
Running Total=   +0.7155849933176751
-0.7155849933176751^3/3!=   -0.0610706331470892

Running Total=	+0.6545143601705860
+0.7155849933176751^5/5!=	+0.0015635971692313
Running Total=	+0.6560779573398172
-0.7155849933176751^7/7!=	-0.0000190632978619
Running Total=	+0.6560588940419553
+0.7155849933176751^9/9!=	+0.0000001355776138
Running Total=	+0.6560590296195691
-0.7155849933176751^11/11!=	-0.0000000006311284
Running Total=	+0.6560590289884406
+0.7155849933176751^13/13!=	+0.0000000000020716
Running Total=	+0.6560590289905123
-0.7155849933176751^15/15!=	-0.0000000000000051
Running Total=	+0.6560590289905073
+0.7155849933176751^17/17!=	+0.0000000000000000
Running Total=	+0.6560590289905073

Sine(+41.0000000000000000)=+0.6560590289905073
Coseacant(+41.0000000000000000)=+1.5242530867058140

42 degrees=0.7330382858376184 radians
Calculate Sine(+0.7330382858376184)

+0.7330382858376184^1/1!=	+0.7330382858376184
Running Total=	+0.7330382858376184
-0.7330382858376184^3/3!=	-0.0656490919835978
Running Total=	+0.6673891938540206
+0.7330382858376184^5/5!=	+0.0017638109884041
Running Total=	+0.6691530048424247
-0.7330382858376184^7/7!=	-0.0000225660771957
Running Total=	+0.6691304387652289
+0.7330382858376184^9/9!=	+0.0000001684134951
Running Total=	+0.6691306071787241
-0.7330382858376184^11/11!=	-0.0000000008226925
Running Total=	+0.6691306063560316
+0.7330382858376184^13/13!=	+0.0000000000028338
Running Total=	+0.6691306063588653
-0.7330382858376184^15/15!=	-0.0000000000000073
Running Total=	+0.6691306063588581
+0.7330382858376184^17/17!=	+0.0000000000000000
Running Total=	+0.6691306063588581

Sine(+42.0000000000000000)=+0.6691306063588582
Coseacant(+42.0000000000000000)=+1.4944765498646090

43 degrees=0.7504915783575618 radians
Calculate Sine(+0.7504915783575618)

+0.7504915783575618^1/1!=	+0.7504915783575618
Running Total=	+0.7504915783575618
-0.7504915783575618^3/3!=	-0.0704508470513431
Running Total=	+0.6800407313062187
+0.7504915783575618^5/5!=	+0.0019840283329150
Running Total=	+0.6820247596391337
-0.7504915783575618^7/7!=	-0.0000266066517807
Running Total=	+0.6819981529873530
+0.7504915783575618^9/9!=	+0.0000002081370408
Running Total=	+0.6819983611243938
-0.7504915783575618^11/11!=	-0.0000000010657328
Running Total=	+0.6819983600586610
+0.7504915783575618^13/13!=	+0.0000000000038478
Running Total=	+0.6819983600625088
-0.7504915783575618^15/15!=	-0.0000000000000103
Running Total=	+0.6819983600624985
+0.7504915783575618^17/17!=	+0.0000000000000000
Running Total=	+0.6819983600624985

Sine(+43.0000000000000000)=+0.6819983600624985
Coseacant(+43.0000000000000000)=+1.4662791856396250

44 degrees=0.7679448708775050 radians
Calculate Sine(+0.7679448708775050)

+0.7679448708775050^1/1!=	+0.7679448708775050
Running Total=	+0.7679448708775050
-0.7679448708775050^3/3!=	-0.0754812149272594
Running Total=	+0.6924636559502456
+0.7679448708775050^5/5!=	+0.0022257120359635
Running Total=	+0.6946893679862092
-0.7679448708775050^7/7!=	-0.0000312521407877
Running Total=	+0.6946581158454215
+0.7679448708775050^9/9!=	+0.0000002559807834
Running Total=	+0.6946583718262048
-0.7679448708775050^11/11!=	-0.0000000013723812
Running Total=	+0.6946583704538236

+0.7679448708775050^13/13!=	+0.0000000000051881
Running Total=	+0.6946583704590117
-0.7679448708775050^15/15!=	-0.0000000000000146
Running Total=	+0.6946583704589971
+0.7679448708775050^17/17!=	+0.0000000000000000
Running Total=	+0.6946583704589971

Sine(+44.0000000000000000)=+0.6946583704589973
Coseacant(+44.0000000000000000)=+1.4395565396257260

45 degrees=0.7853981633974483 radians
Calculate Sine(+0.7853981633974483)

+0.7853981633974483^1/1!=	+0.7853981633974483
Running Total=	+0.7853981633974483
-0.7853981633974483^3/3!=	-0.0807455121882808
Running Total=	+0.7046526512091675
+0.7853981633974483^5/5!=	+0.0024903945701927
Running Total=	+0.7071430457793603
-0.7853981633974483^7/7!=	-0.0000365762041822
Running Total=	+0.7071064695751781
+0.7853981633974483^9/9!=	+0.0000003133616890
Running Total=	+0.7071067829368671
-0.7853981633974483^11/11!=	-0.0000000017572477
Running Total=	+0.7071067811796194
+0.7853981633974483^13/13!=	+0.0000000000069485
Running Total=	+0.7071067811865679
-0.7853981633974483^15/15!=	-0.0000000000000204
Running Total=	+0.7071067811865475
+0.7853981633974483^17/17!=	+0.0000000000000000
Running Total=	+0.7071067811865475

Sine(+45.0000000000000000)=+0.7071067811865475
Coseacant(+45.0000000000000000)=+1.4142135623730950

Using the approximate formula for the sine function.

Deg	sin(x)	Sine	difference
1	+0.0174524064	+0.0174524064	-0.0000000000
2	+0.0348994967	+0.0348994967	-0.0000000000
3	+0.0523359562	+0.0523359562	-0.0000000000
4	+0.0697564737	+0.0697564737	-0.0000000000
5	+0.0871557427	+0.0871557427	-0.0000000000
6	+0.1045284633	+0.1045284633	-0.0000000000
7	+0.1218693434	+0.1218693434	-0.0000000000
8	+0.1391731010	+0.1391731010	-0.0000000000
9	+0.1564344650	+0.1564344650	-0.0000000000
10	+0.1736481777	+0.1736481777	-0.0000000000
11	+0.1908089954	+0.1908089954	-0.0000000000
12	+0.2079116908	+0.2079116908	-0.0000000000
13	+0.2249510543	+0.2249510543	-0.0000000000
14	+0.2419218956	+0.2419218956	-0.0000000000
15	+0.2588190451	+0.2588190451	-0.0000000000
16	+0.2756373558	+0.2756373558	-0.0000000000
17	+0.2923717047	+0.2923717047	-0.0000000000
18	+0.3090169944	+0.3090169944	-0.0000000000
19	+0.3255681545	+0.3255681545	-0.0000000000
20	+0.3420201433	+0.3420201433	-0.0000000000
21	+0.3583679495	+0.3583679495	-0.0000000000
22	+0.3746065934	+0.3746065934	-0.0000000000
23	+0.3907311285	+0.3907311285	-0.0000000000
24	+0.4067366431	+0.4067366431	-0.0000000000
25	+0.4226182617	+0.4226182617	-0.0000000000
26	+0.4383711468	+0.4383711468	-0.0000000000
27	+0.4539904997	+0.4539904997	-0.0000000000
28	+0.4694715628	+0.4694715628	-0.0000000000
29	+0.4848096202	+0.4848096202	+0.0000000000
30	+0.5000000000	+0.5000000000	+0.0000000000
31	+0.5150380749	+0.5150380749	+0.0000000000
32	+0.5299192642	+0.5299192642	+0.0000000000
33	+0.5446390350	+0.5446390350	+0.0000000000
34	+0.5591929035	+0.5591929035	+0.0000000000
35	+0.5735764364	+0.5735764363	+0.0000000000
36	+0.5877852523	+0.5877852523	+0.0000000000
37	+0.6018150232	+0.6018150231	+0.0000000000
38	+0.6156614753	+0.6156614753	+0.0000000000
39	+0.6293203910	+0.6293203910	+0.0000000000
40	+0.6427876097	+0.6427876097	+0.0000000000
41	+0.6560590290	+0.6560590290	+0.0000000000
42	+0.6691306064	+0.6691306063	+0.0000000000

43 +0.6819983601+0.6819983600+0.0000000000
44 +0.6946583705+0.6946583704+0.0000000000
45 +0.7071067812+0.7071067812+0.0000000000
46 +0.7193398003+0.7193398003+0.0000000000
47 +0.7313537016+0.7313537016+0.0000000000
48 +0.7431448255+0.7431448255+0.0000000000
49 +0.7547095802+0.7547095802+0.0000000000
50 +0.7660444431+0.7660444431+0.0000000000
51 +0.7771459615+0.7771459614+0.0000000000
52 +0.7880107536+0.7880107536+0.0000000000
53 +0.7986355100+0.7986355100+0.0000000000
54 +0.8090169944+0.8090169944+0.0000000000
55 +0.8191520443+0.8191520443+0.0000000000
56 +0.8290375726+0.8290375725+0.0000000000
57 +0.8386705679+0.8386705679+0.0000000000
58 +0.8480480962+0.8480480961+0.0000000000
59 +0.8571673007+0.8571673007+0.0000000000
60 +0.8660254038+0.8660254038+0.0000000000
61 +0.8746197071+0.8746197071+0.0000000000
62 +0.8829475929+0.8829475928+0.0000000000
63 +0.8910065242+0.8910065241+0.0000000000
64 +0.8987940463+0.8987940462+0.0000000001
65 +0.9063077870+0.9063077870+0.0000000000
66 +0.9135454576+0.9135454576+0.0000000001
67 +0.9205048535+0.9205048533+0.0000000001
68 +0.9271838546+0.9271838544+0.0000000001
69 +0.9335804265+0.9335804263+0.0000000002
70 +0.9396926208+0.9396926206+0.0000000002
71 +0.9455185756+0.9455185754+0.0000000002
72 +0.9510565163+0.9510565160+0.0000000003
73 +0.9563047560+0.9563047556+0.0000000003
74 +0.9612616959+0.9612616956+0.0000000004
75 +0.9659258263+0.9659258259+0.0000000004
76 +0.9702957263+0.9702957258+0.0000000005
77 +0.9743700648+0.9743700642+0.0000000006
78 +0.9781476007+0.9781476001+0.0000000006
79 +0.9816271834+0.9816271827+0.0000000007
80 +0.9848077530+0.9848077522+0.0000000008
81 +0.9876883406+0.9876883397+0.0000000009
82 +0.9902680687+0.9902680677+0.0000000010
83 +0.9925461516+0.9925461505+0.0000000011
84 +0.9945218954+0.9945218941+0.0000000012
85 +0.9961946981+0.9961946967+0.0000000014
86 +0.9975640503+0.9975640488+0.0000000015
87 +0.9986295348+0.9986295331+0.0000000017
88 +0.9993908270+0.9993908252+0.0000000019
89 +0.9998476952+0.9998476931+0.0000000021
90 +1.0000000000+0.9999999977+0.0000000023

The following are the Cosine function

 1 degrees=0.0174532925199433 radians
Calculate Cosine(+0.0174532925199433)
+1.0000000000000000^1/1!=   +1.0000000000000000
Running Total=   +1.0000000000000000
-0.0174532925199433^2/2!=   -0.0001523087098934
Running Total=   +0.9998476912901066
+0.0174532925199433^4/4!=   +0.0000000038663239
Running Total=   +0.9998476951564305
-0.0174532925199433^6/6!=   -0.0000000000000393
Running Total=   +0.9998476951563912
+0.0174532925199433^8/8!=   +0.0000000000000000
Running Total=   +0.9998476951563912
Cosine(+1.0000000000000000)=+0.9998476951563913
Secant(+1.0000000000000000)=+1.0001523280439080

 2 degrees=0.0349065850398866 radians
Calculate Cosine(+0.0349065850398866)
+1.0000000000000000^1/1!=   +1.0000000000000000
Running Total=   +1.0000000000000000
-0.0349065850398866^2/2!=   -0.0006092348395734
Running Total=   +0.9993907651604266
+0.0349065850398866^4/4!=   +0.0000000618611816
Running Total=   +0.9993908270216082
-0.0349065850398866^6/6!=   -0.0000000000025125
Running Total=   +0.9993908270190957
+0.0349065850398866^8/8!=   +0.0000000000000001

Running Total=   +0.9993908270190957
Cosine(+2.0000000000000000)=+0.9993908270190958
Secant(+2.0000000000000000)=+1.0006095442988220

 3 degrees=0.0523598775598299 radians
Calculate Cosine(+0.0523598775598299)
+1.0000000000000000^1/1!=   +1.0000000000000000
Running Total=   +1.0000000000000000
-0.0523598775598299^2/2!=   -0.0013707783890402
Running Total=   +0.9986292216109598
+0.0523598775598299^4/4!=   +0.0000003131722320
Running Total=   +0.9986295347831917
-0.0523598775598299^6/6!=   -0.0000000000286193
Running Total=   +0.9986295347545724
+0.0523598775598299^8/8!=   +0.0000000000000014
Running Total=   +0.9986295347545738
-0.0523598775598299^10/10!=   -0.0000000000000000
Running Total=   +0.9986295347545738
Cosine(+3.0000000000000000)=+0.9986295347545738
Secant(+3.0000000000000000)=+1.0013723459979210

 4 degrees=0.0698131700797732 radians
Calculate Cosine(+0.0698131700797732)
+1.0000000000000000^1/1!=   +1.0000000000000000
Running Total=   +1.0000000000000000
-0.0698131700797732^2/2!=   -0.0024369393582937
Running Total=   +0.9975630606417063
+0.0698131700797732^4/4!=   +0.0000009897789060
Running Total=   +0.9975640504206122
-0.0698131700797732^6/6!=   -0.0000000001608021
Running Total=   +0.9975640502598102
+0.0698131700797732^8/8!=   +0.0000000000000140
Running Total=   +0.9975640502598242
-0.0698131700797732^10/10!=   -0.0000000000000000
Running Total=   +0.9975640502598242
Cosine(+4.0000000000000000)=+0.9975640502598242
Secant(+4.0000000000000000)=+1.0024418980811720

 5 degrees=0.0872664625997165 radians
Calculate Cosine(+0.0872664625997165)
+1.0000000000000000^1/1!=   +1.0000000000000000
Running Total=   +1.0000000000000000
-0.0872664625997165^2/2!=   -0.0038077177473339
Running Total=   +0.9961922822526661
+0.0872664625997165^4/4!=   +0.0000024164524072
Running Total=   +0.9961946987050733
-0.0872664625997165^6/6!=   -0.0000000006134112
Running Total=   +0.9961946980916621
+0.0872664625997165^8/8!=   +0.0000000000000834
Running Total=   +0.9961946980917454
-0.0872664625997165^10/10!=   -0.0000000000000000
Running Total=   +0.9961946980917454
Cosine(+5.0000000000000000)=+0.9961946980917455
Secant(+5.0000000000000000)=+1.0038198375433470

 6 degrees=0.1047197551196598 radians
Calculate Cosine(+0.1047197551196598)
+1.0000000000000000^1/1!=   +1.0000000000000000
Running Total=   +1.0000000000000000
-0.1047197551196598^2/2!=   -0.0054831135561608
Running Total=   +0.9945168864438393
+0.1047197551196598^4/4!=   +0.0000050107557116
Running Total=   +0.9945218971995509
-0.1047197551196598^6/6!=   -0.0000000018316362
Running Total=   +0.9945218953679147
+0.1047197551196598^8/8!=   +0.0000000000003587
Running Total=   +0.9945218953682734
-0.1047197551196598^10/10!=   -0.0000000000000000
Running Total=   +0.9945218953682734
Cosine(+6.0000000000000000)=+0.9945218953682733
Secant(+6.0000000000000000)=+1.0055082795635160

 7 degrees=0.1221730476396031 radians
Calculate Cosine(+0.1221730476396031)
+1.0000000000000000^1/1!=   +1.0000000000000000
Running Total=   +1.0000000000000000
-0.1221730476396031^2/2!=   -0.0074631267847744
Running Total=   +0.9925368732152257

+0.1221730476396031^4/4!=	+0.0000092830435676	-0.1919862177193762^10/10!=	-0.0000000000000187
Running Total=	+0.9925461562587933	Running Total=	+0.9816271834476640
-0.1221730476396031^6/6!=	-0.0000000046187021	+0.1919862177193762^12/12!=	+0.0000000000000000
Running Total=	+0.9925461516400912	Running Total=	+0.9816271834476640
+0.1221730476396031^8/8!=	+0.0000000000012311		

Cosine(+11.0000000000000000)=+0.9816271834476640
Secant(+11.0000000000000000)=+1.0187166949552140

Left column continued:

+0.1221730476396031^8/8!=   +0.0000000000012311
Running Total=   +0.9925461516413222
-0.1221730476396031^10/10!=   -0.0000000000000002
Running Total=   +0.9925461516413220
Cosine(+7.0000000000000000)=+0.9925461516413220
Secant(+7.0000000000000000)=+1.0075098254588480

 8 degrees=0.1396263401595464 radians
Calculate Cosine(+0.1396263401595464)
+1.0000000000000000^1/1!=   +1.0000000000000000
Running Total=   +1.0000000000000000
-0.1396263401595464^2/2!=   -0.0097477574331747
Running Total=   +0.9902522425668253
+0.1396263401595464^4/4!=   +0.0000158364624960
Running Total=   +0.9902680790293213
-0.1396263401595464^6/6!=   -0.0000000102913330
Running Total=   +0.9902680687379883
+0.1396263401595464^8/8!=   +0.0000000000035828
Running Total=   +0.9902680687415711
-0.1396263401595464^10/10!=   -0.0000000000000008
Running Total=   +0.9902680687415704
Cosine(+8.0000000000000000)=+0.9902680687415704
Secant(+8.0000000000000000)=+1.0098275725186180

 9 degrees=0.1570796326794897 radians
Calculate Cosine(+0.1570796326794897)
+1.0000000000000000^1/1!=   +1.0000000000000000
Running Total=   +1.0000000000000000
-0.1570796326794897^2/2!=   -0.0123370055013617
Running Total=   +0.9876629944986383
+0.1570796326794897^4/4!=   +0.0000253669507901
Running Total=   +0.9876883614494284
-0.1570796326794897^6/6!=   -0.0000000208634808
Running Total=   +0.9876883405859477
+0.1570796326794897^8/8!=   +0.0000000000091926
Running Total=   +0.9876883405951403
-0.1570796326794897^10/10!=   -0.0000000000000025
Running Total=   +0.9876883405951378
+0.1570796326794897^12/12!=   +0.0000000000000000
Running Total=   +0.9876883405951378
Cosine(+9.0000000000000000)=+0.9876883405951378
Secant(+9.0000000000000000)=+1.0124651257880030

10 degrees=0.1745329251994329 radians
Calculate Cosine(+0.1745329251994329)
+1.0000000000000000^1/1!=   +1.0000000000000000
Running Total=   +1.0000000000000000
-0.1745329251994329^2/2!=   -0.0152308709893354
Running Total=   +0.9847691290106646
+0.1745329251994329^4/4!=   +0.0000386632385156
Running Total=   +0.9848077922491802
-0.1745329251994329^6/6!=   -0.0000000392583199
Running Total=   +0.9848077529908604
+0.1745329251994329^8/8!=   +0.0000000000213549
Running Total=   +0.9848077530122153
-0.1745329251994329^10/10!=   -0.0000000000000072
Running Total=   +0.9848077530122081
+0.1745329251994329^12/12!=   +0.0000000000000000
Running Total=   +0.9848077530122081
Cosine(+10.0000000000000000)=+0.9848077530122080
Secant(+10.0000000000000000)=+1.0154266118857450

11 degrees=0.1919862177193762 radians
Calculate Cosine(+0.1919862177193762)
+1.0000000000000000^1/1!=   +1.0000000000000000
Running Total=   +1.0000000000000000
-0.1919862177193762^2/2!=   -0.0184293538970959
Running Total=   +0.9815706461029041
+0.1919862177193762^4/4!=   +0.0000566068475107
Running Total=   +0.9816272529504149
-0.1919862177193762^6/6!=   -0.0000000695485084
Running Total=   +0.9816271834019065
+0.1919862177193762^8/8!=   +0.0000000000457762
Running Total=   +0.9816271834476827

Right column:

-0.1919862177193762^10/10!=   -0.0000000000000187
Running Total=   +0.9816271834476640
+0.1919862177193762^12/12!=   +0.0000000000000000
Running Total=   +0.9816271834476640
Cosine(+11.0000000000000000)=+0.9816271834476640
Secant(+11.0000000000000000)=+1.0187166949552140

12 degrees=0.2094395102393196 radians
Calculate Cosine(+0.2094395102393196)
+1.0000000000000000^1/1!=   +1.0000000000000000
Running Total=   +1.0000000000000000
-0.2094395102393196^2/2!=   -0.0219324542246430
Running Total=   +0.9780675457753569
+0.2094395102393196^4/4!=   +0.0000801720913860
Running Total=   +0.9781477178667429
-0.2094395102393196^6/6!=   -0.0000001172247150
Running Total=   +0.9781476006420280
+0.2094395102393196^8/8!=   +0.0000000000918223
Running Total=   +0.9781476007338503
-0.2094395102393196^10/10!=   -0.0000000000000448
Running Total=   +0.9781476007338056
+0.2094395102393196^12/12!=   +0.0000000000000000
Running Total=   +0.9781476007338056
Cosine(+12.0000000000000000)=+0.9781476007338057
Secant(+12.0000000000000000)=+1.0223405948650290

13 degrees=0.2268928027592629 radians
Calculate Cosine(+0.2268928027592629)
+1.0000000000000000^1/1!=   +1.0000000000000000
Running Total=   +1.0000000000000000
-0.2268928027592629^2/2!=   -0.0257401719719769
Running Total=   +0.9742598280280231
+0.2268928027592629^4/4!=   +0.0001104260755245
Running Total=   +0.9743702541035476
-0.2268928027592629^6/6!=   -0.0000001894924116
Running Total=   +0.9743700646111360
+0.2268928027592629^8/8!=   +0.0000000001741988
Running Total=   +0.9743700647853348
-0.2268928027592629^10/10!=   -0.0000000000000996
Running Total=   +0.9743700647852352
+0.2268928027592629^12/12!=   +0.0000000000000000
Running Total=   +0.9743700647852352
Cosine(+13.0000000000000000)=+0.9743700647852352
Secant(+13.0000000000000000)=+1.0263041077933920

14 degrees=0.2443460952792061 radians
Calculate Cosine(+0.2443460952792061)
+1.0000000000000000^1/1!=   +1.0000000000000000
Running Total=   +1.0000000000000000
-0.2443460952792061^2/2!=   -0.0298525071390974
Running Total=   +0.9701474928609025
+0.2443460952792061^4/4!=   +0.0001485286970816
Running Total=   +0.9702960215579841
-0.2443460952792061^6/6!=   -0.0000002955969327
Running Total=   +0.9702957259610514
+0.2443460952792061^8/8!=   +0.0000000003151539
Running Total=   +0.9702957262762053
-0.2443460952792061^10/10!=   -0.0000000000002091
Running Total=   +0.9702957262759963
+0.2443460952792061^12/12!=   +0.0000000000000001
Running Total=   +0.9702957262759964
Cosine(+14.0000000000000000)=+0.9702957262759965
Secant(+14.0000000000000000)=+1.0306136293498980

15 degrees=0.2617993877991494 radians
Calculate Cosine(+0.2617993877991494)
+1.0000000000000000^1/1!=   +1.0000000000000000
Running Total=   +1.0000000000000000
-0.2617993877991494^2/2!=   -0.0342694597260047
Running Total=   +0.9657305402739953
+0.2617993877991494^4/4!=   +0.0001957326449854
Running Total=   +0.9659262729189807
-0.2617993877991494^6/6!=   -0.0000004471767996
Running Total=   +0.9659258257421811
+0.2617993877991494^8/8!=   +0.0000000005473038
Running Total=   +0.9659258262894850
-0.2617993877991494^10/10!=   -0.0000000000004168
Running Total=   +0.9659258262890682

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+0.2617993877991494^12/12!=        +0.0000000000000002
Running Total=                     +0.9659258262890684
Cosine(+15.0000000000000000)=+0.9659258262890683
Secant(+15.0000000000000000)=+1.0352761804100830

16 degrees=0.2792526803190927 radians
Calculate Cosine(+0.2792526803190927)
+1.0000000000000000^1/1!=           +1.0000000000000000
Running Total=                      +1.0000000000000000
-0.2792526803190927^2/2!=          -0.0389910297326987
Running Total=                      +0.9610089702673013
+0.2792526803190927^4/4!=           +0.0002533833999360
Running Total=                      +0.9612623536672373
-0.2792526803190927^6/6!=          -0.0000006586453120
Running Total=                      +0.9612616950219253
+0.2792526803190927^8/8!=           +0.0000000009171878
Running Total=                      +0.9612616959391130
-0.2792526803190927^10/10!=        -0.0000000000007947
Running Total=                      +0.9612616959383183
+0.2792526803190927^12/12!=         +0.0000000000000005
Running Total=                      +0.9612616959383188
Cosine(+16.0000000000000000)=+0.9612616959383189
Secant(+16.0000000000000000)=+1.0402994358616020

17 degrees=0.2967059728390360 radians
Calculate Cosine(+0.2967059728390360)
+1.0000000000000000^1/1!=           +1.0000000000000000
Running Total=                      +1.0000000000000000
-0.2967059728390360^2/2!=          -0.0440172171591794
Running Total=                      +0.9559827828408206
+0.2967059728390360^4/4!=           +0.0003229192344064
Running Total=                      +0.9563057020752270
-0.2967059728390360^6/6!=          -0.0000009476004044
Running Total=                      +0.9563047544748227
+0.2967059728390360^8/8!=           +0.0000000014896690
Running Total=                      +0.9563047559644917
-0.2967059728390360^10/10!=        -0.0000000000014571
Running Total=                      +0.9563047559630345
+0.2967059728390360^12/12!=         +0.0000000000000010
Running Total=                      +0.9563047559630355
Cosine(+17.0000000000000000)=+0.9563047559630354
Secant(+17.0000000000000000)=+1.0456917564871480

18 degrees=0.3141592653589793 radians
Calculate Cosine(+0.3141592653589793)
+1.0000000000000000^1/1!=           +1.0000000000000000
Running Total=                      +1.0000000000000000
-0.3141592653589793^2/2!=          -0.0493480220054468
Running Total=                      +0.9506519779945533
+0.3141592653589793^4/4!=           +0.0004058712126417
Running Total=                      +0.9510578492071949
-0.3141592653589793^6/6!=          -0.0000013352627689
Running Total=                      +0.9510565139444260
+0.3141592653589793^8/8!=           +0.0000000023533063
Running Total=                      +0.9510565162977324
-0.3141592653589793^10/10!=        -0.0000000000025807
Running Total=                      +0.9510565162951516
+0.3141592653589793^12/12!=         +0.0000000000000019
Running Total=                      +0.9510565162951535
-0.3141592653589793^14/14!=        -0.0000000000000000
Running Total=                      +0.9510565162951535
Cosine(+18.0000000000000000)=+0.9510565162951535
Secant(+18.0000000000000000)=+1.0514622242382670

19 degrees=0.3316125578789226 radians
Calculate Cosine(+0.3316125578789226)
+1.0000000000000000^1/1!=           +1.0000000000000000
Running Total=                      +1.0000000000000000
-0.3316125578789226^2/2!=          -0.0549834442715009
Running Total=                      +0.9450165557284991
+0.3316125578789226^4/4!=           +0.0005038631906595
Running Total=                      +0.9455204189191586
-0.3316125578789226^6/6!=          -0.0000018469422443
Running Total=                      +0.9455185719769144
+0.3316125578789226^8/8!=           +0.0000000036268302
Running Total=                      +0.9455185756037445
-0.3316125578789226^10/10!=        -0.0000000000044315
Running Total=                      +0.9455185755993131
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+0.3316125578789226^12/12!=        +0.0000000000000037
Running Total=                      +0.9455185755993167
-0.3316125578789226^14/14!=       -0.0000000000000000
Running Total=                      +0.9455185755993167
Cosine(+19.0000000000000000)=+0.9455185755993168
Secant(+19.0000000000000000)=+1.0576206811866710

20 degrees=0.3490658503988659 radians
Calculate Cosine(+0.3490658503988659)
+1.0000000000000000^1/1!=          +1.0000000000000000
Running Total=                      +1.0000000000000000
-0.3490658503988659^2/2!=         -0.0609234839573417
Running Total=                      +0.9390765160426583
+0.3490658503988659^4/4!=          +0.0006186118162501
Running Total=                      +0.9396951278589084
-0.3490658503988659^6/6!=         -0.0000025125324709
Running Total=                      +0.9396926153264376
+0.3490658503988659^8/8!=          +0.0000000054668654
Running Total=                      +0.9396926207933030
-0.3490658503988659^10/10!=       -0.0000000000074013
Running Total=                      +0.9396926207859017
+0.3490658503988659^12/12!=        +0.0000000000000068
Running Total=                      +0.9396926207859085
-0.3490658503988659^14/14!=       -0.0000000000000000
Running Total=                      +0.9396926207859085
Cosine(+20.0000000000000000)=+0.9396926207859084
Secant(+20.0000000000000000)=+1.0641777724759120

21 degrees=0.3665191429188092 radians
Calculate Cosine(+0.3665191429188092)
+1.0000000000000000^1/1!=          +1.0000000000000000
Running Total=                      +1.0000000000000000
-0.3665191429188092^2/2!=         -0.0671681410629692
Running Total=                      +0.9328318589370308
+0.3665191429188092^4/4!=          +0.0007519265289758
Running Total=                      +0.9335837854660066
-0.3665191429188092^6/6!=         -0.0000033670338111
Running Total=                      +0.9335804184321955
+0.3665191429188092^8/8!=          +0.0000000080770501
Running Total=                      +0.9335804265092456
-0.3665191429188092^10/10!=       -0.0000000000120560
Running Total=                      +0.9335804264971895
+0.3665191429188092^12/12!=        +0.0000000000000123
Running Total=                      +0.9335804264972019
-0.3665191429188092^14/14!=       -0.0000000000000000
Running Total=                      +0.9335804264972019
Cosine(+21.0000000000000000)=+0.9335804264972017
Secant(+21.0000000000000000)=+1.0711449936370290

22 degrees=0.3839724354387525 radians
Calculate Cosine(+0.3839724354387525)
+1.0000000000000000^1/1!=          +1.0000000000000000
Running Total=                      +1.0000000000000000
-0.3839724354387525^2/2!=         -0.0737174155883835
Running Total=                      +0.9262825844116165
+0.3839724354387525^4/4!=          +0.0009057095601717
Running Total=                      +0.9271882939717883
-0.3839724354387525^6/6!=         -0.0000044511045366
Running Total=                      +0.9271838428672516
+0.3839724354387525^8/8!=          +0.0000000117187115
Running Total=                      +0.9271838545859632
-0.3839724354387525^10/10!=       -0.0000000000191972
Running Total=                      +0.9271838545667660
+0.3839724354387525^12/12!=        +0.0000000000000214
Running Total=                      +0.9271838545667874
-0.3839724354387525^14/14!=       -0.0000000000000000
Running Total=                      +0.9271838545667874
Cosine(+22.0000000000000000)=+0.9271838545667874
Secant(+22.0000000000000000)=+1.0785347426775840

23 degrees=0.4014257279586958 radians
Calculate Cosine(+0.4014257279586958)
+1.0000000000000000^1/1!=          +1.0000000000000000
Running Total=                      +1.0000000000000000
-0.4014257279586958^2/2!=         -0.0805713075335844
Running Total=                      +0.9194286924664156
+0.4014257279586958^4/4!=          +0.0010819559329452
Running Total=                      +0.9205106483993608
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-0.4014257279586958^6/6!=   -0.0000058116402807
Running Total=   +0.9205048367590800
+0.4014257279586958^8/8!=   +0.0000000167232663
Running Total=   +0.9205048534823463
-0.4014257279586958^10/10!=   -0.0000000000299426
Running Total=   +0.9205048534524037
+0.4014257279586958^12/12!=   +0.0000000000000366
Running Total=   +0.9205048534524403
-0.4014257279586958^14/14!=   -0.0000000000000000
Running Total=   +0.9205048534524403
Cosine(+23.0000000000000000)=+0.9205048534524404
Secant(+23.0000000000000000)=+1.0863603774052960

24 degrees=0.4188790204786391 radians
Calculate Cosine(+0.4188790204786391)
+1.0000000000000000^1/1!=   +1.0000000000000000
Running Total=   +1.0000000000000000
-0.4188790204786391^2/2!=   -0.0877298168985721
Running Total=   +0.9122701831014279
+0.4188790204786391^4/4!=   +0.0012827534621762
Running Total=   +0.9135529365636041
-0.4188790204786391^6/6!=   -0.0000075023817575
Running Total=   +0.9135454341818466
+0.4188790204786391^8/8!=   +0.0000000235065206
Running Total=   +0.9135454576883673
-0.4188790204786391^10/10!=   -0.0000000000458272
Running Total=   +0.9135454576425401
+0.4188790204786391^12/12!=   +0.0000000000000609
Running Total=   +0.9135454576426011
-0.4188790204786391^14/14!=   -0.0000000000000001
Running Total=   +0.9135454576426010
Cosine(+24.0000000000000000)=+0.9135454576426009
Secant(+24.0000000000000000)=+1.0946362785060470

25 degrees=0.4363323129985824 radians
Calculate Cosine(+0.4363323129985824)
+1.0000000000000000^1/1!=   +1.0000000000000000
Running Total=   +1.0000000000000000
-0.4363323129985824^2/2!=   -0.0951929436833464
Running Total=   +0.9048070563166536
+0.4363323129985824^4/4!=   +0.0015102827545168
Running Total=   +0.9063173390711704
-0.4363323129985824^6/6!=   -0.0000095845507464
Running Total=   +0.9063077545204240
+0.4363323129985824^8/8!=   +0.0000000325850571
Running Total=   +0.9063077871054811
-0.4363323129985824^10/10!=   -0.0000000000689304
Running Total=   +0.9063077870365507
+0.4363323129985824^12/12!=   +0.0000000000000994
Running Total=   +0.9063077870366500
-0.4363323129985824^14/14!=   -0.0000000000000001
Running Total=   +0.9063077870366499
Cosine(+25.0000000000000000)=+0.9063077870366499
Secant(+25.0000000000000000)=+1.1033779189624920

26 degrees=0.4537856055185257 radians
Calculate Cosine(+0.4537856055185257)
+1.0000000000000000^1/1!=   +1.0000000000000000
Running Total=   +1.0000000000000000
-0.4537856055185257^2/2!=   -0.1029606878879075
Running Total=   +0.8970393121120925
+0.4537856055185257^4/4!=   +0.0017668172083919
Running Total=   +0.8988061293204844
-0.4537856055185257^6/6!=   -0.0000121275143432
Running Total=   +0.8987940018061412
+0.4537856055185257^8/8!=   +0.0000000445949007
Running Total=   +0.8987940464010419
-0.4537856055185257^10/10!=   -0.0000000001020338
Running Total=   +0.8987940462990081
+0.4537856055185257^12/12!=   +0.0000000000001592
Running Total=   +0.8987940462991673
-0.4537856055185257^14/14!=   -0.0000000000000002
Running Total=   +0.8987940462991670
Cosine(+26.0000000000000000)=+0.8987940462991670
Secant(+26.0000000000000000)=+1.1126019404751890

27 degrees=0.4712388980384690 radians
Calculate Cosine(+0.4712388980384690)

+1.0000000000000000^1/1!=   +1.0000000000000000
Running Total=   +1.0000000000000000
-0.4712388980384690^2/2!=   -0.1110330495122553
Running Total=   +0.8889669504877448
+0.4712388980384690^4/4!=   +0.0020547230139985
Running Total=   +0.8910216735017432
-0.4712388980384690^6/6!=   -0.0000152094774765
Running Total=   +0.8910064640242668
+0.4712388980384690^8/8!=   +0.0000000603126666
Running Total=   +0.8910065243369334
-0.4712388980384690^10/10!=   -0.0000000001488155
Running Total=   +0.8910065241881179
+0.4712388980384690^12/12!=   +0.0000000000002504
Running Total=   +0.8910065241883682
-0.4712388980384690^14/14!=   -0.0000000000000003
Running Total=   +0.8910065241883679
Cosine(+27.0000000000000000)=+0.8910065241883679
Secant(+27.0000000000000000)=+1.1223262376343610

28 degrees=0.4886921905584123 radians
Calculate Cosine(+0.4886921905584123)
+1.0000000000000000^1/1!=   +1.0000000000000000
Running Total=   +1.0000000000000000
-0.4886921905584123^2/2!=   -0.1194100285563898
Running Total=   +0.8805899714436103
+0.4886921905584123^4/4!=   +0.0023764591533063
Running Total=   +0.8829664305969166
-0.4886921905584123^6/6!=   -0.0000189182036906
Running Total=   +0.8829475123932260
+0.4886921905584123^8/8!=   +0.0000000806794015
Running Total=   +0.8829475930726275
-0.4886921905584123^10/10!=   -0.0000000002140873
Running Total=   +0.8829475928585402
+0.4886921905584123^12/12!=   +0.0000000000003873
Running Total=   +0.8829475928589275
-0.4886921905584123^14/14!=   -0.0000000000000005
Running Total=   +0.8829475928589270
Cosine(+28.0000000000000000)=+0.8829475928589270
Secant(+28.0000000000000000)=+1.1325700506890390

29 degrees=0.5061454830783556 radians
Calculate Cosine(+0.5061454830783556)
+1.0000000000000000^1/1!=   +1.0000000000000000
Running Total=   +1.0000000000000000
-0.5061454830783556^2/2!=   -0.1280916250203110
Running Total=   +0.8719083749796890
+0.5061454830783556^4/4!=   +0.0027345774000573
Running Total=   +0.8746429523797463
-0.5061454830783556^6/6!=   -0.0000233517641945
Running Total=   +0.8746196006155519
+0.5061454830783556^8/8!=   +0.0000001068273365
Running Total=   +0.8746197074428884
-0.5061454830783556^10/10!=   -0.0000000003040819
Running Total=   +0.8746197071388064
+0.5061454830783556^12/12!=   +0.0000000000005902
Running Total=   +0.8746197071393966
-0.5061454830783556^14/14!=   -0.0000000000000008
Running Total=   +0.8746197071393959
Cosine(+29.0000000000000000)=+0.8746197071393959
Secant(+29.0000000000000000)=+1.1433540678733200

30 degrees=0.5235987755982988 radians
Calculate Cosine(+0.5235987755982988)
+1.0000000000000000^1/1!=   +1.0000000000000000
Running Total=   +1.0000000000000000
-0.5235987755982988^2/2!=   -0.1370778389040188
Running Total=   +0.8629221610959812
+0.5235987755982988^4/4!=   +0.0031317223197660
Running Total=   +0.8660538834157472
-0.5235987755982988^6/6!=   -0.0000286193151761
Running Total=   +0.8660252641005711
+0.5235987755982988^8/8!=   +0.0000001401097813
Running Total=   +0.8660254042103523
-0.5235987755982988^10/10!=   -0.0000000004267988
Running Total=   +0.8660254037835535
+0.5235987755982988^12/12!=   +0.0000000000008864
Running Total=   +0.8660254037844399
-0.5235987755982988^14/14!=   -0.0000000000000013

Running Total=   +0.8660254037844386
+0.5235987755982988^16/16!=   +0.0000000000000000
Running Total=   +0.8660254037844386
Cosine(+30.0000000000000000)=+0.8660254037844386
Secant(+30.0000000000000000)=+1.1547005383792510

31 degrees=0.5410520681182421 radians
Calculate Cosine(+0.5410520681182421)
+1.0000000000000000^1/1!=   +1.0000000000000000
Running Total=   +1.0000000000000000
-0.5410520681182421^2/2!=   -0.1463686702075135
Running Total=   +0.8536313297924866
+0.5410520681182421^4/4!=   +0.0035706312697193
Running Total=   +0.8572019610622059
-0.5410520681182421^6/6!=   -0.0000348419033833
Running Total=   +0.8571671191588226
+0.5410520681182421^8/8!=   +0.0000001821343952
Running Total=   +0.8571673012932178
-0.5410520681182421^10/10!=   -0.0000000005924171
Running Total=   +0.8571673007008007
+0.5410520681182421^12/12!=   +0.0000000000013138
Running Total=   +0.8571673007021146
-0.5410520681182421^14/14!=   -0.0000000000000021
Running Total=   +0.8571673007021124
+0.5410520681182421^16/16!=   +0.0000000000000000
Running Total=   +0.8571673007021124
Cosine(+31.0000000000000000)=+0.8571673007021123
Secant(+31.0000000000000000)=+1.1666333972153300

32 degrees=0.5585053606381855 radians
Calculate Cosine(+0.5585053606381855)
+1.0000000000000000^1/1!=   +1.0000000000000000
Running Total=   +1.0000000000000000
-0.5585053606381855^2/2!=   -0.1559641189307948
Running Total=   +0.8440358810692052
+0.5585053606381855^4/4!=   +0.0040541343989765
Running Total=   +0.8480900154681817
-0.5585053606381855^6/6!=   -0.0000421532999709
Running Total=   +0.8480478621682108
+0.5585053606381855^8/8!=   +0.0000002348000818
Running Total=   +0.8480480969682926
-0.5585053606381855^10/10!=   -0.0000000008137864
Running Total=   +0.8480480961545063
+0.5585053606381855^12/12!=   +0.0000000000019231
Running Total=   +0.8480480961564293
-0.5585053606381855^14/14!=   -0.0000000000000033
Running Total=   +0.8480480961564260
+0.5585053606381855^16/16!=   +0.0000000000000000
Running Total=   +0.8480480961564260
Cosine(+32.0000000000000000)=+0.8480480961564260
Secant(+32.0000000000000000)=+1.1791784033620960

33 degrees=0.5759586531581288 radians
Calculate Cosine(+0.5759586531581288)
+1.0000000000000000^1/1!=   +1.0000000000000000
Running Total=   +1.0000000000000000
-0.5759586531581288^2/2!=   -0.1658641850738628
Running Total=   +0.8341358149261372
+0.5759586531581288^4/4!=   +0.0045851546483694
Running Total=   +0.8387209695745066
-0.5759586531581288^6/6!=   -0.0000507008626126
Running Total=   +0.8386702687118940
+0.5759586531581288^8/8!=   +0.0000003003377593
Running Total=   +0.8386705690496533
-0.5759586531581288^10/10!=   -0.0000000011070062
Running Total=   +0.8386705679426472
+0.5759586531581288^12/12!=   +0.0000000000027820
Running Total=   +0.8386705679454292
-0.5759586531581288^14/14!=   -0.0000000000000051
Running Total=   +0.8386705679454241
+0.5759586531581288^16/16!=   +0.0000000000000000
Running Total=   +0.8386705679454241
Cosine(+33.0000000000000000)=+0.8386705679454241
Secant(+33.0000000000000000)=+1.1923632928359480

34 degrees=0.5934119456780721 radians
Calculate Cosine(+0.5934119456780721)
+1.0000000000000000^1/1!=   +1.0000000000000000

Running Total=   +1.0000000000000000
-0.5934119456780721^2/2!=   -0.1760688686367176
Running Total=   +0.8239311313632824
+0.5934119456780721^4/4!=   +0.0051667077505023
Running Total=   +0.8290978391137848
-0.5934119456780721^6/6!=   -0.0000606464258805
Running Total=   +0.8290371926879042
+0.5934119456780721^8/8!=   +0.0000003813552711
Running Total=   +0.8290375740431754
-0.5934119456780721^10/10!=   -0.0000000014921065
Running Total=   +0.8290375725510689
+0.5934119456780721^12/12!=   +0.0000000000039805
Running Total=   +0.8290375725550494
-0.5934119456780721^14/14!=   -0.0000000000000077
Running Total=   +0.8290375725550417
+0.5934119456780721^16/16!=   +0.0000000000000000
Running Total=   +0.8290375725550417
Cosine(+34.0000000000000000)=+0.8290375725550417
Secant(+34.0000000000000000)=+1.2062179485039050

35 degrees=0.6108652381980153 radians
Calculate Cosine(+0.6108652381980153)
+1.0000000000000000^1/1!=   +1.0000000000000000
Running Total=   +1.0000000000000000
-0.6108652381980153^2/2!=   -0.1865781696193590
Running Total=   +0.8134218303806410
+0.6108652381980153^4/4!=   +0.0058019022297517
Running Total=   +0.8192237326103927
-0.6108652381980153^6/6!=   -0.0000721672198892
Running Total=   +0.8191515653905036
+0.6108652381980153^8/8!=   +0.0000004808867069
Running Total=   +0.8191520462772105
-0.6108652381980153^10/10!=   -0.0000000019938436
Running Total=   +0.8191520442833669
+0.6108652381980153^12/12!=   +0.0000000000056365
Running Total=   +0.8191520442890033
-0.6108652381980153^14/14!=   -0.0000000000000116
Running Total=   +0.8191520442889918
+0.6108652381980153^16/16!=   +0.0000000000000000
Running Total=   +0.8191520442889918
Cosine(+35.0000000000000000)=+0.8191520442889918
Secant(+35.0000000000000000)=+1.2207745887614560

36 degrees=0.6283185307179586 radians
Calculate Cosine(+0.6283185307179586)
+1.0000000000000000^1/1!=   +1.0000000000000000
Running Total=   +1.0000000000000000
-0.6283185307179586^2/2!=   -0.1973920880217871
Running Total=   +0.8026079119782128
+0.6283185307179586^4/4!=   +0.0064939394022668
Running Total=   +0.8091018513804796
-0.6283185307179586^6/6!=   -0.0000854568172067
Running Total=   +0.8090163945632729
+0.6283185307179586^8/8!=   +0.0000006024464137
Running Total=   +0.8090169970096867
-0.6283185307179586^10/10!=   -0.0000000026426257
Running Total=   +0.8090169943670610
+0.6283185307179586^12/12!=   +0.0000000000079035
Running Total=   +0.8090169943749645
-0.6283185307179586^14/14!=   -0.0000000000000171
Running Total=   +0.8090169943749475
+0.6283185307179586^16/16!=   +0.0000000000000000
Running Total=   +0.8090169943749475
Cosine(+36.0000000000000000)=+0.8090169943749475
Secant(+36.0000000000000000)=+1.2360679774997900

37 degrees=0.6457718232379019 radians
Calculate Cosine(+0.6457718232379019)
+1.0000000000000000^1/1!=   +1.0000000000000000
Running Total=   +1.0000000000000000
-0.6457718232379019^2/2!=   -0.2085106238440020
Running Total=   +0.7914893761559980
+0.6457718232379019^4/4!=   +0.0072461133759692
Running Total=   +0.7987354895319672
-0.6457718232379019^6/6!=   -0.0001007261080312
Running Total=   +0.7986347634239360
+0.6457718232379019^8/8!=   +0.0000007500879865
Running Total=   +0.7986355135119225

-0.6457718232379019^10/10!=   -0.0000000034755848
Running Total=   +0.7986355100363378
+0.6457718232379019^12/12!=   +0.0000000000109802
Running Total=   +0.7986355100473180
-0.6457718232379019^14/14!=   -0.0000000000000252
Running Total=   +0.7986355100472928
+0.6457718232379019^16/16!=   +0.0000000000000000
Running Total=   +0.7986355100472928
Cosine(+37.0000000000000000)=+0.7986355100472928
Secant(+37.0000000000000000)=+1.2521356581562260

38 degrees=0.6632251157578453 radians
Calculate Cosine(+0.6632251157578453)
+1.0000000000000000^1/1!=   +1.0000000000000000
Running Total=   +1.0000000000000000
-0.6632251157578453^2/2!=   -0.2199337770860036
Running Total=   +0.7800662229139964
+0.6632251157578453^4/4!=   +0.0080618110505527
Running Total=   +0.7881280339645491
-0.6632251157578453^6/6!=   -0.0001182043036334
Running Total=   +0.7880098296609157
+0.6632251157578453^8/8!=   +0.0000009284685345
Running Total=   +0.7880107581294502
-0.6632251157578453^10/10!=   -0.0000000045378131
Running Total=   +0.7880107535916371
+0.6632251157578453^12/12!=   +0.0000000000151215
Running Total=   +0.7880107536067585
-0.6632251157578453^14/14!=   -0.0000000000000365
Running Total=   +0.7880107536067220
+0.6632251157578453^16/16!=   +0.0000000000000001
Running Total=   +0.7880107536067221
Cosine(+38.0000000000000000)=+0.7880107536067220
Secant(+38.0000000000000000)=+1.2690182150725790

39 degrees=0.6806784082777885 radians
Calculate Cosine(+0.6806784082777885)
+1.0000000000000000^1/1!=   +1.0000000000000000
Running Total=   +1.0000000000000000
-0.6806784082777885^2/2!=   -0.2316615477477919
Running Total=   +0.7683384522522081
+0.6806784082777885^4/4!=   +0.0089445121174837
Running Total=   +0.7772829643696918
-0.6806784082777885^6/6!=   -0.0001381399680657
Running Total=   +0.7771448244016261
+0.6806784082777885^8/8!=   +0.0000011429185289
Running Total=   +0.7771459673201550
-0.6806784082777885^10/10!=   -0.0000000058837839
Running Total=   +0.7771459614363710
+0.6806784082777885^12/12!=   +0.0000000000206522
Running Total=   +0.7771459614570233
-0.6806784082777885^14/14!=   -0.0000000000000526
Running Total=   +0.7771459614569707
+0.6806784082777885^16/16!=   +0.0000000000000001
Running Total=   +0.7771459614569708
Cosine(+39.0000000000000000)=+0.7771459614569709
Secant(+39.0000000000000000)=+1.2867595658931670

40 degrees=0.6981317007977318 radians
Calculate Cosine(+0.6981317007977318)
+1.0000000000000000^1/1!=   +1.0000000000000000
Running Total=   +1.0000000000000000
-0.6981317007977318^2/2!=   -0.2436939358293669
Running Total=   +0.7563060641706332
+0.6981317007977318^4/4!=   +0.0098977890600013
Running Total=   +0.7662038532306344
-0.6981317007977318^6/6!=   -0.0001608020781360
Running Total=   +0.7660430511524984
+0.6981317007977318^8/8!=   +0.0000013995175468
Running Total=   +0.7660444506700452
-0.6981317007977318^10/10!=   -0.0000000075789764
Running Total=   +0.7660444430910688
+0.6981317007977318^12/12!=   +0.0000000000279841
Running Total=   +0.7660444431190528
-0.6981317007977318^14/14!=   -0.0000000000000749
Running Total=   +0.7660444431189779
+0.6981317007977318^16/16!=   +0.0000000000000002
Running Total=   +0.7660444431189780
Cosine(+40.0000000000000000)=+0.7660444431189780

Secant(+40.0000000000000000)=+1.3054072893322790

41 degrees=0.7155849933176751 radians
Calculate Cosine(+0.7155849933176751)
+1.0000000000000000^1/1!=   +1.0000000000000000
Running Total=   +1.0000000000000000
-0.7155849933176751^2/2!=   -0.2560309413307286
Running Total=   +0.7439690586692714
+0.7155849933176751^4/4!=   +0.0109253071531165
Running Total=   +0.7548943658223879
-0.7155849933176751^6/6!=   -0.0001864811116493
Running Total=   +0.7547078847107386
+0.7155849933176751^8/8!=   +0.0000017051762341
Running Total=   +0.7547095898869727
-0.7155849933176751^10/10!=   -0.0000000097017306
Running Total=   +0.7547095801852420
+0.7155849933176751^12/12!=   +0.0000000000376355
Running Total=   +0.7547095802228775
-0.7155849933176751^14/14!=   -0.0000000000001059
Running Total=   +0.7547095802227716
+0.7155849933176751^16/16!=   +0.0000000000000002
Running Total=   +0.7547095802227718
Cosine(+41.0000000000000000)=+0.7547095802227720
Secant(+41.0000000000000000)=+1.3250129933488110

42 degrees=0.7330382858376184 radians
Calculate Cosine(+0.7330382858376184)
+1.0000000000000000^1/1!=   +1.0000000000000000
Running Total=   +1.0000000000000000
-0.7330382858376184^2/2!=   -0.2686725642518770
Running Total=   +0.7313274357481230
+0.7330382858376184^4/4!=   +0.0120308244636132
Running Total=   +0.7433582602117361
-0.7330382858376184^6/6!=   -0.0002154901639135
Running Total=   +0.7431427700478226
+0.7330382858376184^8/8!=   +0.0000020677248182
Running Total=   +0.7431448377726408
-0.7330382858376184^10/10!=   -0.0000000123453540
Running Total=   +0.7431448254272869
+0.7330382858376184^12/12!=   +0.0000000000502554
Running Total=   +0.7431448254775423
-0.7330382858376184^14/14!=   -0.0000000000001484
Running Total=   +0.7431448254773940
+0.7330382858376184^16/16!=   +0.0000000000000003
Running Total=   +0.7431448254773944
Cosine(+42.0000000000000000)=+0.7431448254773942
Secant(+42.0000000000000000)=+1.3456327296063760

43 degrees=0.7504915783575618 radians
Calculate Cosine(+0.7504915783575618)
+1.0000000000000000^1/1!=   +1.0000000000000000
Running Total=   +1.0000000000000000
-0.7504915783575618^2/2!=   -0.2816188045928121
Running Total=   +0.7183811954071879
+0.7504915783575618^4/4!=   +0.0132181918500474
Running Total=   +0.7315993872572354
-0.7504915783575618^6/6!=   -0.0002481660925126
Running Total=   +0.7313512211647228
+0.7504915783575618^8/8!=   +0.0000024960085112
Running Total=   +0.7313537171732341
-0.7504915783575618^10/10!=   -0.0000000156205096
Running Total=   +0.7313537015527244
+0.7504915783575618^12/12!=   +0.0000000000666520
Running Total=   +0.7313537016193763
-0.7504915783575618^14/14!=   -0.0000000000002063
Running Total=   +0.7313537016191700
+0.7504915783575618^16/16!=   +0.0000000000000005
Running Total=   +0.7313537016191705
Cosine(+43.0000000000000000)=+0.7313537016191705
Secant(+43.0000000000000000)=+1.3673274610985950

44 degrees=0.7679448708775050 radians
Calculate Cosine(+0.7679448708775050)
+1.0000000000000000^1/1!=   +1.0000000000000000
Running Total=   +1.0000000000000000
-0.7679448708775050^2/2!=   -0.2948696623535339
Running Total=   +0.7051303376464662
+0.7679448708775050^4/4!=   +0.0144913529627479

Running Total=   +0.7196216906092140
-0.7679448708775050^6/6!=   -0.0002848706903448
Running Total=   +0.7193368199188692
+0.7679448708775050^8/8!=   +0.0000029999901527
Running Total=   +0.7193398199090220
-0.7679448708775050^10/10!=   -0.0000000196579130
Running Total=   +0.7193398002511090
+0.7679448708775050^12/12!=   +0.0000000000878261
Running Total=   +0.7193398003389351
-0.7679448708775050^14/14!=   -0.0000000000002846
Running Total=   +0.7193398003386505
+0.7679448708775050^16/16!=   +0.0000000000000007
Running Total=   +0.7193398003386512
Cosine(+44.0000000000000000)=+0.7193398003386512
Secant(+44.0000000000000000)=+1.3901635910166790

45 degrees=0.7853981633974483 radians
Calculate Cosine(+0.7853981633974483)
+1.0000000000000000^1/1!=   +1.0000000000000000
Running Total=   +1.0000000000000000
-0.7853981633974483^2/2!=   -0.3084251375340424
Running Total=   +0.6915748624659576
+0.7853981633974483^4/4!=   +0.0158543442438155
Running Total=   +0.7074292067097731
-0.7853981633974483^6/6!=   -0.0003259918869274
Running Total=   +0.7071032148228457
+0.7853981633974483^8/8!=   +0.0000035908604486
Running Total=   +0.7071068056832942
-0.7853981633974483^10/10!=   -0.0000000246113695
Running Total=   +0.7071067810719247
+0.7853981633974483^12/12!=   +0.0000000001150116
Running Total=   +0.7071067811869363
-0.7853981633974483^14/14!=   -0.0000000000003898
Running Total=   +0.7071067811865465
+0.7853981633974483^16/16!=   +0.0000000000000010
Running Total=   +0.7071067811865475
-0.7853981633974483^18/18!=   -0.0000000000000000
Running Total=   +0.7071067811865475
Cosine(+45.0000000000000000)=+0.7071067811865476
Secant(+45.0000000000000000)=+1.4142135623730950

Using the approximate formula for the cosine function.

Deg cos(x)   Cosine   difference
 1 +0.9998476952+0.9998476952 -0.0000000000
 2 +0.9993908270+0.9993908270 -0.0000000000
 3 +0.9986295348+0.9986295348 -0.0000000000
 4 +0.9975640503+0.9975640503 -0.0000000000
 5 +0.9961946981+0.9961946981 -0.0000000000
 6 +0.9945218954+0.9945218954 -0.0000000000
 7 +0.9925461516+0.9925461517 -0.0000000000
 8 +0.9902680687+0.9902680688 -0.0000000001
 9 +0.9876883406+0.9876883407 -0.0000000001
10 +0.9848077530+0.9848077531 -0.0000000001
11 +0.9816271834+0.9816271836 -0.0000000001
12 +0.9781476007+0.9781476009 -0.0000000001
13 +0.9743700648+0.9743700649 -0.0000000001
14 +0.9702957263+0.9702957264 -0.0000000001
15 +0.9659258263+0.9659258264 -0.0000000002
16 +0.9612616959+0.9612616961 -0.0000000002
17 +0.9563047560+0.9563047561 -0.0000000002
18 +0.9510565163+0.9510565165 -0.0000000002
19 +0.9455185756+0.9455185758 -0.0000000002
20 +0.9396926208+0.9396926209 -0.0000000002
21 +0.9335804265+0.9335804267 -0.0000000002
22 +0.9271838546+0.9271838547 -0.0000000001
23 +0.9205048535+0.9205048536 -0.0000000001
24 +0.9135454576+0.9135454578 -0.0000000001
25 +0.9063077870+0.9063077871 -0.0000000001
26 +0.8987940463+0.8987940464 -0.0000000001
27 +0.8910065242+0.8910065242 -0.0000000000
28 +0.8829475929+0.8829475929 -0.0000000000
29 +0.8746197071+0.8746197071+0.0000000000
30 +0.8660254038+0.8660254037+0.0000000000
31 +0.8571673007+0.8571673006+0.0000000001
32 +0.8480480962+0.8480480960+0.0000000001
33 +0.8386705679+0.8386705678+0.0000000001

34 +0.8290375726+0.8290375724+0.0000000002
35 +0.8191520443+0.8191520441+0.0000000002
36 +0.8090169944+0.8090169941+0.0000000002
37 +0.7986355100+0.7986355098+0.0000000003
38 +0.7880107536+0.7880107533+0.0000000003
39 +0.7771459615+0.7771459612+0.0000000003
40 +0.7660444431+0.7660444428+0.0000000003
41 +0.7547095802+0.7547095799+0.0000000003
42 +0.7431448255+0.7431448252+0.0000000003
43 +0.7313537016+0.7313537013+0.0000000003
44 +0.7193398003+0.7193398000+0.0000000003
45 +0.7071067812+0.7071067809+0.0000000003
46 +0.6946583705+0.6946583702+0.0000000003
47 +0.6819983601+0.6819983598+0.0000000002
48 +0.6691306064+0.6691306062+0.0000000002
49 +0.6560590290+0.6560590288+0.0000000002
50 +0.6427876097+0.6427876096+0.0000000001
51 +0.6293203910+0.6293203910+0.0000000001
52 +0.6156614753+0.6156614753 -0.0000000000
53 +0.6018150232+0.6018150232 -0.0000000001
54 +0.5877852523+0.5877852524 -0.0000000001
55 +0.5735764364+0.5735764365 -0.0000000002
56 +0.5591929035+0.5591929037 -0.0000000003
57 +0.5446390350+0.5446390353 -0.0000000003
58 +0.5299192642+0.5299192646 -0.0000000004
59 +0.5150380749+0.5150380753 -0.0000000004
60 +0.5000000000+0.5000000005 -0.0000000005
61 +0.4848096202+0.4848096208 -0.0000000005
62 +0.4694715628+0.4694715633 -0.0000000006
63 +0.4539904997+0.4539905003 -0.0000000006
64 +0.4383711468+0.4383711474 -0.0000000006
65 +0.4226182617+0.4226182623 -0.0000000006
66 +0.4067366431+0.4067366437 -0.0000000006
67 +0.3907311285+0.3907311291 -0.0000000006
68 +0.3746065934+0.3746065940 -0.0000000006
69 +0.3583679495+0.3583679501 -0.0000000005
70 +0.3420201433+0.3420201438 -0.0000000005
71 +0.3255681545+0.3255681549 -0.0000000005
72 +0.3090169944+0.3090169948 -0.0000000004
73 +0.2923717047+0.2923717051 -0.0000000004
74 +0.2756373558+0.2756373562 -0.0000000004
75 +0.2588190451+0.2588190455 -0.0000000004
76 +0.2419218956+0.2419218959 -0.0000000003
77 +0.2249510543+0.2249510547 -0.0000000004
78 +0.2079116908+0.2079116912 -0.0000000004
79 +0.1908089611+0.1908089958 -0.0000000004
80 +0.1736481777+0.1736481782 -0.0000000005
81 +0.1564344650+0.1564344657 -0.0000000006
82 +0.1391731010+0.1391731017 -0.0000000008
83 +0.1218693434+0.1218693444 -0.0000000010
84 +0.1045284633+0.1045284644 -0.0000000012
85 +0.0871557427+0.0871557441 -0.0000000014
86 +0.0697564737+0.0697564754 -0.0000000016
87 +0.0523359562+0.0523359581 -0.0000000019
88 +0.0348994967+0.0348994988 -0.0000000021
89 +0.0174524064+0.0174524087 -0.0000000022
90 +0.0000000000+0.0000000023 -0.0000000023

The following are the Arc Tangent function

Calculate ArcTangent(+0.0100000000000000)
ArcTangent(+0.0100000000000000)
+0.0100000000000000^1/1=   +0.0100000000000000
Running Total=   +0.0100000000000000
-0.0100000000000000^3/3=   -0.0000003333333333
Running Total=   +0.0099996666666667
+0.0100000000000000^5/5=   +0.0000000000200000
Running Total=   +0.0099996666866667
-0.0100000000000000^7/7=   -0.0000000000000014
Running Total=   +0.0099996666866652
+0.0100000000000000^9/9=   +0.0000000000000000
Running Total=   +0.0099996666866652
ArcTangent(+0.0100000000000000)=+0.0099996666866652 in radians
ArcTangent(+0.0100000000000000)=+0.5729386976834859 in degrees

Calculate ArcTangent(+0.0200000000000000)
ArcTangent(+0.0200000000000000)

+0.0200000000000000^1/1=	+0.0200000000000000
Running Total=	+0.0200000000000000
-0.0200000000000000^3/3=	-0.0000026666666667
Running Total=	+0.0199973333333333
+0.0200000000000000^5/5=	+0.0000000006400000
Running Total=	+0.0199973339733333
-0.0200000000000000^7/7=	-0.0000000000001829
Running Total=	+0.0199973339731505
+0.0200000000000000^9/9=	+0.0000000000000001
Running Total=	+0.0199973339731505
ArcTangent(+0.0200000000000000)=+0.0199973339731505 in radians
ArcTangent(+0.0200000000000000)=+1.1457628381751030 in degrees

Calculate ArcTangent(+0.0300000000000000)
ArcTangent(+0.0300000000000000)
+0.0300000000000000^1/1=	+0.0300000000000000
Running Total=	+0.0300000000000000
-0.0300000000000000^3/3=	-0.0000090000000000
Running Total=	+0.0299910000000000
+0.0300000000000000^5/5=	+0.0000000048600000
Running Total=	+0.0299910048600000
-0.0300000000000000^7/7=	-0.0000000000031243
Running Total=	+0.0299910048568757
+0.0300000000000000^9/9=	+0.0000000000000022
Running Total=	+0.0299910048568779
-0.0300000000000000^11/11=	-0.0000000000000000
Running Total=	+0.0299910048568779
ArcTangent(+0.0300000000000000)=+0.0299910048568779 in radians
ArcTangent(+0.0300000000000000)=+1.7183580016554570 in degrees

Calculate ArcTangent(+0.0400000000000000)
ArcTangent(+0.0400000000000000)
+0.0400000000000000^1/1=	+0.0400000000000000
Running Total=	+0.0400000000000000
-0.0400000000000000^3/3=	-0.0000213333333333
Running Total=	+0.0399786666666667
+0.0400000000000000^5/5=	+0.0000000204800000
Running Total=	+0.0399786871466667
-0.0400000000000000^7/7=	-0.0000000000234057
Running Total=	+0.0399786871232610
+0.0400000000000000^9/9=	+0.0000000000000291
Running Total=	+0.0399786871232901
-0.0400000000000000^11/11=	-0.0000000000000000
Running Total=	+0.0399786871232901
ArcTangent(+0.0400000000000000)=+0.0399786871232900 in radians
ArcTangent(+0.0400000000000000)=+2.2906100426385300 in degrees

Calculate ArcTangent(+0.0500000000000000)
ArcTangent(+0.0500000000000000)
+0.0500000000000000^1/1=	+0.0500000000000000
Running Total=	+0.0500000000000000
-0.0500000000000000^3/3=	-0.0000416666666667
Running Total=	+0.0499583333333333
+0.0500000000000000^5/5=	+0.0000000625000000
Running Total=	+0.0499583958333333
-0.0500000000000000^7/7=	-0.0000000001116071
Running Total=	+0.0499583957217262
+0.0500000000000000^9/9=	+0.0000000000002170
Running Total=	+0.0499583957219432
-0.0500000000000000^11/11=	-0.0000000000000004
Running Total=	+0.0499583957219428
ArcTangent(+0.0500000000000000)=+0.0499583957219428 in radians
ArcTangent(+0.0500000000000000)=+2.8624052261117480 in degrees

Calculate ArcTangent(+0.0600000000000000)
ArcTangent(+0.0600000000000000)
+0.0600000000000000^1/1=	+0.0600000000000000
Running Total=	+0.0600000000000000
-0.0600000000000000^3/3=	-0.0000720000000000
Running Total=	+0.0599280000000000
+0.0600000000000000^5/5=	+0.0000001555200000
Running Total=	+0.0599281555200000
-0.0600000000000000^7/7=	-0.0000000003999086
Running Total=	+0.0599281551200914
+0.0600000000000000^9/9=	+0.0000000000011197
Running Total=	+0.0599281551212112
-0.0600000000000000^11/11=	-0.0000000000000033
Running Total=	+0.0599281551212079

+0.0600000000000000^13/13=	+0.0000000000000000
Running Total=	+0.0599281551212079
ArcTangent(+0.0600000000000000)=+0.0599281551212079 in radians
ArcTangent(+0.0600000000000000)=+3.4336303624505220 in degrees

Calculate ArcTangent(+0.0700000000000000)
ArcTangent(+0.0700000000000000)
+0.0700000000000000^1/1=	+0.0700000000000000
Running Total=	+0.0700000000000000
-0.0700000000000000^3/3=	-0.0001143333333333
Running Total=	+0.0698856666666667
+0.0700000000000000^5/5=	+0.0000003361400000
Running Total=	+0.0698860028066667
-0.0700000000000000^7/7=	-0.0000000011764900
Running Total=	+0.0698860016301767
+0.0700000000000000^9/9=	+0.0000000000044837
Running Total=	+0.0698860016346604
-0.0700000000000000^11/11=	-0.0000000000000180
Running Total=	+0.0698860016346424
+0.0700000000000000^13/13=	+0.0000000000000001
Running Total=	+0.0698860016346425
ArcTangent(+0.0700000000000000)=+0.0698860016346425 in radians
ArcTangent(+0.0700000000000000)=+4.0041729407093870 in degrees

Calculate ArcTangent(+0.0800000000000000)
ArcTangent(+0.0800000000000000)
+0.0800000000000000^1/1=	+0.0800000000000000
Running Total=	+0.0800000000000000
-0.0800000000000000^3/3=	-0.0001706666666667
Running Total=	+0.0798293333333333
+0.0800000000000000^5/5=	+0.0000006553600000
Running Total=	+0.0798299886933333
-0.0800000000000000^7/7=	-0.0000000029959314
Running Total=	+0.0798299856974019
+0.0800000000000000^9/9=	+0.0000000000149131
Running Total=	+0.0798299857123150
-0.0800000000000000^11/11=	-0.0000000000000781
Running Total=	+0.0798299857122369
+0.0800000000000000^13/13=	+0.0000000000000004
Running Total=	+0.0798299857122373
ArcTangent(+0.0800000000000000)=+0.0798299857122373 in radians
ArcTangent(+0.0800000000000000)=+4.5739212599008610 in degrees

Calculate ArcTangent(+0.0900000000000000)
ArcTangent(+0.0900000000000000)
+0.0900000000000000^1/1=	+0.0900000000000000
Running Total=	+0.0900000000000000
-0.0900000000000000^3/3=	-0.0002430000000000
Running Total=	+0.0897570000000000
+0.0900000000000000^5/5=	+0.0000011809800000
Running Total=	+0.0897581809800000
-0.0900000000000000^7/7=	-0.0000000068328129
Running Total=	+0.0897581741471872
+0.0900000000000000^9/9=	+0.0000000000430467
Running Total=	+0.0897581741902339
-0.0900000000000000^11/11=	-0.0000000000002853
Running Total=	+0.0897581741899486
+0.0900000000000000^13/13=	+0.0000000000000020
Running Total=	+0.0897581741899505
-0.0900000000000000^15/15=	-0.0000000000000000
Running Total=	+0.0897581741899505
ArcTangent(+0.0900000000000000)=+0.0897581741899505 in radians
ArcTangent(+0.0900000000000000)=+5.1427645578842420 in degrees

Calculate ArcTangent(+0.1000000000000000)
ArcTangent(+0.1000000000000000)
+0.1000000000000000^1/1=	+0.1000000000000000
Running Total=	+0.1000000000000000
-0.1000000000000000^3/3=	-0.0003333333333333
Running Total=	+0.0996666666666667
+0.1000000000000000^5/5=	+0.0000020000000000
Running Total=	+0.0996686666666667
-0.1000000000000000^7/7=	-0.0000000142857143
Running Total=	+0.0996686523809524
+0.1000000000000000^9/9=	+0.0000000001111111
Running Total=	+0.0996686524920635
-0.1000000000000000^11/11=	-0.0000000000009091
Running Total=	+0.0996686524911544

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+0.1000000000000000^13/13=          +0.0000000000000077
Running Total=                      +0.0996686524911621
-0.1000000000000000^15/15=          -0.0000000000000001
Running Total=                      +0.0996686524911620
ArcTangent(+0.1000000000000000)=+0.0996686524911620 in radians
ArcTangent(+0.1000000000000000)=+5.7105931374996430 in degrees

Calculate ArcTangent(+0.1100000000000000)
ArcTangent(+0.1100000000000000)
+0.1100000000000000^1/1=            +0.1100000000000000
Running Total=                      +0.1100000000000000
-0.1100000000000000^3/3=            -0.0004436666666667
Running Total=                      +0.1095563333333333
+0.1100000000000000^5/5=            +0.0000032210200000
Running Total=                      +0.1095595543533333
-0.1100000000000000^7/7=            -0.0000000278388157
Running Total=                      +0.1095595265145176
+0.1100000000000000^9/9=            +0.0000000002619942
Running Total=                      +0.1095595267765118
-0.1100000000000000^11/11=          -0.0000000000025937
Running Total=                      +0.1095595267739181
+0.1100000000000000^13/13=          +0.0000000000000266
Running Total=                      +0.1095595267739446
-0.1100000000000000^15/15=          -0.0000000000000003
Running Total=                      +0.1095595267739444
ArcTangent(+0.1100000000000000)=+0.1095595267739443 in radians
ArcTangent(+0.1100000000000000)=+6.2772984895975550 in degrees

Calculate ArcTangent(+0.1200000000000000)
ArcTangent(+0.1200000000000000)
+0.1200000000000000^1/1=            +0.1200000000000000
Running Total=                      +0.1200000000000000
-0.1200000000000000^3/3=            -0.0005760000000000
Running Total=                      +0.1194240000000000
+0.1200000000000000^5/5=            +0.0000049766400000
Running Total=                      +0.1194289766400000
-0.1200000000000000^7/7=            -0.0000000511882971
Running Total=                      +0.1194289254517029
+0.1200000000000000^9/9=            +0.0000000005733089
Running Total=                      +0.1194289260250118
-0.1200000000000000^11/11=          -0.0000000000067546
Running Total=                      +0.1194289260182572
+0.1200000000000000^13/13=          +0.0000000000000823
Running Total=                      +0.1194289260183395
-0.1200000000000000^15/15=          -0.0000000000000010
Running Total=                      +0.1194289260183384
+0.1200000000000000^17/17=          +0.0000000000000000
Running Total=                      +0.1194289260183385
ArcTangent(+0.1200000000000000)=+0.1194289260183384 in radians
ArcTangent(+0.1200000000000000)=+6.8427734126309400 in degrees

Calculate ArcTangent(+0.1300000000000000)
ArcTangent(+0.1300000000000000)
+0.1300000000000000^1/1=            +0.1300000000000000
Running Total=                      +0.1300000000000000
-0.1300000000000000^3/3=            -0.0007323333333333
Running Total=                      +0.1292676666666667
+0.1300000000000000^5/5=            +0.0000074258600000
Running Total=                      +0.1292750925266667
-0.1300000000000000^7/7=            -0.0000000896407386
Running Total=                      +0.1292750028859281
+0.1300000000000000^9/9=            +0.0000000011782777
Running Total=                      +0.1292750040642058
-0.1300000000000000^11/11=          -0.0000000000162924
Running Total=                      +0.1292750040479134
+0.1300000000000000^13/13=          +0.0000000000002330
Running Total=                      +0.1292750040481464
-0.1300000000000000^15/15=          -0.0000000000000034
Running Total=                      +0.1292750040481430
+0.1300000000000000^17/17=          +0.0000000000000001
Running Total=                      +0.1292750040481430
ArcTangent(+0.1300000000000000)=+0.1292750040481431 in radians
ArcTangent(+0.1300000000000000)=+7.4069121284952300 in degrees

Calculate ArcTangent(+0.1400000000000000)
ArcTangent(+0.1400000000000000)
+0.1400000000000000^1/1=            +0.1400000000000000
Running Total=                      +0.1400000000000000
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-0.1400000000000000^3/3=            -0.0009146666666667
Running Total=                      +0.1390853333333333
+0.1400000000000000^5/5=            +0.0000107564800000
Running Total=                      +0.1390960898133334
-0.1400000000000000^7/7=            -0.0000001505907200
Running Total=                      +0.1390959392226133
+0.1400000000000000^9/9=            +0.0000000022956719
Running Total=                      +0.1390959415182852
-0.1400000000000000^11/11=          -0.0000000000368142
Running Total=                      +0.1390959414814710
+0.1400000000000000^13/13=          +0.0000000000006105
Running Total=                      +0.1390959414820815
-0.1400000000000000^15/15=          -0.0000000000000104
Running Total=                      +0.1390959414820712
+0.1400000000000000^17/17=          +0.0000000000000002
Running Total=                      +0.1390959414820713
ArcTangent(+0.1400000000000000)=+0.1390959414820713 in radians
ArcTangent(+0.1400000000000000)=+7.9696103943213610 in degrees

Calculate ArcTangent(+0.1500000000000000)
ArcTangent(+0.1500000000000000)
+0.1500000000000000^1/1=            +0.1500000000000000
Running Total=                      +0.1500000000000000
-0.1500000000000000^3/3=            -0.0011250000000000
Running Total=                      +0.1488750000000000
+0.1500000000000000^5/5=            +0.0000151875000000
Running Total=                      +0.1488901875000000
-0.1500000000000000^7/7=            -0.0000002440848214
Running Total=                      +0.1488899434151786
+0.1500000000000000^9/9=            +0.0000000042714844
Running Total=                      +0.1488899476866630
-0.1500000000000000^11/11=          -0.0000000000786341
Running Total=                      +0.1488899476080288
+0.1500000000000000^13/13=          +0.0000000000014971
Running Total=                      +0.1488899476095259
-0.1500000000000000^15/15=          -0.0000000000000292
Running Total=                      +0.1488899476094967
+0.1500000000000000^17/17=          +0.0000000000000006
Running Total=                      +0.1488899476094973
ArcTangent(+0.1500000000000000)=+0.1488899476094973 in radians
ArcTangent(+0.1500000000000000)=+8.5307656099481320 in degrees

Calculate ArcTangent(+0.1600000000000000)
ArcTangent(+0.1600000000000000)
+0.1600000000000000^1/1=            +0.1600000000000000
Running Total=                      +0.1600000000000000
-0.1600000000000000^3/3=            -0.0013653333333333
Running Total=                      +0.1586346666666667
+0.1600000000000000^5/5=            +0.0000209715200000
Running Total=                      +0.1586556381866667
-0.1600000000000000^7/7=            -0.0000003834792229
Running Total=                      +0.1586552547074438
+0.1600000000000000^9/9=            +0.0000000076354974
Running Total=                      +0.1586552623429413
-0.1600000000000000^11/11=          -0.0000000001599290
Running Total=                      +0.1586552621830123
+0.1600000000000000^13/13=          +0.0000000000034643
Running Total=                      +0.1586552621864766
-0.1600000000000000^15/15=          -0.0000000000000769
Running Total=                      +0.1586552621863997
+0.1600000000000000^17/17=          +0.0000000000000017
Running Total=                      +0.1586552621864015
-0.1600000000000000^19/19=          -0.0000000000000000
Running Total=                      +0.1586552621864015
ArcTangent(+0.1600000000000000)=+0.1586552621864014 in radians
ArcTangent(+0.1600000000000000)=+9.0902769208223230 in degrees

Calculate ArcTangent(+0.1700000000000000)
ArcTangent(+0.1700000000000000)
+0.1700000000000000^1/1=            +0.1700000000000000
Running Total=                      +0.1700000000000000
-0.1700000000000000^3/3=            -0.0016376666666667
Running Total=                      +0.1683623333333333
+0.1700000000000000^5/5=            +0.0000283971400000
Running Total=                      +0.1683907304733333
-0.1700000000000000^7/7=            -0.0000005861981043
Running Total=                      +0.1683901442752291
+0.1700000000000000^9/9=            +0.0000000131764307
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Running Total=	+0.1683901574516598
-0.1700000000000000^11/11=	-0.0000000003115627
Running Total=	+0.1683901571400971
+0.1700000000000000^13/13=	+0.0000000000076189
Running Total=	+0.1683901571477160
-0.1700000000000000^15/15=	-0.0000000000001908
Running Total=	+0.1683901571475252
+0.1700000000000000^17/17=	+0.0000000000000049
Running Total=	+0.1683901571475300
-0.1700000000000000^19/19=	-0.0000000000000001
Running Total=	+0.1683901571475299

ArcTangent(+0.1700000000000000)=+0.1683901571475299 in radians
ArcTangent(+0.1700000000000000)=+9.6480453160981570 in degrees

Calculate ArcTangent(+0.1800000000000000)
ArcTangent(+0.1800000000000000)

+0.1800000000000000^1/1=	+0.1800000000000000
Running Total=	+0.1800000000000000
-0.1800000000000000^3/3=	-0.0019440000000000
Running Total=	+0.1780560000000000
+0.1800000000000000^5/5=	+0.0000377913600000
Running Total=	+0.1780937913600000
-0.1800000000000000^7/7=	-0.0000008746000457
Running Total=	+0.1780929167599543
+0.1800000000000000^9/9=	+0.0000000220399212
Running Total=	+0.1780929387998754
-0.1800000000000000^11/11=	-0.0000000005842583
Running Total=	+0.1780929382156171
+0.1800000000000000^13/13=	+0.0000000000160177
Running Total=	+0.1780929382316348
-0.1800000000000000^15/15=	-0.0000000000004498
Running Total=	+0.1780929382311850
+0.1800000000000000^17/17=	+0.0000000000000129
Running Total=	+0.1780929382311979
-0.1800000000000000^19/19=	-0.0000000000000004
Running Total=	+0.1780929382311975

ArcTangent(+0.1800000000000000)=+0.1780929382311975 in radians
ArcTangent(+0.1800000000000000)=+10.2039737173316800 in degrees

Calculate ArcTangent(+0.1900000000000000)
ArcTangent(+0.1900000000000000)

+0.1900000000000000^1/1=	+0.1900000000000000
Running Total=	+0.1900000000000000
-0.1900000000000000^3/3=	-0.0022863333333333
Running Total=	+0.1877136666666667
+0.1900000000000000^5/5=	+0.0000495219800000
Running Total=	+0.1877631886466667
-0.1900000000000000^7/7=	-0.0000012769596271
Running Total=	+0.1877619116870395
+0.1900000000000000^9/9=	+0.0000000358541886
Running Total=	+0.1877619475412282
-0.1900000000000000^11/11=	-0.0000000010590024
Running Total=	+0.1877619464822258
+0.1900000000000000^13/13=	+0.0000000000323484
Running Total=	+0.1877619465145743
-0.1900000000000000^15/15=	-0.0000000000010121
Running Total=	+0.1877619465135622
+0.1900000000000000^17/17=	+0.0000000000000322
Running Total=	+0.1877619465135944
-0.1900000000000000^19/19=	-0.0000000000000010
Running Total=	+0.1877619465135933
+0.1900000000000000^21/21=	+0.0000000000000000
Running Total=	+0.1877619465135934

ArcTangent(+0.1900000000000000)=+0.1877619465135934 in radians
ArcTangent(+0.1900000000000000)=+10.7579670883900000 in degrees

Calculate ArcTangent(+0.2000000000000000)
ArcTangent(+0.2000000000000000)

+0.2000000000000000^1/1=	+0.2000000000000000
Running Total=	+0.2000000000000000
-0.2000000000000000^3/3=	-0.0026666666666667
Running Total=	+0.1973333333333333
+0.2000000000000000^5/5=	+0.0000640000000000
Running Total=	+0.1973973333333333
-0.2000000000000000^7/7=	-0.0000018285714286
Running Total=	+0.1973955047619048
+0.2000000000000000^9/9=	+0.0000000568888889
Running Total=	+0.1973955616507936

-0.2000000000000000^11/11=	-0.0000000018618182
Running Total=	+0.1973955597889755
+0.2000000000000000^13/13=	+0.0000000000630154
Running Total=	+0.1973955598519909
-0.2000000000000000^15/15=	-0.0000000000021845
Running Total=	+0.1973955598498063
+0.2000000000000000^17/17=	+0.0000000000000771
Running Total=	+0.1973955598498834
-0.2000000000000000^19/19=	-0.0000000000000028
Running Total=	+0.1973955598498807
+0.2000000000000000^21/21=	+0.0000000000000001
Running Total=	+0.1973955598498808

ArcTangent(+0.2000000000000000)=+0.1973955598498808 in radians
ArcTangent(+0.2000000000000000)=+11.3099324740202100 in degrees

Calculate ArcTangent(+0.2100000000000000)
ArcTangent(+0.2100000000000000)

+0.2100000000000000^1/1=	+0.2100000000000000
Running Total=	+0.2100000000000000
-0.2100000000000000^3/3=	-0.0030870000000000
Running Total=	+0.2069130000000000
+0.2100000000000000^5/5=	+0.0000816820200000
Running Total=	+0.2069946820200000
-0.2100000000000000^7/7=	-0.0000025729836300
Running Total=	+0.2069921090363700
+0.2100000000000000^9/9=	+0.0000000882533385
Running Total=	+0.2069921972897085
-0.2100000000000000^11/11=	-0.0000000031843409
Running Total=	+0.2069921941053676
+0.2100000000000000^13/13=	+0.0000000001188249
Running Total=	+0.2069921942241925
-0.2100000000000000^15/15=	-0.0000000000045415
Running Total=	+0.2069921942196510
+0.2100000000000000^17/17=	+0.0000000000001767
Running Total=	+0.2069921942198277
-0.2100000000000000^19/19=	-0.0000000000000070
Running Total=	+0.2069921942198208
+0.2100000000000000^21/21=	+0.0000000000000003
Running Total=	+0.2069921942198210

ArcTangent(+0.2100000000000000)=+0.2069921942198210 in radians
ArcTangent(+0.2100000000000000)=+11.8597791209479800 in degrees

Calculate ArcTangent(+0.2200000000000000)
ArcTangent(+0.2200000000000000)

+0.2200000000000000^1/1=	+0.2200000000000000
Running Total=	+0.2200000000000000
-0.2200000000000000^3/3=	-0.0035493333333333
Running Total=	+0.2164506666666667
+0.2200000000000000^5/5=	+0.0001030726400000
Running Total=	+0.2165537393066667
-0.2200000000000000^7/7=	-0.0000035633684114
Running Total=	+0.2165501759382553
+0.2200000000000000^9/9=	+0.0000001341410242
Running Total=	+0.2165503100792795
-0.2200000000000000^11/11=	-0.0000000053119846
Running Total=	+0.2165503047672949
+0.2200000000000000^13/13=	+0.0000000002175462
Running Total=	+0.2165503049848411
-0.2200000000000000^15/15=	-0.0000000000091253
Running Total=	+0.2165503049757158
+0.2200000000000000^17/17=	+0.0000000000003897
Running Total=	+0.2165503049761055
-0.2200000000000000^19/19=	-0.0000000000000169
Running Total=	+0.2165503049760886
+0.2200000000000000^21/21=	+0.0000000000000007
Running Total=	+0.2165503049760894

ArcTangent(+0.2200000000000000)=+0.2165503049760893 in radians
ArcTangent(+0.2200000000000000)=+12.4074185274007500 in degrees

Calculate ArcTangent(+0.2300000000000000)
ArcTangent(+0.2300000000000000)

+0.2300000000000000^1/1=	+0.2300000000000000
Running Total=	+0.2300000000000000
-0.2300000000000000^3/3=	-0.0040556666666667
Running Total=	+0.2259443333333333
+0.2300000000000000^5/5=	+0.0001287268600000
Running Total=	+0.2260730601933333
-0.2300000000000000^7/7=	-0.0000048640363529

Running Total=   +0.2260681961569805
+0.2300000000000000^9/9=   +0.0000002001280735
Running Total=   +0.2260683962850540
-0.2300000000000000^11/11=   -0.0000000086619069
Running Total=   +0.2260683876231471
+0.2300000000000000^13/13=   +0.0000000003877203
Running Total=   +0.2260683880108674
-0.2300000000000000^15/15=   -0.0000000000177757
Running Total=   +0.2260683879930917
+0.2300000000000000^17/17=   +0.0000000000008297
Running Total=   +0.2260683879939214
-0.2300000000000000^19/19=   -0.0000000000000393
Running Total=   +0.2260683879938821
+0.2300000000000000^21/21=   +0.0000000000000019
Running Total=   +0.2260683879938840
-0.2300000000000000^23/23=   -0.0000000000000001
Running Total=   +0.2260683879938839
ArcTangent(+0.2300000000000000)=+0.2260683879938839 in radians
ArcTangent(+0.2300000000000000)=+12.9527645133755200 in degrees

Calculate ArcTangent(+0.2400000000000000)
ArcTangent(+0.2400000000000000)
+0.2400000000000000^1/1=   +0.2400000000000000
Running Total=   +0.2400000000000000
-0.2400000000000000^3/3=   -0.0046080000000000
Running Total=   +0.2353920000000000
+0.2400000000000000^5/5=   +0.0001592524800000
Running Total=   +0.2355512524800000
-0.2400000000000000^7/7=   -0.0000065521020343
Running Total=   +0.2355447003779657
+0.2400000000000000^9/9=   +0.0000002935341711
Running Total=   +0.2355449939121368
-0.2400000000000000^11/11=   -0.0000000138334649
Running Total=   +0.2355449800786719
+0.2400000000000000^13/13=   +0.0000000006742218
Running Total=   +0.2355449807528937
-0.2400000000000000^15/15=   -0.0000000000336572
Running Total=   +0.2355449807192365
+0.2400000000000000^17/17=   +0.0000000000017106
Running Total=   +0.2355449807209471
-0.2400000000000000^19/19=   -0.0000000000000882
Running Total=   +0.2355449807208590
+0.2400000000000000^21/21=   +0.0000000000000046
Running Total=   +0.2355449807208636
-0.2400000000000000^23/23=   -0.0000000000000002
Running Total=   +0.2355449807208633
ArcTangent(+0.2400000000000000)=+0.2355449807208633 in radians
ArcTangent(+0.2400000000000000)=+13.4957332807958100 in degrees

Calculate ArcTangent(+0.2500000000000000)
ArcTangent(+0.2500000000000000)
+0.2500000000000000^1/1=   +0.2500000000000000
Running Total=   +0.2500000000000000
-0.2500000000000000^3/3=   -0.0052083333333333
Running Total=   +0.2447916666666667
+0.2500000000000000^5/5=   +0.0001953125000000
Running Total=   +0.2449869791666666
-0.2500000000000000^7/7=   -0.0000087193080357
Running Total=   +0.2449782598586309
+0.2500000000000000^9/9=   +0.0000004238552517
Running Total=   +0.2449786837138827
-0.2500000000000000^11/11=   -0.0000000216744163
Running Total=   +0.2449786620394664
+0.2500000000000000^13/13=   +0.0000000011462432
Running Total=   +0.2449786631857095
-0.2500000000000000^15/15=   -0.0000000000620882
Running Total=   +0.2449786631236213
+0.2500000000000000^17/17=   +0.0000000000034240
Running Total=   +0.2449786631270453
-0.2500000000000000^19/19=   -0.0000000000001915
Running Total=   +0.2449786631268538
+0.2500000000000000^21/21=   +0.0000000000000108
Running Total=   +0.2449786631268647
-0.2500000000000000^23/23=   -0.0000000000000006
Running Total=   +0.2449786631268641
ArcTangent(+0.2500000000000000)=+0.2449786631268641 in radians
ArcTangent(+0.2500000000000000)=+14.0362434679264800 in degrees

Calculate ArcTangent(+0.2600000000000000)
ArcTangent(+0.2600000000000000)
+0.2600000000000000^1/1=   +0.2600000000000000
Running Total=   +0.2600000000000000
-0.2600000000000000^3/3=   -0.0058586666666667
Running Total=   +0.2541413333333333
+0.2600000000000000^5/5=   +0.0002376275200000
Running Total=   +0.2543789608533333
-0.2600000000000000^7/7=   -0.0000114740145371
Running Total=   +0.2543674868387962
+0.2600000000000000^9/9=   +0.0000006032781866
Running Total=   +0.2543680901169827
-0.2600000000000000^11/11=   -0.0000000333667681
Running Total=   +0.2543680567502147
+0.2600000000000000^13/13=   +0.0000000019085791
Running Total=   +0.2543680586587938
-0.2600000000000000^15/15=   -0.0000000001118173
Running Total=   +0.2543680585469765
+0.2600000000000000^17/17=   +0.0000000000066696
Running Total=   +0.2543680585536461
-0.2600000000000000^19/19=   -0.0000000000004034
Running Total=   +0.2543680585532427
+0.2600000000000000^21/21=   +0.0000000000000247
Running Total=   +0.2543680585532673
-0.2600000000000000^23/23=   -0.0000000000000015
Running Total=   +0.2543680585532658
+0.2600000000000000^25/25=   +0.0000000000000001
Running Total=   +0.2543680585532659
ArcTangent(+0.2600000000000000)=+0.2543680585532659 in radians
ArcTangent(+0.2600000000000000)=+14.5742161980387400 in degrees

Calculate ArcTangent(+0.2700000000000000)
ArcTangent(+0.2700000000000000)
+0.2700000000000000^1/1=   +0.2700000000000000
Running Total=   +0.2700000000000000
-0.2700000000000000^3/3=   -0.0065610000000000
Running Total=   +0.2634390000000000
+0.2700000000000000^5/5=   +0.0002869781400000
Running Total=   +0.2637259781400000
-0.2700000000000000^7/7=   -0.0000149433617186
Running Total=   +0.2637110347782815
+0.2700000000000000^9/9=   +0.0000008472886094
Running Total=   +0.2637118820668909
-0.2700000000000000^11/11=   -0.0000000505369142
Running Total=   +0.2637118315299766
+0.2700000000000000^13/13=   +0.0000000031173501
Running Total=   +0.2637118346473267
-0.2700000000000000^15/15=   -0.0000000001969542
Running Total=   +0.2637118344503726
+0.2700000000000000^17/17=   +0.0000000000126688
Running Total=   +0.2637118344630414
-0.2700000000000000^19/19=   -0.0000000000008263
Running Total=   +0.2637118344622150
+0.2700000000000000^21/21=   +0.0000000000000545
Running Total=   +0.2637118344622695
-0.2700000000000000^23/23=   -0.0000000000000036
Running Total=   +0.2637118344622659
+0.2700000000000000^25/25=   +0.0000000000000002
Running Total=   +0.2637118344622661
ArcTangent(+0.2700000000000000)=+0.2637118344622661 in radians
ArcTangent(+0.2700000000000000)=+15.1095751223404600 in degrees

Calculate ArcTangent(+0.2800000000000000)
ArcTangent(+0.2800000000000000)
+0.2800000000000000^1/1=   +0.2800000000000000
Running Total=   +0.2800000000000000
-0.2800000000000000^3/3=   -0.0073173333333333
Running Total=   +0.2726826666666667
+0.2800000000000000^5/5=   +0.0003442073600000
Running Total=   +0.2730268740266667
-0.2800000000000000^7/7=   -0.0000192756121600
Running Total=   +0.2730075984145067
+0.2800000000000000^9/9=   +0.0000011753839948
Running Total=   +0.2730087737985015
-0.2800000000000000^11/11=   -0.0000000753955406
Running Total=   +0.2730086984029609
+0.2800000000000000^13/13=   +0.0000000050016242
Running Total=   +0.2730087034045851

-0.2800000000000000^15/15=   -0.0000000003398437
Running Total=   +0.2730087030647414
+0.2800000000000000^17/17=   +0.0000000000235092
Running Total=   +0.2730087030882506
-0.2800000000000000^19/19=   -0.0000000000016491
Running Total=   +0.2730087030866015
+0.2800000000000000^21/21=   +0.0000000000001170
Running Total=   +0.2730087030867184
-0.2800000000000000^23/23=   -0.0000000000000084
Running Total=   +0.2730087030867100
+0.2800000000000000^25/25=   +0.0000000000000006
Running Total=   +0.2730087030867107
ArcTangent(+0.2800000000000000)=+0.2730087030867106 in radians
ArcTangent(+0.2800000000000000)=+15.6422464572087300 in degrees

Calculate ArcTangent(+0.2900000000000000)
ArcTangent(+0.2900000000000000)
+0.2900000000000000^1/1=   +0.2900000000000000
Running Total=   +0.2900000000000000
-0.2900000000000000^3/3=   -0.0081296666666667
Running Total=   +0.2818703333333333
+0.2900000000000000^5/5=   +0.0004102229800000
Running Total=   +0.2822805563133333
-0.2900000000000000^7/7=   -0.0000246426804414
Running Total=   +0.2822559136328919
+0.2900000000000000^9/9=   +0.0000016119051084
Running Total=   +0.2822575255380003
-0.2900000000000000^11/11=   -0.0000001109137251
Running Total=   +0.2822574146242752
+0.2900000000000000^13/13=   +0.0000000078927913
Running Total=   +0.2822574225170665
-0.2900000000000000^15/15=   -0.0000000005752792
Running Total=   +0.2822574219417872
+0.2900000000000000^17/17=   +0.0000000000426891
Running Total=   +0.2822574219844763
-0.2900000000000000^19/19=   -0.0000000000032122
Running Total=   +0.2822574219812641
+0.2900000000000000^21/21=   +0.0000000000002444
Running Total=   +0.2822574219815085
-0.2900000000000000^23/23=   -0.0000000000000188
Running Total=   +0.2822574219814897
+0.2900000000000000^25/25=   +0.0000000000000015
Running Total=   +0.2822574219814912
-0.2900000000000000^27/27=   -0.0000000000000001
Running Total=   +0.2822574219814911
ArcTangent(+0.2900000000000000)=+0.2822574219814911 in radians
ArcTangent(+0.2900000000000000)=+16.1721590157825500 in degrees

Calculate ArcTangent(+0.3000000000000000)
ArcTangent(+0.3000000000000000)
+0.3000000000000000^1/1=   +0.3000000000000000
Running Total=   +0.3000000000000000
-0.3000000000000000^3/3=   -0.0090000000000000
Running Total=   +0.2910000000000000
+0.3000000000000000^5/5=   +0.0004860000000000
Running Total=   +0.2914860000000000
-0.3000000000000000^7/7=   -0.0000312428571429
Running Total=   +0.2914547571428571
+0.3000000000000000^9/9=   +0.0000021870000000
Running Total=   +0.2914569441428571
-0.3000000000000000^11/11=   -0.0000001610427273
Running Total=   +0.2914567831001298
+0.3000000000000000^13/13=   +0.0000000122640231
Running Total=   +0.2914567953641529
-0.3000000000000000^15/15=   -0.0000000009565938
Running Total=   +0.2914567944075591
+0.3000000000000000^17/17=   +0.0000000000759648
Running Total=   +0.2914567944835239
-0.3000000000000000^19/19=   -0.0000000000061172
Running Total=   +0.2914567944774067
+0.3000000000000000^21/21=   +0.0000000000004981
Running Total=   +0.2914567944779048
-0.3000000000000000^23/23=   -0.0000000000000409
Running Total=   +0.2914567944778639
+0.3000000000000000^25/25=   +0.0000000000000034
Running Total=   +0.2914567944778673
-0.3000000000000000^27/27=   -0.00000000000000003
Running Total=   +0.2914567944778670

ArcTangent(+0.3000000000000000)=+0.2914567944778671 in radians
ArcTangent(+0.3000000000000000)=+16.6992442339936200 in degrees

Calculate ArcTangent(+0.3100000000000000)
ArcTangent(+0.3100000000000000)
+0.3100000000000000^1/1=   +0.3100000000000000
Running Total=   +0.3100000000000000
-0.3100000000000000^3/3=   -0.0099303333333333
Running Total=   +0.3000696666666667
+0.3100000000000000^5/5=   +0.0005725830200000
Running Total=   +0.3006422496866667
-0.3100000000000000^7/7=   -0.0000393037344443
Running Total=   +0.30060294595222224
+0.3100000000000000^9/9=   +0.0000029377357956
Running Total=   +0.3006058836880180
-0.3100000000000000^11/11=   -0.0000002309861536
Running Total=   +0.3006056527018645
+0.3100000000000000^13/13=   +0.0000000187827279
Running Total=   +0.3006056714845924
-0.3100000000000000^15/15=   -0.0000000015643508
Running Total=   +0.3006056699202416
+0.3100000000000000^17/17=   +0.0000000001326477
Running Total=   +0.3006056700528893
-0.3100000000000000^19/19=   -0.0000000000114056
Running Total=   +0.3006056700414837
+0.3100000000000000^21/21=   +0.0000000000009917
Running Total=   +0.3006056700424754
-0.3100000000000000^23/23=   -0.0000000000000870
Running Total=   +0.3006056700423884
+0.3100000000000000^25/25=   +0.0000000000000077
Running Total=   +0.3006056700423961
-0.3100000000000000^27/27=   -0.0000000000000007
Running Total=   +0.3006056700423954
ArcTangent(+0.3100000000000000)=+0.3006056700423954 in radians
ArcTangent(+0.3100000000000000)=+17.2234361911314600 in degrees

Calculate ArcTangent(+0.3200000000000000)
ArcTangent(+0.3200000000000000)
+0.3200000000000000^1/1=   +0.3200000000000000
Running Total=   +0.3200000000000000
-0.3200000000000000^3/3=   -0.0109226666666667
Running Total=   +0.3090773333333333
+0.3200000000000000^5/5=   +0.0006710886400000
Running Total=   +0.3097484219733333
-0.3200000000000000^7/7=   -0.0000490853405257
Running Total=   +0.3096993366328076
+0.3200000000000000^9/9=   +0.0000039093746765
Running Total=   +0.3097032460074841
-0.3200000000000000^11/11=   -0.0000003275345184
Running Total=   +0.3097029184729658
+0.3200000000000000^13/13=   +0.0000000283796063
Running Total=   +0.3097029468525720
-0.3200000000000000^15/15=   -0.0000000025185955
Running Total=   +0.3097029443339766
+0.3200000000000000^17/17=   +0.0000000002275625
Running Total=   +0.3097029445615391
-0.3200000000000000^19/19=   -0.0000000000208495
Running Total=   +0.3097029445406896
+0.3200000000000000^21/21=   +0.0000000000019317
Running Total=   +0.3097029445426213
-0.3200000000000000^23/23=   -0.0000000000001806
Running Total=   +0.3097029445424407
+0.3200000000000000^25/25=   +0.0000000000000170
Running Total=   +0.3097029445424577
-0.3200000000000000^27/27=   -0.0000000000000016
Running Total=   +0.3097029445424561
+0.3200000000000000^29/29=   +0.0000000000000002
Running Total=   +0.3097029445424563
ArcTangent(+0.3200000000000000)=+0.3097029445424562 in radians
ArcTangent(+0.3200000000000000)=+17.7446716250569300 in degrees

Calculate ArcTangent(+0.3300000000000000)
ArcTangent(+0.3300000000000000)
+0.3300000000000000^1/1=   +0.3300000000000000
Running Total=   +0.3300000000000000
-0.3300000000000000^3/3=   -0.0119790000000000
Running Total=   +0.3180210000000000
+0.3300000000000000^5/5=   +0.0007827078600000

Running Total=   +0.3188037078600000
-0.3300000000000000^7/7=   -0.0000608834899671
Running Total=   +0.3187428243700329
+0.3300000000000000^9/9=   +0.0000051568316002
Running Total=   +0.3187479812016331
-0.3300000000000000^11/11=   -0.0000004594736956
Running Total=   +0.3187475217279375
+0.3300000000000000^13/13=   +0.0000000423387338
Running Total=   +0.3187475640666714
-0.3300000000000000^15/15=   -0.0000000039959297
Running Total=   +0.3187475600707417
+0.3300000000000000^17/17=   +0.0000000003839618
Running Total=   +0.3187475604547035
-0.3300000000000000^19/19=   -0.0000000000374120
Running Total=   +0.3187475604172915
+0.3300000000000000^21/21=   +0.0000000000036862
Running Total=   +0.3187475604209776
-0.3300000000000000^23/23=   -0.0000000000003665
Running Total=   +0.3187475604206111
+0.3300000000000000^25/25=   +0.0000000000000367
Running Total=   +0.3187475604206478
-0.3300000000000000^27/27=   -0.0000000000000037
Running Total=   +0.3187475604206441
+0.3300000000000000^29/29=   +0.0000000000000004
Running Total=   +0.3187475604206444
ArcTangent(+0.3300000000000000)=+0.3187475604206444 in radians
ArcTangent(+0.3300000000000000)=+18.2628899421941300 in degrees

Calculate ArcTangent(+0.3400000000000000)
ArcTangent(+0.3400000000000000)
+0.3400000000000000^1/1=   +0.3400000000000000
Running Total=   +0.3400000000000000
-0.3400000000000000^3/3=   -0.0131013333333333
Running Total=   +0.3268986666666667
+0.3400000000000000^5/5=   +0.0009087084800000
Running Total=   +0.3278073751466667
-0.3400000000000000^7/7=   -0.0000750333573486
Running Total=   +0.3277323417893181
+0.3400000000000000^9/9=   +0.0000067463325296
Running Total=   +0.3277390881218477
-0.3400000000000000^11/11=   -0.0000006380803967
Running Total=   +0.3277384500414510
+0.3400000000000000^13/13=   +0.0000000624140794
Running Total=   +0.3277385124555304
-0.3400000000000000^15/15=   -0.0000000062530586
Running Total=   +0.3277385062024719
+0.3400000000000000^17/17=   +0.0000000006378120
Running Total=   +0.3277385068402838
-0.3400000000000000^19/19=   -0.0000000000659699
Running Total=   +0.3277385067743139
+0.3400000000000000^21/21=   +0.0000000000068998
Running Total=   +0.3277385067812137
-0.3400000000000000^23/23=   -0.0000000000007283
Running Total=   +0.3277385067804855
+0.3400000000000000^25/25=   +0.0000000000000775
Running Total=   +0.3277385067805629
-0.3400000000000000^27/27=   -0.0000000000000083
Running Total=   +0.3277385067805547
+0.3400000000000000^29/29=   +0.0000000000000009
Running Total=   +0.3277385067805555
ArcTangent(+0.3400000000000000)=+0.3277385067805555 in radians
ArcTangent(+0.3400000000000000)=+18.7780332224455400 in degrees

Calculate ArcTangent(+0.3500000000000000)
ArcTangent(+0.3500000000000000)
+0.3500000000000000^1/1=   +0.3500000000000000
Running Total=   +0.3500000000000000
-0.3500000000000000^3/3=   -0.0142916666666667
Running Total=   +0.3357083333333333
+0.3500000000000000^5/5=   +0.0010504375000000
Running Total=   +0.3367587708333333
-0.3500000000000000^7/7=   -0.0000919132812500
Running Total=   +0.3366668575520833
+0.3500000000000000^9/9=   +0.0000087572931858
Running Total=   +0.3366756148452691
-0.3500000000000000^11/11=   -0.0000008777196125
Running Total=   +0.3366747371256566
+0.3500000000000000^13/13=   +0.0000000909790137

Running Total=   +0.3366748281046703
-0.3500000000000000^15/15=   -0.0000000096589386
Running Total=   +0.3366748184457317
+0.3500000000000000^17/17=   +0.0000000010440176
Running Total=   +0.3366748194897493
-0.3500000000000000^19/19=   -0.0000000001144298
Running Total=   +0.3366748193753195
+0.3500000000000000^21/21=   +0.0000000000126826
Running Total=   +0.3366748193880021
-0.3500000000000000^23/23=   -0.0000000000014185
Running Total=   +0.3366748193865836
+0.3500000000000000^25/25=   +0.0000000000001599
Running Total=   +0.3366748193867434
-0.3500000000000000^27/27=   -0.0000000000000181
Running Total=   +0.3366748193867253
+0.3500000000000000^29/29=   +0.0000000000000021
Running Total=   +0.3366748193867273
-0.3500000000000000^31/31=   -0.0000000000000002
Running Total=   +0.3366748193867271
ArcTangent(+0.3500000000000000)=+0.3366748193867272 in radians
ArcTangent(+0.3500000000000000)=+19.2900462191887300 in degrees

Calculate ArcTangent(+0.3600000000000000)
ArcTangent(+0.3600000000000000)
+0.3600000000000000^1/1=   +0.3600000000000000
Running Total=   +0.3600000000000000
-0.3600000000000000^3/3=   -0.0155520000000000
Running Total=   +0.3444480000000000
+0.3600000000000000^5/5=   +0.0012093235200000
Running Total=   +0.3456573235200000
-0.3600000000000000^7/7=   -0.0001119488058514
Running Total=   +0.3455453747141486
+0.3600000000000000^9/9=   +0.0000112844396298
Running Total=   +0.3455566591537784
-0.3600000000000000^11/11=   -0.0000011965609440
Running Total=   +0.3455554625928344
+0.3600000000000000^13/13=   +0.0000001312167140
Running Total=   +0.3455555938095484
-0.3600000000000000^15/15=   -0.0000000147382613
Running Total=   +0.3455555790712871
+0.3600000000000000^17/17=   +0.0000000016853635
Running Total=   +0.3455555807566506
-0.3600000000000000^19/19=   -0.0000000001954312
Running Total=   +0.3455555805612194
+0.3600000000000000^21/21=   +0.0000000000229157
Running Total=   +0.3455555805841351
-0.3600000000000000^23/23=   -0.0000000000027116
Running Total=   +0.3455555805814235
+0.3600000000000000^25/25=   +0.0000000000003233
Running Total=   +0.3455555805817468
-0.3600000000000000^27/27=   -0.0000000000000388
Running Total=   +0.3455555805817080
+0.3600000000000000^29/29=   +0.0000000000000047
Running Total=   +0.3455555805817127
-0.3600000000000000^31/31=   -0.0000000000000006
Running Total=   +0.3455555805817121
ArcTangent(+0.3600000000000000)=+0.3455555805817122 in radians
ArcTangent(+0.3600000000000000)=+19.7988763545249300 in degrees

Calculate ArcTangent(+0.3700000000000000)
ArcTangent(+0.3700000000000000)
+0.3700000000000000^1/1=   +0.3700000000000000
Running Total=   +0.3700000000000000
-0.3700000000000000^3/3=   -0.0168843333333333
Running Total=   +0.3531156666666667
+0.3700000000000000^5/5=   +0.0013868791400000
Running Total=   +0.3545025458066667
-0.3700000000000000^7/7=   -0.0001356169673329
Running Total=   +0.3543669288393339
+0.3700000000000000^9/9=   +0.0000144401933106
Running Total=   +0.3543813690326444
-0.3700000000000000^11/11=   -0.0000016174329253
Running Total=   +0.3543797515997191
+0.3700000000000000^13/13=   +0.0000001873609417
Running Total=   +0.3543799389606608
-0.3700000000000000^15/15=   -0.0000000222297512
Running Total=   +0.3543799167309096
+0.3700000000000000^17/17=   +0.0000000026852232

Running Total=	+0.3543799194161328
-0.3700000000000000^19/19=	-0.0000000003289116
Running Total=	+0.3543799190872212
+0.3700000000000000^21/21=	+0.0000000000407396
Running Total=	+0.3543799191279609
-0.3700000000000000^23/23=	-0.0000000000050923
Running Total=	+0.3543799191228686
+0.3700000000000000^25/25=	+0.0000000000006414
Running Total=	+0.3543799191235100
-0.3700000000000000^27/27=	-0.0000000000000813
Running Total=	+0.3543799191234286
+0.3700000000000000^29/29=	+0.0000000000000104
Running Total=	+0.3543799191234390
-0.3700000000000000^31/31=	-0.0000000000000013
Running Total=	+0.3543799191234377
+0.3700000000000000^33/33=	+0.0000000000000002
Running Total=	+0.3543799191234379

ArcTangent(+0.3700000000000000)=+0.3543799191234378 in radians
ArcTangent(+0.3700000000000000)=+20.3044737099604400 in degrees

Calculate ArcTangent(+0.3800000000000000)
ArcTangent(+0.3800000000000000)

+0.3800000000000000^1/1=	+0.3800000000000000
Running Total=	+0.3800000000000000
-0.3800000000000000^3/3=	-0.0182906666666667
Running Total=	+0.3617093333333333
+0.3800000000000000^5/5=	+0.0015847033600000
Running Total=	+0.3632940366933333
-0.3800000000000000^7/7=	-0.0001634508322743
Running Total=	+0.3631305858610591
+0.3800000000000000^9/9=	+0.0000183573445848
Running Total=	+0.3631489432056438
-0.3800000000000000^11/11=	-0.0000021688368202
Running Total=	+0.3631467743688236
+0.3800000000000000^13/13=	+0.0000002649984927
Running Total=	+0.3631470393673163
-0.3800000000000000^15/15=	-0.0000000331636780
Running Total=	+0.3631470062036383
+0.3800000000000000^17/17=	+0.0000000042254427
Running Total=	+0.3631470104290810
-0.3800000000000000^19/19=	-0.0000000005459272
Running Total=	+0.3631470098831538
+0.3800000000000000^21/21=	+0.0000000000713241
Running Total=	+0.3631470099544780
-0.3800000000000000^23/23=	-0.0000000000094036
Running Total=	+0.3631470099450744
+0.3800000000000000^25/25=	+0.0000000000012493
Running Total=	+0.3631470099463237
-0.3800000000000000^27/27=	-0.0000000000001670
Running Total=	+0.3631470099461566
+0.3800000000000000^29/29=	+0.0000000000000225
Running Total=	+0.3631470099461791
-0.3800000000000000^31/31=	-0.0000000000000030
Running Total=	+0.3631470099461760
+0.3800000000000000^33/33=	+0.0000000000000004
Running Total=	+0.3631470099461764

ArcTangent(+0.3800000000000000)=+0.3631470099461763 in radians
ArcTangent(+0.3800000000000000)=+20.8067910127112300 in degrees

Calculate ArcTangent(+0.3900000000000000)
ArcTangent(+0.3900000000000000)

+0.3900000000000000^1/1=	+0.3900000000000000
Running Total=	+0.3900000000000000
-0.3900000000000000^3/3=	-0.0197730000000000
Running Total=	+0.3702270000000000
+0.3900000000000000^5/5=	+0.0018044839800000
Running Total=	+0.3720314839800000
-0.3900000000000000^7/7=	-0.0001960442952557
Running Total=	+0.3718354396847443
+0.3900000000000000^9/9=	+0.0000231920401288
Running Total=	+0.3718586317248730
-0.3900000000000000^11/11=	-0.0000028861439757
Running Total=	+0.3718557455808974
+0.3900000000000000^13/13=	+0.0000003714467297
Running Total=	+0.3718561170276271
-0.3900000000000000^15/15=	-0.0000000489641079
Running Total=	+0.3718560680635192
+0.3900000000000000^17/17=	+0.0000000065712713

Running Total=	+0.3718560746347905
-0.3900000000000000^19/19=	-0.0000000008942809
Running Total=	+0.3718560737405096
+0.3900000000000000^21/21=	+0.0000000001230658
Running Total=	+0.3718560738635754
-0.3900000000000000^23/23=	-0.0000000000170906
Running Total=	+0.3718560738464848
+0.3900000000000000^25/25=	+0.0000000000023915
Running Total=	+0.3718560738488764
-0.3900000000000000^27/27=	-0.0000000000003368
Running Total=	+0.3718560738485396
+0.3900000000000000^29/29=	+0.0000000000000477
Running Total=	+0.3718560738485873
-0.3900000000000000^31/31=	-0.0000000000000068
Running Total=	+0.3718560738485805
+0.3900000000000000^33/33=	+0.0000000000000010
Running Total=	+0.3718560738485814

ArcTangent(+0.3900000000000000)=+0.3718560738485813 in radians
ArcTangent(+0.3900000000000000)=+21.3057836178287700 in degrees

Calculate ArcTangent(+0.4000000000000000)
ArcTangent(+0.4000000000000000)

+0.4000000000000000^1/1=	+0.4000000000000000
Running Total=	+0.4000000000000000
-0.4000000000000000^3/3=	-0.0213333333333333
Running Total=	+0.3786666666666667
+0.4000000000000000^5/5=	+0.0020480000000000
Running Total=	+0.3807146666666667
-0.4000000000000000^7/7=	-0.0002340571428571
Running Total=	+0.3804806095238096
+0.4000000000000000^9/9=	+0.0000291271111111
Running Total=	+0.3805097366349207
-0.4000000000000000^11/11=	-0.0000038130036364
Running Total=	+0.3805059236312843
+0.4000000000000000^13/13=	+0.0000005162220308
Running Total=	+0.3805064398533151
-0.4000000000000000^15/15=	-0.0000000715827883
Running Total=	+0.3805063682705269
+0.4000000000000000^17/17=	+0.0000000101058054
Running Total=	+0.3805063783763323
-0.4000000000000000^19/19=	-0.0000000014467258
Running Total=	+0.3805063769296064
+0.4000000000000000^21/21=	+0.0000000002094308
Running Total=	+0.3805063771390372
-0.4000000000000000^23/23=	-0.0000000000305951
Running Total=	+0.3805063771084422
+0.4000000000000000^25/25=	+0.0000000000045036
Running Total=	+0.3805063771129458
-0.4000000000000000^27/27=	-0.0000000000006672
Running Total=	+0.3805063771122786
+0.4000000000000000^29/29=	+0.0000000000000994
Running Total=	+0.3805063771123779
-0.4000000000000000^31/31=	-0.0000000000000149
Running Total=	+0.3805063771123631
+0.4000000000000000^33/33=	+0.0000000000000022
Running Total=	+0.3805063771123653
-0.4000000000000000^35/35=	-0.0000000000000003
Running Total=	+0.3805063771123650

ArcTangent(+0.4000000000000000)=+0.3805063771123649 in radians
ArcTangent(+0.4000000000000000)=+21.8014094863518100 in degrees

The following are the Tangent function

1 degrees=0.0174532925199433 radians
Calculate Tangent(+0.0174532925199433)

+0.0174532925199433^1/1	+0.0174532925199433
Running Total=	+0.0174532925199433
+0.0174532925199433^3* a fraction=	+0.0000017721923114
Running Total=	+0.0174550647122547
+0.0174532925199433^5* a fraction=	+0.0000000002159363
Running Total=	+0.0174550649281910
+0.0174532925199433^7* a fraction=	+0.0000000000000266
Running Total=	+0.0174550649282176
+0.0174532925199433^9* a fraction=	+0.0000000000000000
Running Total=	+0.0174550649282176
Tangent(+1.0000000000000000)=	+0.0174550649282176
Cotangent(+1.0000000000000000)=	+57.2899616307594300

2 degrees=0.0349065850398866 radians
Calculate Tangent(+0.0349065850398866)

+0.0349065850398866^1/1	+0.0349065850398866
Running Total=	+0.0349065850398866
+0.0349065850398866^3* a fraction=	+0.0000141775384912
Running Total=	+0.0349207625783778
+0.0349065850398866^5* a fraction=	+0.0000000069099603
Running Total=	+0.0349207694883381
+0.0349065850398866^7* a fraction=	+0.0000000000034079
Running Total=	+0.0349207694917461
+0.0349065850398866^9* a fraction=	+0.0000000000000017
Running Total=	+0.0349207694917477
+0.0349065850398866^11* a fraction=	+0.0000000000000000
Running Total=	+0.0349207694917477
Tangent(+2.0000000000000000)=	+0.0349207694917477
Cotangent(+2.0000000000000000)=	+28.6362532829156000

3 degrees=0.0523598775598299 radians
Calculate Tangent(+0.0523598775598299)

+0.0523598775598299^1/1	+0.0523598775598299
Running Total=	+0.0523598775598299
+0.0523598775598299^3* a fraction=	+0.0000478491924079
Running Total=	+0.0524077267522378
+0.0523598775598299^5* a fraction=	+0.0000000524725111
Running Total=	+0.0524077792247489
+0.0523598775598299^7* a fraction=	+0.0000000000582276
Running Total=	+0.0524077792829764
+0.0523598775598299^9* a fraction=	+0.0000000000000647
Running Total=	+0.0524077792830411
+0.0523598775598299^11* a fraction=	+0.0000000000000001
Running Total=	+0.0524077792830412
Tangent(+3.0000000000000000)=	+0.0524077792830412
Cotangent(+3.0000000000000000)=	+19.0811366877282100

4 degrees=0.0698131700797732 radians
Calculate Tangent(+0.0698131700797732)

+0.0698131700797732^1/1	+0.0698131700797732
Running Total=	+0.0698131700797732
+0.0698131700797732^3* a fraction=	+0.0001134203079298
Running Total=	+0.0699265903877030
+0.0698131700797732^5* a fraction=	+0.0000002211187299
Running Total=	+0.0699268115064329
+0.0698131700797732^7* a fraction=	+0.0000000004362143
Running Total=	+0.0699268119426472
+0.0698131700797732^9* a fraction=	+0.0000000000008615
Running Total=	+0.0699268119435087
+0.0698131700797732^11* a fraction=	+0.0000000000000017
Running Total=	+0.0699268119435104
+0.0698131700797732^13* a fraction=	+0.0000000000000000
Running Total=	+0.0699268119435104
Tangent(+4.0000000000000000)=	+0.0699268119435104
Cotangent(+4.0000000000000000)=	+14.3006662567119300

5 degrees=0.0872664625997165 radians
Calculate Tangent(+0.0872664625997165)

+0.0872664625997165^1/1	+0.0872664625997165
Running Total=	+0.0872664625997165
+0.0872664625997165^3* a fraction=	+0.0002215240389253
Running Total=	+0.0874879866386418
+0.0872664625997165^5* a fraction=	+0.0000006748008116
Running Total=	+0.0874886614394534
+0.0872664625997165^7* a fraction=	+0.0000000020800318
Running Total=	+0.0874886635194852
+0.0872664625997165^9* a fraction=	+0.0000000000064190
Running Total=	+0.0874886635259041
+0.0872664625997165^11* a fraction=	+0.0000000000000198
Running Total=	+0.0874886635259239
+0.0872664625997165^13* a fraction=	+0.0000000000000001
Running Total=	+0.0874886635259240
Tangent(+5.0000000000000000)=	+0.0874886635259240
Cotangent(+5.0000000000000000)=	+11.4300523027613400

6 degrees=0.1047197551196598 radians
Calculate Tangent(+0.1047197551196598)

+0.1047197551196598^1/1	+0.1047197551196598
Running Total=	+0.1047197551196598
+0.1047197551196598^3* a fraction=	+0.0003827935392630
Running Total=	+0.1051025486589227
+0.1047197551196598^5* a fraction=	+0.0000016791203555
Running Total=	+0.1051042277792782
+0.1047197551196598^7* a fraction=	+0.0000000074531299
Running Total=	+0.1051042352324082
+0.1047197551196598^9* a fraction=	+0.0000000000331204
Running Total=	+0.1051042352655286
+0.1047197551196598^11* a fraction=	+0.0000000000001472
Running Total=	+0.1051042352656758
+0.1047197551196598^13* a fraction=	+0.0000000000000007
Running Total=	+0.1051042352656765
Tangent(+6.0000000000000000)=	+0.1051042352656765
Cotangent(+6.0000000000000000)=	+9.5143644542225850

7 degrees=0.1221730476396031 radians
Calculate Tangent(+0.1221730476396031)

+0.1221730476396031^1/1	+0.1221730476396031
Running Total=	+0.1221730476396031
+0.1221730476396031^3* a fraction=	+0.0006078619628111
Running Total=	+0.1227809096024142
+0.1221730476396031^5* a fraction=	+0.0000036292407169
Running Total=	+0.1227845388431310
+0.1221730476396031^7* a fraction=	+0.0000000219263439
Running Total=	+0.1227845607694749
+0.1221730476396031^9* a fraction=	+0.0000000001326225
Running Total=	+0.1227845609020974
+0.1221730476396031^11* a fraction=	+0.0000000000008023
Running Total=	+0.1227845609028997
+0.1221730476396031^13* a fraction=	+0.0000000000000049
Running Total=	+0.1227845609029046
+0.1221730476396031^15* a fraction=	+0.0000000000000000
Running Total=	+0.1227845609029046
Tangent(+7.0000000000000000)=	+0.1227845609029046
Cotangent(+7.0000000000000000)=	+8.1443464279745950

8 degrees=0.1396263401595464 radians
Calculate Tangent(+0.1396263401595464)

+0.1396263401595464^1/1	+0.1396263401595464
Running Total=	+0.1396263401595464
+0.1396263401595464^3* a fraction=	+0.0009073624634381
Running Total=	+0.1405337026229845
+0.1396263401595464^5* a fraction=	+0.0000070757993581
Running Total=	+0.1405407784223425
+0.1396263401595464^7* a fraction=	+0.0000000558354280
Running Total=	+0.1405408342577706
+0.1396263401595464^9* a fraction=	+0.0000000004411079
Running Total=	+0.1405408346988784
+0.1396263401595464^11* a fraction=	+0.0000000000034852
Running Total=	+0.1405408347023637
+0.1396263401595464^13* a fraction=	+0.0000000000000275
Running Total=	+0.1405408347023912
+0.1396263401595464^15* a fraction=	+0.0000000000000002
Running Total=	+0.1405408347023914
Tangent(+8.0000000000000000)=	+0.1405408347023915
Cotangent(+8.0000000000000000)=	+7.1153697223842090

9 degrees=0.1570796326794897 radians
Calculate Tangent(+0.1570796326794897)

+0.1570796326794897^1/1	+0.1570796326794897
Running Total=	+0.1570796326794897
+0.1570796326794897^3* a fraction=	+0.0012919281950125
Running Total=	+0.1583715608745022
+0.1570796326794897^5* a fraction=	+0.0000127508201994
Running Total=	+0.1583843116947015
+0.1570796326794897^7* a fraction=	+0.0000001273437125
Running Total=	+0.1583844390384140
+0.1570796326794897^9* a fraction=	+0.0000000012732612
Running Total=	+0.1583844403116753
+0.1570796326794897^11* a fraction=	+0.0000000000127324
Running Total=	+0.1583844403244077
+0.1570796326794897^13* a fraction=	+0.0000000000001273
Running Total=	+0.1583844403245350
+0.1570796326794897^15* a fraction=	+0.0000000000000013
Running Total=	+0.1583844403245363
+0.1570796326794897^17* a fraction=	+0.0000000000000000
Running Total=	+0.1583844403245363
Tangent(+9.0000000000000000)=	+0.1583844403245363
Cotangent(+9.0000000000000000)=	+6.3137515146750430

10 degrees=0.1745329251994329 radians
Calculate Tangent(+0.1745329251994329)

+0.1745329251994329^1/1	+0.1745329251994329
Running Total=	+0.1745329251994329
+0.1745329251994329^3* a fraction=	+0.0017721923114026
Running Total=	+0.1763051175108356
+0.1745329251994329^5* a fraction=	+0.0000215936259706
Running Total=	+0.1763267111368062
+0.1745329251994329^7* a fraction=	+0.0000002662440682
Running Total=	+0.1763269773808744
+0.1745329251994329^9* a fraction=	+0.0000000032865098
Running Total=	+0.1763269806673842
+0.1745329251994329^11* a fraction=	+0.0000000000405736
Running Total=	+0.1763269807079578
+0.1745329251994329^13* a fraction=	+0.0000000000005009
Running Total=	+0.1763269807084587
+0.1745329251994329^15* a fraction=	+0.0000000000000062
Running Total=	+0.1763269807084649
+0.1745329251994329^17* a fraction=	+0.0000000000000001
Running Total=	+0.1763269807084650
Tangent(+10.0000000000000000)=	+0.1763269807084650
Cotangent(+10.0000000000000000)=	+5.6712818196177090

11 degrees=0.1919862177193762 radians
Calculate Tangent(+0.1919862177193762)

+0.1919862177193762^1/1	+0.1919862177193762
Running Total=	+0.1919862177193762
+0.1919862177193762^3* a fraction=	+0.0023587879664769
Running Total=	+0.1943450056858531
+0.1919862177193762^5* a fraction=	+0.0000347767505619
Running Total=	+0.1943797824364150
+0.1919862177193762^7* a fraction=	+0.0000005188343685
Running Total=	+0.1943803012707836
+0.1919862177193762^9* a fraction=	+0.0000000077494182
Running Total=	+0.1943803090202018
+0.1919862177193762^11* a fraction=	+0.0000000001157612
Running Total=	+0.1943803091359630
+0.1919862177193762^13* a fraction=	+0.0000000000017293
Running Total=	+0.1943803091376922
+0.1919862177193762^15* a fraction=	+0.0000000000000258
Running Total=	+0.1943803091377181
+0.1919862177193762^17* a fraction=	+0.0000000000000004
Running Total=	+0.1943803091377184
Tangent(+11.0000000000000000)=	+0.1943803091377185
Cotangent(+11.0000000000000000)=	+5.1445540159703100

12 degrees=0.2094395102393196 radians
Calculate Tangent(+0.2094395102393196)

+0.2094395102393196^1/1	+0.2094395102393196
Running Total=	+0.2094395102393196
+0.2094395102393196^3* a fraction=	+0.0030623483141037
Running Total=	+0.2125018585534232
+0.2094395102393196^5* a fraction=	+0.0000537318513752
Running Total=	+0.2125555904047984
+0.2094395102393196^7* a fraction=	+0.0000009540006334
Running Total=	+0.2125565444054318
+0.2094395102393196^9* a fraction=	+0.0000000169576688
Running Total=	+0.2125565613631006
+0.2094395102393196^11* a fraction=	+0.0000000003014651
Running Total=	+0.2125565616645657
+0.2094395102393196^13* a fraction=	+0.0000000000053594
Running Total=	+0.2125565616699251
+0.2094395102393196^15* a fraction=	+0.0000000000000953
Running Total=	+0.2125565616700204
+0.2094395102393196^17* a fraction=	+0.0000000000000017
Running Total=	+0.2125565616700221
+0.2094395102393196^19* a fraction=	+0.0000000000000000
Running Total=	+0.2125565616700221
Tangent(+12.0000000000000000)=	+0.2125565616700221
Cotangent(+12.0000000000000000)=	+4.7046301094784550

13 degrees=0.2268928027592629 radians
Calculate Tangent(+0.2268928027592629)

+0.2268928027592629^1/1	+0.2268928027592629
Running Total=	+0.2268928027592629
+0.2268928027592629^3* a fraction=	+0.0038935065081515
Running Total=	+0.2307863092674144
+0.2268928027592629^5* a fraction=	+0.0000801756216751
Running Total=	+0.2308664848890894
+0.2268928027592629^7* a fraction=	+0.0000016706420442
Running Total=	+0.2308681555311336
+0.2268928027592629^9* a fraction=	+0.0000000348517914
Running Total=	+0.2308681903829249
+0.2268928027592629^11* a fraction=	+0.0000000007271436
Running Total=	+0.2308681911100686
+0.2268928027592629^13* a fraction=	+0.0000000000151712
Running Total=	+0.2308681911252398
+0.2268928027592629^15* a fraction=	+0.0000000000003165
Running Total=	+0.2308681911255564
+0.2268928027592629^17* a fraction=	+0.0000000000000066
Running Total=	+0.2308681911255630
+0.2268928027592629^19* a fraction=	+0.0000000000000001
Running Total=	+0.2308681911255631
Tangent(+13.0000000000000000)=	+0.2308681911255631
Cotangent(+13.0000000000000000)=	+4.3314758742841550

14 degrees=0.2443460952792061 radians
Calculate Tangent(+0.2443460952792061)

+0.2443460952792061^1/1	+0.2443460952792061
Running Total=	+0.2443460952792061
+0.2443460952792061^3* a fraction=	+0.0048628957024887
Running Total=	+0.2492089909816949
+0.2443460952792061^5* a fraction=	+0.0001161357029402
Running Total=	+0.2493251266846351
+0.2443460952792061^7* a fraction=	+0.0000028065720152
Running Total=	+0.2493279332566503
+0.2443460952792061^9* a fraction=	+0.0000000679027332
Running Total=	+0.2493280011593834
+0.2443460952792061^11* a fraction=	+0.0000000016430536
Running Total=	+0.2493280028024370
+0.2443460952792061^13* a fraction=	+0.0000000000397578
Running Total=	+0.2493280028421948
+0.2443460952792061^15* a fraction=	+0.0000000000009620
Running Total=	+0.2493280028431568
+0.2443460952792061^17* a fraction=	+0.0000000000000233
Running Total=	+0.2493280028431801
+0.2443460952792061^19* a fraction=	+0.0000000000000006
Running Total=	+0.2493280028431807
Tangent(+14.0000000000000000)=	+0.2493280028431807
Cotangent(+14.0000000000000000)=	+4.0107809335358450

15 degrees=0.2617993877991494 radians
Calculate Tangent(+0.2617993877991494)

+0.2617993877991494^1/1	+0.2617993877991494
Running Total=	+0.2617993877991494
+0.2617993877991494^3* a fraction=	+0.0059811490509838
Running Total=	+0.2677805368501331
+0.2617993877991494^5* a fraction=	+0.0001639765972143
Running Total=	+0.2679445134473475
+0.2617993877991494^7* a fraction=	+0.0000045490295096
Running Total=	+0.2679490624768571
+0.2617993877991494^9* a fraction=	+0.0000001263444782
Running Total=	+0.2679491888213353
+0.2617993877991494^11* a fraction=	+0.0000000035095157
Running Total=	+0.2679491923308510
+0.2617993877991494^13* a fraction=	+0.0000000000974864
Running Total=	+0.2679491924283374
+0.2617993877991494^15* a fraction=	+0.0000000000027080
Running Total=	+0.2679491924310453
+0.2617993877991494^17* a fraction=	+0.0000000000000752
Running Total=	+0.2679491924311205
+0.2617993877991494^19* a fraction=	+0.0000000000000021
Running Total=	+0.2679491924311226
+0.2617993877991494^21* a fraction=	+0.0000000000000001
Running Total=	+0.2679491924311227
Tangent(+15.0000000000000000)=	+0.2679491924311227
Cotangent(+15.0000000000000000)=	+3.7320508075688770

16 degrees=0.2792526803190927 radians
Calculate Tangent(+0.2792526803190927)

+0.2792526803190927^1/1	+0.2792526803190927
Running Total=	+0.2792526803190927
+0.2792526803190927^3* a fraction=	+0.0072588997075050
Running Total=	+0.2865115800265978
+0.2792526803190927^5* a fraction=	+0.0002264255794576

Running Total=	+0.2867380056060554
+0.2792526803190927^7* a fraction=	+0.0000071469347864
Running Total=	+0.2867451525408418
+0.2792526803190927^9* a fraction=	+0.0000002258472353
Running Total=	+0.2867453783880771
+0.2792526803190927^11* a fraction=	+0.0000000071377798
Running Total=	+0.2867453855258569
+0.2792526803190927^13* a fraction=	+0.0000000002255887
Running Total=	+0.2867453857514456
+0.2792526803190927^15* a fraction=	+0.0000000000071297
Running Total=	+0.2867453857585753
+0.2792526803190927^17* a fraction=	+0.0000000000002253
Running Total=	+0.2867453857588007
+0.2792526803190927^19* a fraction=	+0.0000000000000071
Running Total=	+0.2867453857588078
+0.2792526803190927^21* a fraction=	+0.0000000000000002
Running Total=	+0.2867453857588080
Tangent(+16.0000000000000000)=	+0.2867453857588079
Cotangent(+16.0000000000000000)=	+3.4874144438409090

17 degrees=0.2967059728390360 radians
Calculate Tangent(+0.2967059728390360)

+0.2967059728390360^1/1	+0.2967059728390360
Running Total=	+0.2967059728390360
+0.2967059728390360^3* a fraction=	+0.0087067808259210
Running Total=	+0.3054127536649570
+0.2967059728390360^5* a fraction=	+0.0003065986098976
Running Total=	+0.3057193522748546
+0.2967059728390360^7* a fraction=	+0.0000109250237654
Running Total=	+0.3057302772986200
+0.2967059728390360^9* a fraction=	+0.0000003897402209
Running Total=	+0.3057306670388409
+0.2967059728390360^11* a fraction=	+0.0000000139053354
Running Total=	+0.3057306809441764
+0.2967059728390360^13* a fraction=	+0.0000000004961278
Running Total=	+0.3057306814403042
+0.2967059728390360^15* a fraction=	+0.0000000000177013
Running Total=	+0.3057306814580055
+0.2967059728390360^17* a fraction=	+0.0000000000006316
Running Total=	+0.3057306814586371
+0.2967059728390360^19* a fraction=	+0.0000000000000225
Running Total=	+0.3057306814586596
+0.2967059728390360^21* a fraction=	+0.0000000000000008
Running Total=	+0.3057306814586604
Tangent(+17.0000000000000000)=	+0.3057306814586603
Cotangent(+17.0000000000000000)=	+3.2708526184841410

18 degrees=0.3141592653589793 radians
Calculate Tangent(+0.3141592653589793)

+0.3141592653589793^1/1	+0.3141592653589793
Running Total=	+0.3141592653589793
+0.3141592653589793^3* a fraction=	+0.0103354255600999
Running Total=	+0.3244946909190792
+0.3141592653589793^5* a fraction=	+0.0004080262463804
Running Total=	+0.3249027171654596
+0.3141592653589793^7* a fraction=	+0.0000162999951975
Running Total=	+0.3249190171606571
+0.3141592653589793^9* a fraction=	+0.0000006519097561
Running Total=	+0.3249196690704133
+0.3141592653589793^11* a fraction=	+0.0000000260759951
Running Total=	+0.3249196951464083
+0.3141592653589793^13* a fraction=	+0.0000000010430381
Running Total=	+0.3249196961894463
+0.3141592653589793^15* a fraction=	+0.0000000000417215
Running Total=	+0.3249196962311678
+0.3141592653589793^17* a fraction=	+0.0000000000016689
Running Total=	+0.3249196962328367
+0.3141592653589793^19* a fraction=	+0.0000000000000668
Running Total=	+0.3249196962329035
+0.3141592653589793^21* a fraction=	+0.0000000000000027
Running Total=	+0.3249196962329062
+0.3141592653589793^23* a fraction=	+0.0000000000000001
Running Total=	+0.3249196962329063
Tangent(+18.0000000000000000)=	+0.3249196962329063
Cotangent(+18.0000000000000000)=	+3.0776835371752540

19 degrees=0.3316125578789226 radians
Calculate Tangent(+0.3316125578789226)

+0.3316125578789226^1/1	+0.3316125578789226
Running Total=	+0.3316125578789226
+0.3316125578789226^3* a fraction=	+0.0121554670639104
Running Total=	+0.3437680249428330
+0.3316125578789226^5* a fraction=	+0.0005346795567221
Running Total=	+0.3443027044995551
+0.3316125578789226^7* a fraction=	+0.0000237988048273
Running Total=	+0.3443265033043824
+0.3316125578789226^9* a fraction=	+0.0000010605162883
Running Total=	+0.3443275638206706
+0.3316125578789226^11* a fraction=	+0.0000000472642689
Running Total=	+0.3443276110849395
+0.3316125578789226^13* a fraction=	+0.0000000021064657
Running Total=	+0.3443276131914053
+0.3316125578789226^15* a fraction=	+0.0000000000938807
Running Total=	+0.3443276132852860
+0.3316125578789226^17* a fraction=	+0.0000000000041841
Running Total=	+0.3443276132894700
+0.3316125578789226^19* a fraction=	+0.0000000000001865
Running Total=	+0.3443276132896565
+0.3316125578789226^21* a fraction=	+0.0000000000000083
Running Total=	+0.3443276132896648
+0.3316125578789226^23* a fraction=	+0.0000000000000004
Running Total=	+0.3443276132896652
Tangent(+19.0000000000000000)=	+0.3443276132896652
Cotangent(+19.0000000000000000)=	+2.9042108776758230

20 degrees=0.3490658503988659 radians
Calculate Tangent(+0.3490658503988659)

+0.3490658503988659^1/1	+0.3490658503988659
Running Total=	+0.3490658503988659
+0.3490658503988659^3* a fraction=	+0.0141775384912208
Running Total=	+0.3632433888900867
+0.3490658503988659^5* a fraction=	+0.0006909960310596
Running Total=	+0.3639343849211463
+0.3490658503988659^7* a fraction=	+0.0000340792407342
Running Total=	+0.3639684641618805
+0.3490658503988659^9* a fraction=	+0.0000016826930290
Running Total=	+0.3639701468549095
+0.3490658503988659^11* a fraction=	+0.0000000830946927
Running Total=	+0.3639702299496023
+0.3490658503988659^13* a fraction=	+0.0000000041034347
Running Total=	+0.3639702340530370
+0.3490658503988659^15* a fraction=	+0.0000000002026387
Running Total=	+0.3639702342556758
+0.3490658503988659^17* a fraction=	+0.0000000000100068
Running Total=	+0.3639702342656826
+0.3490658503988659^19* a fraction=	+0.0000000000004942
Running Total=	+0.3639702342661768
+0.3490658503988659^21* a fraction=	+0.0000000000000244
Running Total=	+0.3639702342662012
+0.3490658503988659^23* a fraction=	+0.0000000000000012
Running Total=	+0.3639702342662024
+0.3490658503988659^25* a fraction=	+0.0000000000000001
Running Total=	+0.3639702342662025
Tangent(+20.0000000000000000)=	+0.3639702342662023
Cotangent(+20.0000000000000000)=	+2.7474774194546230

21 degrees=0.3665191429188092 radians
Calculate Tangent(+0.3665191429188092)

+0.3665191429188092^1/1	+0.3665191429188092
Running Total=	+0.3665191429188092
+0.3665191429188092^3* a fraction=	+0.0164122729958994
Running Total=	+0.3829314159147086
+0.3665191429188092^5* a fraction=	+0.0008819054942020
Running Total=	+0.3838133214089107
+0.3665191429188092^7* a fraction=	+0.0000479529140409
Running Total=	+0.3838612743229516
+0.3665191429188092^9* a fraction=	+0.0000026104091748
Running Total=	+0.3838638847321263
+0.3665191429188092^11* a fraction=	+0.0000001421201234
Running Total=	+0.3838640268522497
+0.3665191429188092^13* a fraction=	+0.0000000077376382
Running Total=	+0.3838640345898879
+0.3665191429188092^15* a fraction=	+0.0000000004212713
Running Total=	+0.3838640350111593
+0.3665191429188092^17* a fraction=	+0.0000000000229359
Running Total=	+0.3838640350340952

+0.3665191429188092^19* a fraction=   +0.0000000000012487
Running Total=   +0.3838640350353439
+0.3665191429188092^21* a fraction=   +0.0000000000000680
Running Total=   +0.3838640350354119
+0.3665191429188092^23* a fraction=   +0.0000000000000037
Running Total=   +0.3838640350354156
+0.3665191429188092^25* a fraction=   +0.0000000000000002
Running Total=   +0.3838640350354158
Tangent(+21.0000000000000000)=   +0.3838640350354158
Cotangent(+21.0000000000000000)=   +2.6050890646938010

22 degrees=0.3839724354387525 radians
Calculate Tangent(+0.3839724354387525)
+0.3839724354387525^1/1   +0.3839724354387525
Running Total=   +0.3839724354387525
+0.3839724354387525^3* a fraction=   +0.0188703037318148
Running Total=   +0.4028427391705673
+0.3839724354387525^5* a fraction=   +0.0011128560179818
Running Total=   +0.4039555951885491
+0.3839724354387525^7* a fraction=   +0.0000664107991738
Running Total=   +0.4040220059877229
+0.3839724354387525^9* a fraction=   +0.0000039677021425
Running Total=   +0.4040259736898653
+0.3839724354387525^11* a fraction=   +0.0000002370788560
Running Total=   +0.4040262107687213
+0.3839724354387525^13* a fraction=   +0.0000000141661696
Running Total=   +0.4040262249348909
+0.3839724354387525^15* a fraction=   +0.0000000008464722
Running Total=   +0.4040262257813631
+0.3839724354387525^17* a fraction=   +0.0000000000505793
Running Total=   +0.4040262258319424
+0.3839724354387525^19* a fraction=   +0.0000000000030223
Running Total=   +0.4040262258349647
+0.3839724354387525^21* a fraction=   +0.0000000000001806
Running Total=   +0.4040262258351452
+0.3839724354387525^23* a fraction=   +0.0000000000000108
Running Total=   +0.4040262258351560
+0.3839724354387525^25* a fraction=   +0.0000000000000006
Running Total=   +0.4040262258351567
Tangent(+22.0000000000000000)=   +0.4040262258351568
Cotangent(+22.0000000000000000)=   +2.4750868534162960

23 degrees=0.4014257279586958 radians
Calculate Tangent(+0.4014257279586958)
+0.4014257279586958^1/1   +0.4014257279586958
Running Total=   +0.4014257279586958
+0.4014257279586958^3* a fraction=   +0.0215622638528354
Running Total=   +0.4229879918115312
+0.4014257279586958^5* a fraction=   +0.0013898398336057
Running Total=   +0.4243778316451369
+0.4014257279586958^7* a fraction=   +0.0000906514578643
Running Total=   +0.4244684831030012
+0.4014257279586958^9* a fraction=   +0.0000059195059134
Running Total=   +0.4244744026089146
+0.4014257279586958^11* a fraction=   +0.0000003865890334
Running Total=   +0.4244747891979481
+0.4014257279586958^13* a fraction=   +0.0000000252475624
Running Total=   +0.4244748144455105
+0.4014257279586958^15* a fraction=   +0.0000000016488837
Running Total=   +0.4244748160943942
+0.4014257279586958^17* a fraction=   +0.0000000001076864
Running Total=   +0.4244748162020806
+0.4014257279586958^19* a fraction=   +0.0000000000070328
Running Total=   +0.4244748162091134
+0.4014257279586958^21* a fraction=   +0.0000000000004593
Running Total=   +0.4244748162095727
+0.4014257279586958^23* a fraction=   +0.0000000000000300
Running Total=   +0.4244748162096027
+0.4014257279586958^25* a fraction=   +0.0000000000000020
Running Total=   +0.4244748162096046
+0.4014257279586958^27* a fraction=   +0.0000000000000001
Running Total=   +0.4244748162096048
Tangent(+23.0000000000000000)=   +0.4244748162096048
Cotangent(+23.0000000000000000)=   +2.3558523658237530

24 degrees=0.4188790204786391 radians
Calculate Tangent(+0.4188790204786391)
+0.4188790204786391^1/1   +0.4188790204786391

Running Total=   +0.4188790204786391
+0.4188790204786391^3* a fraction=   +0.0244987865128295
Running Total=   +0.4433778069914686
+0.4188790204786391^5* a fraction=   +0.0017194192440062
Running Total=   +0.4450972262354748
+0.4188790204786391^7* a fraction=   +0.0001221120810774
Running Total=   +0.4452193383165522
+0.4188790204786391^9* a fraction=   +0.0000086823264297
Running Total=   +0.4452280206429818
+0.4188790204786391^11* a fraction=   +0.0000006174005224
Running Total=   +0.4452286380435043
+0.4188790204786391^13* a fraction=   +0.0000000439039635
Running Total=   +0.4452286819474678
+0.4188790204786391^15* a fraction=   +0.0000000031220590
Running Total=   +0.4452286850695268
+0.4188790204786391^17* a fraction=   +0.0000000002220131
Running Total=   +0.4452286852915399
+0.4188790204786391^19* a fraction=   +0.0000000000157876
Running Total=   +0.4452286853073275
+0.4188790204786391^21* a fraction=   +0.0000000000011227
Running Total=   +0.4452286853084502
+0.4188790204786391^23* a fraction=   +0.0000000000000798
Running Total=   +0.4452286853085300
+0.4188790204786391^25* a fraction=   +0.0000000000000057
Running Total=   +0.4452286853085357
+0.4188790204786391^27* a fraction=   +0.0000000000000004
Running Total=   +0.4452286853085360
Tangent(+24.0000000000000000)=   +0.4452286853085362
Cotangent(+24.0000000000000000)=   +2.2460367739042160

25 degrees=0.4363323129985824 radians
Calculate Tangent(+0.4363323129985824)
+0.4363323129985824^1/1   +0.4363323129985824
Running Total=   +0.4363323129985824
+0.4363323129985824^3* a fraction=   +0.0276905048656656
Running Total=   +0.4640228178642479
+0.4363323129985824^5* a fraction=   +0.0021087525361926
Running Total=   +0.4661315704004405
+0.4363323129985824^7* a fraction=   +0.0001625024830542
Running Total=   +0.4662940728834947
+0.4363323129985824^9* a fraction=   +0.0000125370400327
Running Total=   +0.4663066099235275
+0.4363323129985824^11* a fraction=   +0.0000009673495394
Running Total=   +0.4663075772730669
+0.4363323129985824^13* a fraction=   +0.0000000746410430
Running Total=   +0.4663076519141099
+0.4363323129985824^15* a fraction=   +0.0000000057593387
Running Total=   +0.4663076576734486
+0.4363323129985824^17* a fraction=   +0.0000000004443934
Running Total=   +0.4663076581178420
+0.4363323129985824^19* a fraction=   +0.0000000000342896
Running Total=   +0.4663076581521316
+0.4363323129985824^21* a fraction=   +0.0000000000026458
Running Total=   +0.4663076581547774
+0.4363323129985824^23* a fraction=   +0.0000000000002042
Running Total=   +0.4663076581549816
+0.4363323129985824^25* a fraction=   +0.0000000000000158
Running Total=   +0.4663076581549974
+0.4363323129985824^27* a fraction=   +0.0000000000000012
Running Total=   +0.4663076581549986
+0.4363323129985824^29* a fraction=   +0.0000000000000001
Running Total=   +0.4663076581549987
Tangent(+25.0000000000000000)=   +0.4663076581549986
Cotangent(+25.0000000000000000)=   +2.1445069205095590

26 degrees=0.4537856055185257 radians
Calculate Tangent(+0.4537856055185257)
+0.4537856055185257^1/1   +0.4537856055185257
Running Total=   +0.4537856055185257
+0.4537856055185257^3* a fraction=   +0.0311480520652120
Running Total=   +0.4849336575837377
+0.4537856055185257^5* a fraction=   +0.0025656198936021
Running Total=   +0.4874992774773398
+0.4537856055185257^7* a fraction=   +0.0002138421816558
Running Total=   +0.4877131196589956
+0.4537856055185257^9* a fraction=   +0.0000178441171714
Running Total=   +0.4877309637761669
+0.4537856055185257^11* a fraction=   +0.0000014891901723

Running Total=	+0.4877324529663392
+0.4537856055185257^13* a fraction=	+0.0000001242828233
Running Total=	+0.4877325772491625
+0.4537856055185257^15* a fraction=	+0.0000000103722436
Running Total=	+0.4877325876214061
+0.4537856055185257^17* a fraction=	+0.0000000008656341
Running Total=	+0.4877325884870402
+0.4537856055185257^19* a fraction=	+0.0000000000722430
Running Total=	+0.4877325885592833
+0.4537856055185257^21* a fraction=	+0.0000000000060292
Running Total=	+0.4877325885653124
+0.4537856055185257^23* a fraction=	+0.0000000000005032
Running Total=	+0.4877325885658156
+0.4537856055185257^25* a fraction=	+0.0000000000000420
Running Total=	+0.4877325885658575
+0.4537856055185257^27* a fraction=	+0.0000000000000035
Running Total=	+0.4877325885658610
+0.4537856055185257^29* a fraction=	+0.0000000000000003
Running Total=	+0.4877325885658613
Tangent(+26.0000000000000000)=	+0.4877325885658614
Cotangent(+26.0000000000000000)=	+2.0503038415792960

27 degrees=0.4712388980384690 radians
Calculate Tangent(+0.4712388980384690)

+0.4712388980384690^1/1	+0.4712388980384690
Running Total=	+0.4712388980384690
+0.4712388980384690^3* a fraction=	+0.0348820612653373
Running Total=	+0.5061209593038063
+0.4712388980384690^5* a fraction=	+0.0030984493084510
Running Total=	+0.5092194086122572
+0.4712388980384690^7* a fraction=	+0.0002785006991952
Running Total=	+0.5094979093114524
+0.4712388980384690^9* a fraction=	+0.0000250616010356
Running Total=	+0.5095229709124880
+0.4712388980384690^11* a fraction=	+0.0000022555099099
Running Total=	+0.5095252264223978
+0.4712388980384690^13* a fraction=	+0.0000002029955515
Running Total=	+0.5095254294179494
+0.4712388980384690^15* a fraction=	+0.0000000182695962
Running Total=	+0.5095254476875457
+0.4712388980384690^17* a fraction=	+0.0000000016442636
Running Total=	+0.5095254493318093
+0.4712388980384690^19* a fraction=	+0.0000000001479837
Running Total=	+0.5095254494797931
+0.4712388980384690^21* a fraction=	+0.0000000000133185
Running Total=	+0.5095254494931116
+0.4712388980384690^23* a fraction=	+0.0000000000011987
Running Total=	+0.5095254494943103
+0.4712388980384690^25* a fraction=	+0.0000000000001079
Running Total=	+0.5095254494944182
+0.4712388980384690^27* a fraction=	+0.0000000000000097
Running Total=	+0.5095254494944279
+0.4712388980384690^29* a fraction=	+0.0000000000000009
Running Total=	+0.5095254494944288
Tangent(+27.0000000000000000)=	+0.5095254494944288
Cotangent(+27.0000000000000000)=	+1.9626105055051510

28 degrees=0.4886921905584123 radians
Calculate Tangent(+0.4886921905584123)

+0.4886921905584123^1/1	+0.4886921905584123
Running Total=	+0.4886921905584123
+0.4886921905584123^3* a fraction=	+0.0389031656199098
Running Total=	+0.5275953561783221
+0.4886921905584123^5* a fraction=	+0.0037163424940859
Running Total=	+0.5313116986724080
+0.4886921905584123^7* a fraction=	+0.0003592412179452
Running Total=	+0.5316709398903533
+0.4886921905584123^9* a fraction=	+0.0000347661993960
Running Total=	+0.5317057060897493
+0.4886921905584123^11* a fraction=	+0.0000033649737339
Running Total=	+0.5317090710634832
+0.4886921905584123^13* a fraction=	+0.0000003256956771
Running Total=	+0.5317093967591603
+0.4886921905584123^15* a fraction=	+0.0000000315241189
Running Total=	+0.5317094282832793
+0.4886921905584123^17* a fraction=	+0.0000000030512233
Running Total=	+0.5317094313345025
+0.4886921905584123^19* a fraction=	+0.0000000002953283

Running Total=	+0.5317094316298309
+0.4886921905584123^21* a fraction=	+0.0000000000285849
Running Total=	+0.5317094316584158
+0.4886921905584123^23* a fraction=	+0.0000000000027667
Running Total=	+0.5317094316611826
+0.4886921905584123^25* a fraction=	+0.0000000000002678
Running Total=	+0.5317094316614503
+0.4886921905584123^27* a fraction=	+0.0000000000000259
Running Total=	+0.5317094316614762
+0.4886921905584123^29* a fraction=	+0.0000000000000025
Running Total=	+0.5317094316614788
+0.4886921905584123^31* a fraction=	+0.0000000000000002
Running Total=	+0.5317094316614790
Tangent(+28.0000000000000000)=	+0.5317094316614788
Cotangent(+28.0000000000000000)=	+1.8807264653463320

29 degrees=0.5061454830783556 radians
Calculate Tangent(+0.5061454830783556)

+0.5061454830783556^1/1	+0.5061454830783556
Running Total=	+0.5061454830783556
+0.5061454830783556^3* a fraction=	+0.0432219982827979
Running Total=	+0.5493674813611535
+0.5061454830783556^5* a fraction=	+0.0044291007973349
Running Total=	+0.5537965821584885
+0.5061454830783556^7* a fraction=	+0.0004592677245076
Running Total=	+0.5542558498829960
+0.5061454830783556^9* a fraction=	+0.0000476778777437
Running Total=	+0.5543035277607398
+0.5061454830783556^11* a fraction=	+0.0000049501836421
Running Total=	+0.5543084779443819
+0.5061454830783556^13* a fraction=	+0.0000005139626498
Running Total=	+0.5543089919070316
+0.5061454830783556^15* a fraction=	+0.0000000533632726
Running Total=	+0.5543090452703042
+0.5061454830783556^17* a fraction=	+0.0000000055405570
Running Total=	+0.5543090508108611
+0.5061454830783556^19* a fraction=	+0.0000000005752603
Running Total=	+0.5543090513861214
+0.5061454830783556^21* a fraction=	+0.0000000000597276
Running Total=	+0.5543090514458491
+0.5061454830783556^23* a fraction=	+0.0000000000062014
Running Total=	+0.5543090514520504
+0.5061454830783556^25* a fraction=	+0.0000000000006439
Running Total=	+0.5543090514526943
+0.5061454830783556^27* a fraction=	+0.0000000000000669
Running Total=	+0.5543090514527611
+0.5061454830783556^29* a fraction=	+0.0000000000000069
Running Total=	+0.5543090514527681
+0.5061454830783556^31* a fraction=	+0.0000000000000007
Running Total=	+0.5543090514527688
Tangent(+29.0000000000000000)=	+0.5543090514527689
Cotangent(+29.0000000000000000)=	+1.8040477552714240

30 degrees=0.5235987755982988 radians
Calculate Tangent(+0.5235987755982988)

+0.5235987755982988^1/1	+0.5235987755982988
Running Total=	+0.5235987755982988
+0.5235987755982988^3* a fraction=	+0.0478491924078701
Running Total=	+0.5714479680061689
+0.5235987755982988^5* a fraction=	+0.0052472511108587
Running Total=	+0.5766952191170277
+0.5235987755982988^7* a fraction=	+0.0005822757772321
Running Total=	+0.5772774948942598
+0.5235987755982988^9* a fraction=	+0.0000646883728330
Running Total=	+0.5773421832670929
+0.5235987755982988^11* a fraction=	+0.0000071874880516
Running Total=	+0.5773493707551445
+0.5235987755982988^13* a fraction=	+0.0000007986084446
Running Total=	+0.5773501693635891
+0.5235987755982988^15* a fraction=	+0.0000000887342551
Running Total=	+0.5773502580978442
+0.5235987755982988^17* a fraction=	+0.0000000098593615
Running Total=	+0.5773502679572057
+0.5235987755982988^19* a fraction=	+0.0000000010954846
Running Total=	+0.5773502690526903
+0.5235987755982988^21* a fraction=	+0.0000000001217205
Running Total=	+0.5773502691744108
+0.5235987755982988^23* a fraction=	+0.0000000000135245

Running Total=   +0.5773502691879353
+0.5235987755982988^25* a fraction=   +0.0000000000015027
Running Total=   +0.5773502691894380
+0.5235987755982988^27* a fraction=   +0.0000000000001670
Running Total=   +0.5773502691896050
+0.5235987755982988^29* a fraction=   +0.0000000000000186
Running Total=   +0.5773502691896235
+0.5235987755982988^31* a fraction=   +0.0000000000000021
Running Total=   +0.5773502691896256
+0.5235987755982988^33* a fraction=   +0.0000000000000002
Running Total=   +0.5773502691896258
Tangent(+30.0000000000000000)=   +0.5773502691896257
Cotangent(+30.0000000000000000)=   +1.7320508075688770

31 degrees=0.5410520681182421 radians
Calculate Tangent(+0.5410520681182421)
+0.5410520681182421^1/1   +0.5410520681182421
Running Total=   +0.5410520681182421
+0.5410520681182421^3* a fraction=   +0.0527953811489947
Running Total=   +0.5938474492672369
+0.5410520681182421^5* a fraction=   +0.0061820717855017
Running Total=   +0.6000295210527387
+0.5410520681182421^7* a fraction=   +0.0007325070308720
Running Total=   +0.6007620280836107
+0.5410520681182421^9* a fraction=   +0.0000868940779299
Running Total=   +0.6008489221615405
+0.5410520681182421^11* a fraction=   +0.0000103091288084
Running Total=   +0.6008592312903489
+0.5410520681182421^13* a fraction=   +0.0000012230933549
Running Total=   +0.6008604543837038
+0.5410520681182421^15* a fraction=   +0.0000001451101846
Running Total=   +0.6008605994938885
+0.5410520681182421^17* a fraction=   +0.0000000172161586
Running Total=   +0.6008606167100471
+0.5410520681182421^19* a fraction=   +0.0000000020425591
Running Total=   +0.6008606187526061
+0.5410520681182421^21* a fraction=   +0.0000000002423332
Running Total=   +0.6008606189949394
+0.5410520681182421^23* a fraction=   +0.0000000000287509
Running Total=   +0.6008606190236903
+0.5410520681182421^25* a fraction=   +0.0000000000034111
Running Total=   +0.6008606190271013
+0.5410520681182421^27* a fraction=   +0.0000000000004047
Running Total=   +0.6008606190275060
+0.5410520681182421^29* a fraction=   +0.0000000000000480
Running Total=   +0.6008606190275539
+0.5410520681182421^31* a fraction=   +0.0000000000000057
Running Total=   +0.6008606190275596
+0.5410520681182421^33* a fraction=   +0.0000000000000007
Running Total=   +0.6008606190275603
Tangent(+31.0000000000000000)=   +0.6008606190275604
Cotangent(+31.00000000000000000)=   +1.6642794823505180

32 degrees=0.5585053606381855 radians
Calculate Tangent(+0.5585053606381855)
+0.5585053606381855^1/1   +0.5585053606381855
Running Total=   +0.5585053606381855
+0.5585053606381855^3* a fraction=   +0.0580711976600403
Running Total=   +0.6165765582982257
+0.5585053606381855^5* a fraction=   +0.0072456185426434
Running Total=   +0.6238221768408690
+0.5585053606381855^7* a fraction=   +0.0009148076526621
Running Total=   +0.6247369844935311
+0.5585053606381855^9* a fraction=   +0.0001156337844627
Running Total=   +0.6248526182779938
+0.5585053606381855^11* a fraction=   +0.0000146181729347
Running Total=   +0.6248672364509285
+0.5585053606381855^13* a fraction=   +0.0000018480227146
Running Total=   +0.6248690844736430
+0.5585053606381855^15* a fraction=   +0.0000002336265318
Running Total=   +0.6248693181001748
+0.5585053606381855^17* a fraction=   +0.0000000295350079
Running Total=   +0.6248693476351826
+0.5585053606381855^19* a fraction=   +0.0000000037338084
Running Total=   +0.6248693513689910
+0.5585053606381855^21* a fraction=   +0.0000000004720271
Running Total=   +0.6248693518410181
+0.5585053606381855^23* a fraction=   +0.0000000000596736

Running Total=   +0.6248693519006917
+0.5585053606381855^25* a fraction=   +0.0000000000075439
Running Total=   +0.6248693519082357
+0.5585053606381855^27* a fraction=   +0.0000000000009537
Running Total=   +0.6248693519091894
+0.5585053606381855^29* a fraction=   +0.0000000000001206
Running Total=   +0.6248693519093099
+0.5585053606381855^31* a fraction=   +0.0000000000000152
Running Total=   +0.6248693519093251
+0.5585053606381855^33* a fraction=   +0.0000000000000019
Running Total=   +0.6248693519093270
+0.5585053606381855^35* a fraction=   +0.0000000000000002
Running Total=   +0.6248693519093272
Tangent(+32.0000000000000000)=   +0.6248693519093275
Cotangent(+32.0000000000000000)=   +1.6003345290410500

33 degrees=0.5759586531581288 radians
Calculate Tangent(+0.5759586531581288)
+0.5759586531581288^1/1   +0.5759586531581288
Running Total=   +0.5759586531581288
+0.5759586531581288^3* a fraction=   +0.0636872750948751
Running Total=   +0.6396459282530038
+0.5759586531581288^5* a fraction=   +0.0084507503865491
Running Total=   +0.6480966786395529
+0.5759586531581288^7* a fraction=   +0.0011346907640081
Running Total=   +0.6492313694035610
+0.5759586531581288^9* a fraction=   +0.0001525317993562
Running Total=   +0.6493839012029171
+0.5759586531581288^11* a fraction=   +0.0000205067422349
Running Total=   +0.6494044079451520
+0.5759586531581288^13* a fraction=   +0.0000027570129447
Running Total=   +0.6494071649580967
+0.5759586531581288^15* a fraction=   +0.0000003706650047
Running Total=   +0.6494075356231014
+0.5759586531581288^17* a fraction=   +0.0000000498338496
Running Total=   +0.6494075854569510
+0.5759586531581288^19* a fraction=   +0.0000000066998842
Running Total=   +0.6494075921568352
+0.5759586531581288^21* a fraction=   +0.0000000009007622
Running Total=   +0.6494075930575974
+0.5759586531581288^23* a fraction=   +0.0000000001211025
Running Total=   +0.6494075931786999
+0.5759586531581288^25* a fraction=   +0.0000000000162816
Running Total=   +0.6494075931949814
+0.5759586531581288^27* a fraction=   +0.0000000000021890
Running Total=   +0.6494075931971703
+0.5759586531581288^29* a fraction=   +0.0000000000002943
Running Total=   +0.6494075931974647
+0.5759586531581288^31* a fraction=   +0.0000000000000396
Running Total=   +0.6494075931975042
+0.5759586531581288^33* a fraction=   +0.0000000000000053
Running Total=   +0.6494075931975095
+0.5759586531581288^35* a fraction=   +0.0000000000000007
Running Total=   +0.6494075931975102
Tangent(+33.0000000000000000)=   +0.6494075931975105
Cotangent(+33.0000000000000000)=   +1.5398649638145830

34 degrees=0.5934119456780721 radians
Calculate Tangent(+0.5934119456780721)
+0.5934119456780721^1/1   +0.5934119456780721
Running Total=   +0.5934119456780721
+0.5934119456780721^3* a fraction=   +0.0696542466073677
Running Total=   +0.6630661922854397
+0.5934119456780721^5* a fraction=   +0.0098111555167217
Running Total=   +0.6728773478021615
+0.5934119456780721^7* a fraction=   +0.0013984030419723
Running Total=   +0.6742757508441337
+0.5934119456780721^9* a fraction=   +0.0001995469931097
Running Total=   +0.6744752978372434
+0.5934119456780721^11* a fraction=   +0.0000284781269230
Running Total=   +0.6745037759641663
+0.5934119456780721^13* a fraction=   +0.0000040642789541
Running Total=   +0.6745078402431204
+0.5934119456780721^15* a fraction=   +0.0000005800377280
Running Total=   +0.6745084202808485
+0.5934119456780721^17* a fraction=   +0.0000000827806913
Running Total=   +0.6745085030615398
+0.5934119456780721^19* a fraction=   +0.0000000118141332

Running Total= +0.6745085148756730
+0.5934119456780721^21* a fraction= +0.0000000016860664
Running Total= +0.6745085165617394
+0.5934119456780721^23* a fraction= +0.0000000002406287
Running Total= +0.6745085168023681
+0.5934119456780721^25* a fraction= +0.0000000000343416
Running Total= +0.6745085168367096
+0.5934119456780721^27* a fraction= +0.0000000000049011
Running Total= +0.6745085168416107
+0.5934119456780721^29* a fraction= +0.0000000000006995
Running Total= +0.6745085168423102
+0.5934119456780721^31* a fraction= +0.0000000000000998
Running Total= +0.6745085168424100
+0.5934119456780721^33* a fraction= +0.0000000000000142
Running Total= +0.6745085168424242
+0.5934119456780721^35* a fraction= +0.0000000000000020
Running Total= +0.6745085168424262
+0.5934119456780721^37* a fraction= +0.0000000000000003
Running Total= +0.6745085168424265
Tangent(+34.0000000000000000)= +0.6745085168424266
Cotangent(+34.0000000000000000)= +1.4825609685127400

35 degrees=0.6108652381980153 radians
Calculate Tangent(+0.6108652381980153)
+0.6108652381980153^1/1 +0.6108652381980153
Running Total= +0.6108652381980153
+0.6108652381980153^3* a fraction= +0.0759827453513863
Running Total= +0.6868479835494016
+0.6108652381980153^5* a fraction= +0.0113413772402524
Running Total= +0.6981893607896540
+0.6108652381980153^7* a fraction= +0.0017129956147444
Running Total= +0.6999023564043984
+0.6108652381980153^9* a fraction= +0.0002590283706488
Running Total= +0.7001613847750471
+0.6108652381980153^11* a fraction= +0.0000391734500166
Running Total= +0.7002005582250637
+0.6108652381980153^13* a fraction= +0.0000059243698536
Running Total= +0.7002064825949172
+0.6108652381980153^15* a fraction= +0.0000008959693482
Running Total= +0.7002073785642655
+0.6108652381980153^17* a fraction= +0.0000001355015344
Running Total= +0.7002075140658000
+0.6108652381980153^19* a fraction= +0.0000000204925160
Running Total= +0.7002075345583160
+0.6108652381980153^21* a fraction= +0.0000000030991768
Running Total= +0.7002075376574928
+0.6108652381980153^23* a fraction= +0.0000000004687027
Running Total= +0.7002075381261954
+0.6108652381980153^25* a fraction= +0.0000000000708840
Running Total= +0.7002075381970795
+0.6108652381980153^27* a fraction= +0.0000000000107201
Running Total= +0.7002075382077996
+0.6108652381980153^29* a fraction= +0.0000000000016213
Running Total= +0.7002075382094208
+0.6108652381980153^31* a fraction= +0.0000000000002452
Running Total= +0.7002075382096660
+0.6108652381980153^33* a fraction= +0.0000000000000371
Running Total= +0.7002075382097031
+0.6108652381980153^35* a fraction= +0.0000000000000056
Running Total= +0.7002075382097087
+0.6108652381980153^37* a fraction= +0.0000000000000008
Running Total= +0.7002075382097096
Tangent(+35.0000000000000000)= +0.7002075382097097
Cotangent(+35.0000000000000000)= +1.4281480067421150

36 degrees=0.6283185307179586 radians
Calculate Tangent(+0.6283185307179586)
+0.6283185307179586^1/1 +0.6283185307179586
Running Total= +0.6283185307179586
+0.6283185307179586^3* a fraction= +0.0826834044807995
Running Total= +0.7110019351987581
+0.6283185307179586^5* a fraction= +0.0130568398841720
Running Total= +0.7240587750829302
+0.6283185307179586^7* a fraction= +0.0020863993852833
Running Total= +0.7261451744682135
+0.6283185307179586^9* a fraction= +0.0003337777951467
Running Total= +0.7264789522633602
+0.6283185307179586^11* a fraction= +0.0000534036378654

Running Total= +0.7265323559012257
+0.6283185307179586^13* a fraction= +0.0000085545677326
Running Total= +0.7265409004689583
+0.6283185307179586^15* a fraction= +0.0000013671305829
Running Total= +0.7265422675995412
+0.6283185307179586^17* a fraction= +0.0000002187408887
Running Total= +0.7265424863404299
+0.6283185307179586^19* a fraction= +0.0000000349985421
Running Total= +0.7265425213389720
+0.6283185307179586^21* a fraction= +0.0000000055997667
Running Total= +0.7265425269387388
+0.6283185307179586^23* a fraction= +0.0000000008959627
Running Total= +0.7265425278347014
+0.6283185307179586^25* a fraction= +0.0000000001433540
Running Total= +0.7265425279780554
+0.6283185307179586^27* a fraction= +0.0000000000229366
Running Total= +0.7265425280009921
+0.6283185307179586^29* a fraction= +0.0000000000036699
Running Total= +0.7265425280046619
+0.6283185307179586^31* a fraction= +0.0000000000005872
Running Total= +0.7265425280052491
+0.6283185307179586^33* a fraction= +0.0000000000000939
Running Total= +0.7265425280053430
+0.6283185307179586^35* a fraction= +0.0000000000000150
Running Total= +0.7265425280053580
+0.6283185307179586^37* a fraction= +0.0000000000000024
Running Total= +0.7265425280053605
+0.6283185307179586^39* a fraction= +0.0000000000000004
Running Total= +0.7265425280053608
Tangent(+36.0000000000000000)= +0.7265425280053609
Cotangent(+36.0000000000000000)= +1.3763819204711740

37 degrees=0.6457718232379019 radians
Calculate Tangent(+0.6457718232379019)
+0.6457718232379019^1/1 +0.6457718232379019
Running Total= +0.6457718232379019
+0.6457718232379019^3* a fraction= +0.0897668571494757
Running Total= +0.7355386803873777
+0.6457718232379019^5* a fraction= +0.0149738747078021
Running Total= +0.7505125550951798
+0.6457718232379019^7* a fraction= +0.0025275049173170
Running Total= +0.7530400600124968
+0.6457718232379019^9* a fraction= +0.0004271205343643
Running Total= +0.7534671805468611
+0.6457718232379019^11* a fraction= +0.0000721875493632
Running Total= +0.7535393680962243
+0.6457718232379019^13* a fraction= +0.0000122005665911
Running Total= +0.7535515686628155
+0.6457718232379019^15* a fraction= +0.0000020620459946
Running Total= +0.7535536307088101
+0.6457718232379019^17* a fraction= +0.0000003485112233
Running Total= +0.7535539792200333
+0.6457718232379019^19* a fraction= +0.0000000589026992
Running Total= +0.7535540381227325
+0.6457718232379019^21* a fraction= +0.0000000099552834
Running Total= +0.7535540480780158
+0.6457718232379019^23* a fraction= +0.0000000016825658
Running Total= +0.7535540497605816
+0.6457718232379019^25* a fraction= +0.0000000002843744
Running Total= +0.7535540500449560
+0.6457718232379019^27* a fraction= +0.0000000000480628
Running Total= +0.7535540500930188
+0.6457718232379019^29* a fraction= +0.0000000000081232
Running Total= +0.7535540501011420
+0.6457718232379019^31* a fraction= +0.0000000000013729
Running Total= +0.7535540501025149
+0.6457718232379019^33* a fraction= +0.0000000000002320
Running Total= +0.7535540501027469
+0.6457718232379019^35* a fraction= +0.0000000000000392
Running Total= +0.7535540501027861
+0.6457718232379019^37* a fraction= +0.0000000000000066
Running Total= +0.7535540501027927
+0.6457718232379019^39* a fraction= +0.0000000000000011
Running Total= +0.7535540501027939
+0.6457718232379019^41* a fraction= +0.0000000000000002
Running Total= +0.7535540501027941
Tangent(+37.0000000000000000)= +0.7535540501027942
Cotangent(+37.0000000000000000)= +1.3270448216204100

38 degrees=0.6632251157578453 radians
Calculate Tangent(+0.6632251157578453)

+0.6632251157578453^1/1	+0.6632251157578453
Running Total=	+0.6632251157578453
+0.6632251157578453^3* a fraction=	+0.0972437365112833
Running Total=	+0.7604688522691285
+0.6632251157578453^5* a fraction=	+0.0171097458151061
Running Total=	+0.7775785980842347
+0.6632251157578453^7* a fraction=	+0.0030462470178886
Running Total=	+0.7806248451021234
+0.6632251157578453^9* a fraction=	+0.0005429843396083
Running Total=	+0.7811678294417317
+0.6632251157578453^11* a fraction=	+0.0000967972226694
Running Total=	+0.7812646266644011
+0.6632251157578453^13* a fraction=	+0.0000172561673070
Running Total=	+0.7812818828317081
+0.6632251157578453^15* a fraction=	+0.0000030762840687
Running Total=	+0.7812849591157768
+0.6632251157578453^17* a fraction=	+0.0000005484140868
Running Total=	+0.7812855075298636
+0.6632251157578453^19* a fraction=	+0.0000000977666592
Running Total=	+0.7812856052965228
+0.6632251157578453^21* a fraction=	+0.0000000174290192
Running Total=	+0.7812856227255420
+0.6632251157578453^23* a fraction=	+0.0000000031070992
Running Total=	+0.7812856258326413
+0.6632251157578453^25* a fraction=	+0.0000000005539076
Running Total=	+0.7812856263865489
+0.6632251157578453^27* a fraction=	+0.0000000000987460
Running Total=	+0.7812856264852949
+0.6632251157578453^29* a fraction=	+0.0000000000176036
Running Total=	+0.7812856265028985
+0.6632251157578453^31* a fraction=	+0.0000000000031382
Running Total=	+0.7812856265060367
+0.6632251157578453^33* a fraction=	+0.0000000000005595
Running Total=	+0.7812856265065962
+0.6632251157578453^35* a fraction=	+0.0000000000000997
Running Total=	+0.7812856265066959
+0.6632251157578453^37* a fraction=	+0.0000000000000178
Running Total=	+0.7812856265067136
+0.6632251157578453^39* a fraction=	+0.0000000000000032
Running Total=	+0.7812856265067168
+0.6632251157578453^41* a fraction=	+0.0000000000000006
Running Total=	+0.7812856265067174
Tangent(+38.0000000000000000)=	+0.7812856265067174
Cotangent(+38.0000000000000000)=	+1.2799416321930790

39 degrees=0.6806784082777885 radians
Calculate Tangent(+0.6806784082777885)

+0.6806784082777885^1/1	+0.6806784082777885
Running Total=	+0.6806784082777885
+0.6806784082777885^3* a fraction=	+0.1051246757200906
Running Total=	+0.7858030839978790
+0.6806784082777885^5* a fraction=	+0.0194826760670407
Running Total=	+0.8052857600649197
+0.6806784082777885^7* a fraction=	+0.0036536941506339
Running Total=	+0.8089394542155536
+0.6806784082777885^9* a fraction=	+0.0006859878091482
Running Total=	+0.8096254420247018
+0.6806784082777885^11* a fraction=	+0.0001288113141864
Running Total=	+0.8097542533388882
+0.6806784082777885^13* a fraction=	+0.0000241878161770
Running Total=	+0.8097784412006652
+0.6806784082777885^15* a fraction=	+0.0000045419420889
Running Total=	+0.8097829831427541
+0.6806784082777885^17* a fraction=	+0.0000008528757746
Running Total=	+0.8097838360185288
+0.6806784082777885^19* a fraction=	+0.0000001601511173
Running Total=	+0.8097839961696461
+0.6806784082777885^21* a fraction=	+0.0000000300728209
Running Total=	+0.8097840262424670
+0.6806784082777885^23* a fraction=	+0.0000000056470075
Running Total=	+0.8097840318894746
+0.6806784082777885^25* a fraction=	+0.0000000010603825
Running Total=	+0.8097840329498571
+0.6806784082777885^27* a fraction=	+0.0000000001991163
Running Total=	+0.8097840331489734
+0.6806784082777885^29* a fraction=	+0.0000000000373896
Running Total=	+0.8097840331863631
+0.6806784082777885^31* a fraction=	+0.0000000000070209
Running Total=	+0.8097840331933840
+0.6806784082777885^33* a fraction=	+0.0000000000013184
Running Total=	+0.8097840331947024
+0.6806784082777885^35* a fraction=	+0.0000000000002476
Running Total=	+0.8097840331949500
+0.6806784082777885^37* a fraction=	+0.0000000000000465
Running Total=	+0.8097840331949965
+0.6806784082777885^39* a fraction=	+0.0000000000000087
Running Total=	+0.8097840331950052
+0.6806784082777885^41* a fraction=	+0.0000000000000016
Running Total=	+0.8097840331950069
+0.6806784082777885^43* a fraction=	+0.0000000000000003
Running Total=	+0.8097840331950072
Tangent(+39.0000000000000000)=	+0.8097840331950071
Cotangent(+39.0000000000000000)=	+1.2348971565350510

40 degrees=0.6981317007977318 radians
Calculate Tangent(+0.6981317007977318)

+0.6981317007977318^1/1	+0.6981317007977318
Running Total=	+0.6981317007977318
+0.6981317007977318^3* a fraction=	+0.1134203079297661
Running Total=	+0.8115520087274979
+0.6981317007977318^5* a fraction=	+0.0221118729939068
Running Total=	+0.8336638817214046
+0.6981317007977318^7* a fraction=	+0.0043621428139787
Running Total=	+0.8380260245353832
+0.6981317007977318^9* a fraction=	+0.0008615388308663
Running Total=	+0.8388875633662495
+0.6981317007977318^11* a fraction=	+0.0001701779306715
Running Total=	+0.8390577412969210
+0.6981317007977318^13* a fraction=	+0.0000336153373532
Running Total=	+0.8390913566342741
+0.6981317007977318^15* a fraction=	+0.0000066400654026
Running Total=	+0.8390979966996768
+0.6981317007977318^17* a fraction=	+0.0000013116178302
Running Total=	+0.8390993083175070
+0.6981317007977318^19* a fraction=	+0.0000002590850029
Running Total=	+0.8390995674025099
+0.6981317007977318^21* a fraction=	+0.0000000511772845
Running Total=	+0.8390996185797944
+0.6981317007977318^23* a fraction=	+0.0000000101090932
Running Total=	+0.8390996286888877
+0.6981317007977318^25* a fraction=	+0.0000000019968579
Running Total=	+0.8390996306857456
+0.6981317007977318^27* a fraction=	+0.0000000003944411
Running Total=	+0.8390996310801866
+0.6981317007977318^29* a fraction=	+0.0000000000779143
Running Total=	+0.8390996311581008
+0.6981317007977318^31* a fraction=	+0.0000000000153905
Running Total=	+0.8390996311734913
+0.6981317007977318^33* a fraction=	+0.0000000000030401
Running Total=	+0.8390996311765314
+0.6981317007977318^35* a fraction=	+0.0000000000006005
Running Total=	+0.8390996311771319
+0.6981317007977318^37* a fraction=	+0.0000000000001186
Running Total=	+0.8390996311772505
+0.6981317007977318^39* a fraction=	+0.0000000000000234
Running Total=	+0.8390996311772739
+0.6981317007977318^41* a fraction=	+0.0000000000000046
Running Total=	+0.8390996311772786
+0.6981317007977318^43* a fraction=	+0.0000000000000009
Running Total=	+0.8390996311772795
Tangent(+40.0000000000000000)=	+0.8390996311772800
Cotangent(+40.0000000000000000)=	+1.1917535925942100

41 degrees=0.7155849933176751 radians
Calculate Tangent(+0.7155849933176751)

+0.7155849933176751^1/1	+0.7155849933176751
Running Total=	+0.7155849933176751
+0.7155849933176751^3* a fraction=	+0.1221412662941783
Running Total=	+0.8377262596118534
+0.7155849933176751^5* a fraction=	+0.0250175547077005
Running Total=	+0.8627438143195539
+0.7155849933176751^7* a fraction=	+0.0051852170184426
Running Total=	+0.8679290313379966

+0.7155849933176751^9* a fraction=	+0.0010759439430409
Running Total=	+0.8690049752810375
+0.7155849933176751^11* a fraction=	+0.0002232881922863
Running Total=	+0.8692282634733238
+0.7155849933176751^13* a fraction=	+0.0000463391138178
Running Total=	+0.8692746025871416
+0.7155849933176751^15* a fraction=	+0.0000096167945480
Running Total=	+0.8692842193816896
+0.7155849933176751^17* a fraction=	+0.0000019957816421
Running Total=	+0.8692862151633318
+0.7155849933176751^19* a fraction=	+0.0000004141862880
Running Total=	+0.8692866293496199
+0.7155849933176751^21* a fraction=	+0.0000000859564383
Running Total=	+0.8692867153060582
+0.7155849933176751^23* a fraction=	+0.0000000178386139
Running Total=	+0.8692867331446721
+0.7155849933176751^25* a fraction=	+0.0000000037020630
Running Total=	+0.8692867368467351
+0.7155849933176751^27* a fraction=	+0.0000000007682923
Running Total=	+0.8692867376150274
+0.7155849933176751^29* a fraction=	+0.0000000001594444
Running Total=	+0.8692867377744717
+0.7155849933176751^31* a fraction=	+0.0000000000330896
Running Total=	+0.8692867378075614
+0.7155849933176751^33* a fraction=	+0.0000000000068671
Running Total=	+0.8692867378144286
+0.7155849933176751^35* a fraction=	+0.0000000000014251
Running Total=	+0.8692867378158537
+0.7155849933176751^37* a fraction=	+0.0000000000002958
Running Total=	+0.8692867378161495
+0.7155849933176751^39* a fraction=	+0.0000000000000614
Running Total=	+0.8692867378162109
+0.7155849933176751^41* a fraction=	+0.0000000000000127
Running Total=	+0.8692867378162237
+0.7155849933176751^43* a fraction=	+0.0000000000000026
Running Total=	+0.8692867378162263
+0.7155849933176751^45* a fraction=	+0.0000000000000005
Running Total=	+0.8692867378162269
Tangent(+41.0000000000000000)=	+0.8692867378162267
Cotangent(+41.0000000000000000)=	+1.1503684072210100

42 degrees=0.7330382858376184 radians
Calculate Tangent(+0.7330382858376184)

+0.7330382858376184^1/1	+0.7330382858376184
Running Total=	+0.7330382858376184
+0.7330382858376184^3* a fraction=	+0.1312981839671955
Running Total=	+0.8643364698048139
+0.7330382858376184^5* a fraction=	+0.0282209758144649
Running Total=	+0.8925574456192789
+0.7330382858376184^7* a fraction=	+0.0061379729972363
Running Total=	+0.8986954186165151
+0.7330382858376184^9* a fraction=	+0.0013365294974840
Running Total=	+0.9000319481139991
+0.7330382858376184^11* a fraction=	+0.0002910620127103
Running Total=	+0.9003230101267095
+0.7330382858376184^13* a fraction=	+0.0000633867320489
Running Total=	+0.9003863968587583
+0.7330382858376184^15* a fraction=	+0.0000138042190786
Running Total=	+0.9004002010778369
+0.7330382858376184^17* a fraction=	+0.0000030062520928
Running Total=	+0.9004032073299297
+0.7330382858376184^19* a fraction=	+0.0000006546948987
Running Total=	+0.9004038620248285
+0.7330382858376184^21* a fraction=	+0.0000001425780001
Running Total=	+0.9004040046028285
+0.7330382858376184^23* a fraction=	+0.0000000310503200
Running Total=	+0.9004040356531485
+0.7330382858376184^25* a fraction=	+0.0000000067620697
Running Total=	+0.9004040424152182
+0.7330382858376184^27* a fraction=	+0.0000000014726285
Running Total=	+0.9004040438878467
+0.7330382858376184^29* a fraction=	+0.0000000003207058
Running Total=	+0.9004040442085525
+0.7330382858376184^31* a fraction=	+0.0000000000698426
Running Total=	+0.9004040442783950
+0.7330382858376184^33* a fraction=	+0.0000000000152102
Running Total=	+0.9004040442936052
+0.7330382858376184^35* a fraction=	+0.0000000000033124

Running Total=	+0.9004040442969177
+0.7330382858376184^37* a fraction=	+0.0000000000007214
Running Total=	+0.9004040442976391
+0.7330382858376184^39* a fraction=	+0.0000000000001571
Running Total=	+0.9004040442977962
+0.7330382858376184^41* a fraction=	+0.0000000000000342
Running Total=	+0.9004040442978304
+0.7330382858376184^43* a fraction=	+0.0000000000000075
Running Total=	+0.9004040442978378
+0.7330382858376184^45* a fraction=	+0.0000000000000016
Running Total=	+0.9004040442978395
+0.7330382858376184^47* a fraction=	+0.0000000000000004
Running Total=	+0.9004040442978398
Tangent(+42.0000000000000000)=	+0.9004040442978399
Cotangent(+42.0000000000000000)=	+1.1106125148291930

43 degrees=0.7504915783575618 radians
Calculate Tangent(+0.7504915783575618)

+0.7504915783575618^1/1	+0.7504915783575618
Running Total=	+0.7504915783575618
+0.7504915783575618^3* a fraction=	+0.1409016941026862
Running Total=	+0.8913932724602480
+0.7504915783575618^5* a fraction=	+0.0317444533266405
Running Total=	+0.9231377257868885
+0.7504915783575618^7* a fraction=	+0.0072370092843387
Running Total=	+0.9303747350712273
+0.7504915783575618^9* a fraction=	+0.0016517755557636
Running Total=	+0.9320265106269909
+0.7504915783575618^11* a fraction=	+0.0003770477427702
Running Total=	+0.9324035583697612
+0.7504915783575618^13* a fraction=	+0.0000860691490763
Running Total=	+0.9324896275188375
+0.7504915783575618^15* a fraction=	+0.0000196471391409
Running Total=	+0.9325092746579784
+0.7504915783575618^17* a fraction=	+0.0000044848838915
Running Total=	+0.9325137595418699
+0.7504915783575618^19* a fraction=	+0.0000010237716415
Running Total=	+0.9325147833135115
+0.7504915783575618^21* a fraction=	+0.0000002336979956
Running Total=	+0.9325150170115071
+0.7504915783575618^23* a fraction=	+0.0000000533466165
Running Total=	+0.9325150703581236
+0.7504915783575618^25* a fraction=	+0.0000000121775178
Running Total=	+0.9325150825356414
+0.7504915783575618^27* a fraction=	+0.0000000027797815
Running Total=	+0.9325150853154229
+0.7504915783575618^29* a fraction=	+0.0000000006345452
Running Total=	+0.9325150859499681
+0.7504915783575618^31* a fraction=	+0.0000000001448486
Running Total=	+0.9325150860948168
+0.7504915783575618^33* a fraction=	+0.0000000000330648
Running Total=	+0.9325150861278817
+0.7504915783575618^35* a fraction=	+0.0000000000075478
Running Total=	+0.9325150861354294
+0.7504915783575618^37* a fraction=	+0.0000000000017229
Running Total=	+0.9325150861371524
+0.7504915783575618^39* a fraction=	+0.0000000000003933
Running Total=	+0.9325150861375457
+0.7504915783575618^41* a fraction=	+0.0000000000000898
Running Total=	+0.9325150861376356
+0.7504915783575618^43* a fraction=	+0.0000000000000205
Running Total=	+0.9325150861376561
+0.7504915783575618^45* a fraction=	+0.0000000000000047
Running Total=	+0.9325150861376608
+0.7504915783575618^47* a fraction=	+0.0000000000000011
Running Total=	+0.9325150861376619
+0.7504915783575618^49* a fraction=	+0.0000000000000002
Running Total=	+0.9325150861376621
Tangent(+43.0000000000000000)=	+0.9325150861376617
Cotangent(+43.0000000000000000)=	+1.0723687100246830

44 degrees=0.7679448708775050 radians
Calculate Tangent(+0.7679448708775050)

+0.7679448708775050^1/1	+0.7679448708775050
Running Total=	+0.7679448708775050
+0.7679448708775050^3* a fraction=	+0.1509624298545187
Running Total=	+0.9189073007320236
+0.7679448708775050^5* a fraction=	+0.0356113925754168

Running Total=	+0.9545186933074404
+0.7679448708775050^7* a fraction=	+0.0085005822942423
Running Total=	+0.9630192756016828
+0.7679448708775050^9* a fraction=	+0.0020314634969480
Running Total=	+0.9650507390986308
+0.7679448708775050^11* a fraction=	+0.0004855374970102
Running Total=	+0.9655362765956410
+0.7679448708775050^13* a fraction=	+0.0001160492615064
Running Total=	+0.9656523258571474
+0.7679448708775050^15* a fraction=	+0.0000277372010478
Running Total=	+0.9656800630581952
+0.7679448708775050^17* a fraction=	+0.0000066295333481
Running Total=	+0.9656866925915433
+0.7679448708775050^19* a fraction=	+0.0000015845403126
Running Total=	+0.9656882771318559
+0.7679448708775050^21* a fraction=	+0.0000003787246969
Running Total=	+0.9656886558565527
+0.7679448708775050^23* a fraction=	+0.0000000905198782
Running Total=	+0.9656887463764309
+0.7679448708775050^25* a fraction=	+0.0000000216353684
Running Total=	+0.9656887680117993
+0.7679448708775050^27* a fraction=	+0.0000000051711202
Running Total=	+0.9656887731829195
+0.7679448708775050^29* a fraction=	+0.0000000012359616
Running Total=	+0.9656887744188810
+0.7679448708775050^31* a fraction=	+0.0000000002954101
Running Total=	+0.9656887747142910
+0.7679448708775050^33* a fraction=	+0.0000000000706067
Running Total=	+0.9656887747848977
+0.7679448708775050^35* a fraction=	+0.0000000000168759
Running Total=	+0.9656887748017735
+0.7679448708775050^37* a fraction=	+0.0000000000040335
Running Total=	+0.9656887748058071
+0.7679448708775050^39* a fraction=	+0.0000000000009641
Running Total=	+0.9656887748067712
+0.7679448708775050^41* a fraction=	+0.0000000000002304
Running Total=	+0.9656887748070015
+0.7679448708775050^43* a fraction=	+0.0000000000000551
Running Total=	+0.9656887748070566
+0.7679448708775050^45* a fraction=	+0.0000000000000132
Running Total=	+0.9656887748070698
+0.7679448708775050^47* a fraction=	+0.0000000000000031
Running Total=	+0.9656887748070729
+0.7679448708775050^49* a fraction=	+0.0000000000000008
Running Total=	+0.9656887748070737
Tangent(+44.0000000000000000)=	+0.9656887748070740
Cotangent(+44.0000000000000000)=	+1.0355303137905700

45 degrees=0.7853981633974483 radians
Calculate Tangent(+0.7853981633974483)

+0.7853981633974483^1/1	+0.7853981633974483
Running Total=	+0.7853981633974483

+0.7853981633974483^3* a fraction=	+0.1614910243765615
Running Total=	+0.9468891877740098
+0.7853981633974483^5* a fraction=	+0.0398463131230835
Running Total=	+0.9867355008970933
+0.7853981633974483^7* a fraction=	+0.0099487275375522
Running Total=	+0.9966842284346454
+0.7853981633974483^9* a fraction=	+0.0024868383642041
Running Total=	+0.9991710667988495
+0.7853981633974483^11* a fraction=	+0.0006217001688829
Running Total=	+0.9997927669677323
+0.7853981633974483^13* a fraction=	+0.0001554247816343
Running Total=	+0.9999481917493667
+0.7853981633974483^15* a fraction=	+0.0000388561881812
Running Total=	+0.9999870479375479
+0.7853981633974483^17* a fraction=	+0.0000097140468446
Running Total=	+0.9999967619843926
+0.7853981633974483^19* a fraction=	+0.0000024285117056
Running Total=	+0.9999991904960982
+0.7853981633974483^21* a fraction=	+0.0000006071279262
Running Total=	+0.9999997976240245
+0.7853981633974483^23* a fraction=	+0.0000001517819816
Running Total=	+0.9999999494060060
+0.7853981633974483^25* a fraction=	+0.0000000379454954
Running Total=	+0.9999999873515014
+0.7853981633974483^27* a fraction=	+0.0000000094863738
Running Total=	+0.9999999968378752
+0.7853981633974483^29* a fraction=	+0.0000000023715935
Running Total=	+0.9999999992094687
+0.7853981633974483^31* a fraction=	+0.0000000005928984
Running Total=	+0.9999999998023671
+0.7853981633974483^33* a fraction=	+0.0000000001482246
Running Total=	+0.9999999999505916
+0.7853981633974483^35* a fraction=	+0.0000000000370561
Running Total=	+0.9999999999876478
+0.7853981633974483^37* a fraction=	+0.0000000000092640
Running Total=	+0.9999999999969118
+0.7853981633974483^39* a fraction=	+0.0000000000023160
Running Total=	+0.9999999999992278
+0.7853981633974483^41* a fraction=	+0.0000000000005790
Running Total=	+0.9999999999998068
+0.7853981633974483^43* a fraction=	+0.0000000000001448
Running Total=	+0.9999999999999516
+0.7853981633974483^45* a fraction=	+0.0000000000000362
Running Total=	+0.9999999999999878
+0.7853981633974483^47* a fraction=	+0.0000000000000090
Running Total=	+0.9999999999999968
+0.7853981633974483^49* a fraction=	+0.0000000000000023
Running Total=	+0.9999999999999990
+0.7853981633974483^51* a fraction=	+0.0000000000000006
Running Total=	+0.9999999999999996
Tangent(+45.0000000000000000)=	+1.0000000000000000
Cotangent(+45.0000000000000000)=	+1.0000000000000000

Here is the small sample of a trig table created by using the values calculated above. They use to calculate tables 60 times or 3600 times as much work and it was all done by hand work without a computer. Both natural which is this table and log and log trig tables were used for almost 400 years, a book from 1619. I still have my 4, 5, 6, 7 and 23 digit tables that I used until 1973 when I purchased a calculator that could do the work with lss effort. With my involvement with the IBM PC computer in 1983 and my own PC in 1987 I made the next change in my calculating power. In the following table you read down the degrees on the left side with the top label from 0° to 45° and up the degrees on the right side using the bottom label for angles 45° to 90°. By using this method the table is only half the size. The relationship that makes this work Sin(X°) = Cos(90° –X°) the same is true for the other two "co" functions. Tables larger than this were very common in math books as there were no computers or calculators to do the work. The starting tables would be 4 digits in 10 ark minuets which could be expanded to 1 ark minuet. The next larger table 5 digit tables in 1 ark minuet which could be reduced to 10 arc second and sometimes extended to 1 ark second, I had a 6 digit table which would give 1 ark second. The real large table was 7 digit the first and last 6 degrees were in 1 ark second the rest were in 10 ark second entrie.

Eight digit natural trig table

Deg	Sine	Cosine	Tangent	Cotangent	Secant	Cosecant	
0	0.00000000	1.00000000	0.00000000	infinity	1.00000000	infinity	90
1	0.01745241	0.99984770	0.01745506	57.28996163	1.00015233	57.29868850	89
2	0.03489950	0.99939083	0.03492077	28.63625328	1.00060954	28.65370835	88
3	0.05233596	0.99862953	0.05240778	19.08113669	1.00137235	19.10732261	87
4	0.06975647	0.99756405	0.06992681	14.30066626	1.00244190	14.33558703	86
5	0.08715574	0.99619470	0.08748866	11.43005230	1.00381984	11.47371325	85
6	0.10452846	0.99452190	0.10510424	9.51436445	1.00550828	9.56677223	84
7	0.12186934	0.99254615	0.12278456	8.14434643	1.00750983	8.20550905	83
8	0.13917310	0.99026807	0.14054083	7.11536972	1.00982757	7.18529653	82
9	0.15643447	0.98768834	0.15838444	6.31375151	1.01246513	6.39245322	81
10	0.17364818	0.98480775	0.17632698	5.67128182	1.01542661	5.75877048	80
11	0.19080900	0.98162718	0.19438031	5.14455402	1.01871669	5.24084306	79
12	0.20791169	0.97814760	0.21255656	4.70463011	1.02234059	4.80973434	78
13	0.22495105	0.97437006	0.23086819	4.33147587	1.02630411	4.44541148	77
14	0.24192190	0.97029573	0.24932800	4.01078093	1.03061363	4.13356549	76
15	0.25881905	0.96592583	0.26794919	3.73205081	1.03527618	3.86370331	75
16	0.27563736	0.96126170	0.28674539	3.48741444	1.04029944	3.62795528	74
17	0.29237170	0.95630476	0.30573068	3.27085262	1.04569176	3.42030362	73
18	0.30901699	0.95105652	0.32491970	3.07768354	1.05146222	3.23606798	72
19	0.32556815	0.94551858	0.34432761	2.90421088	1.05762068	3.07155349	71
20	0.34202014	0.93969262	0.36397023	2.74747742	1.06417777	2.92380440	70
21	0.35836795	0.93358043	0.38386404	2.60508906	1.07114499	2.79042811	69
22	0.37460659	0.92718385	0.40402623	2.47508685	1.07853474	2.66946716	68
23	0.39073113	0.92050485	0.42447482	2.35585237	1.08636038	2.55930467	67
24	0.40673664	0.91354546	0.44522869	2.24603677	1.09463628	2.45859334	66
25	0.42261826	0.90630779	0.46630766	2.14450692	1.10337792	2.36620158	65
26	0.43837115	0.89879405	0.48773259	2.05030384	1.11260194	2.28117203	64
27	0.45399050	0.89100652	0.50952545	1.96261051	1.12232624	2.20268926	63
28	0.46947156	0.88294759	0.53170943	1.88072647	1.13257005	2.13005447	62
29	0.48480962	0.87461971	0.55430905	1.80404776	1.14335407	2.06266534	61
30	0.50000000	0.86602540	0.57735027	1.73205081	1.15470054	2.00000000	60
31	0.51503807	0.85716730	0.60086062	1.66427948	1.16663340	1.94160403	59
32	0.52991926	0.84804810	0.62486935	1.60033453	1.17917840	1.88707991	58
33	0.54463904	0.83867057	0.64940759	1.53986496	1.19236329	1.83607846	57
34	0.55919290	0.82903757	0.67450852	1.48256097	1.20621795	1.78829165	56
35	0.57357644	0.81915204	0.70020754	1.42814801	1.22077459	1.74344680	55
36	0.58778525	0.80901699	0.72654253	1.37638192	1.23606798	1.70130162	54
37	0.60181502	0.79863551	0.75355405	1.32704482	1.25213566	1.66164014	53
38	0.61566148	0.78801075	0.78128563	1.27994163	1.26901822	1.62426925	52
39	0.62932039	0.77714596	0.80978403	1.23489716	1.28675957	1.58901573	51
40	0.64278761	0.76604444	0.83909963	1.19175359	1.30540729	1.55572383	50
41	0.65605903	0.75470958	0.86928674	1.15036841	1.32501299	1.52425309	49
42	0.66913061	0.74314483	0.90040404	1.11061251	1.34563273	1.49447655	48
43	0.68199836	0.73135370	0.93251509	1.07236871	1.36732746	1.46627919	47
44	0.69465837	0.71933980	0.96568877	1.03553031	1.39016359	1.43955654	46
45	0.70710678	0.70710678	1.00000000	1.00000000	1.41421356	1.41421356	45
	Cosine	Sine	Cotangent	Tangent	Cosecant	Secant	deg

The following list of fractions used in the Tangent function starting with the first term which is 1/1. Each of the terms has an odd power value of X. The series is $\tan(X^r) = X + X^3/3 + X^5*2/15 + X^7*17/315$ Etc. Note how the fraction value is getting smaller but not in a rush to reduce its value the real work is done by using a small value of X or use many terms to get any accurate value.

Numerator=1/
Denominator=1
fraction=+1.0000000000000000
Numerator=1/
Denominator=3
fraction=+0.3333333333333333
Numerator=2/
Denominator=15
fraction=+0.1333333333333333
Numerator=17/
Denominator=315
fraction=+0.0539682539682540
Numerator=62/
Denominator=2835
fraction=+0.0218694885361552
Numerator=1382/
Denominator=155925
fraction=+0.0088632355299022
Numerator=21844/
Denominator=6081075
fraction=+0.0035921280365725
Numerator=929569/
Denominator=638512875
fraction=+0.0014558343870513
Numerator=6404582/
Denominator=10854718875
fraction=+0.0005900274409456
Numerator=443861162/
Denominator=1856156927625
fraction=+0.0002391291142436
Numerator=18888466084/
Denominator=194896477400625
fraction=+0.0000969153795693
Numerator=113927491862/
Denominator=2900518163668125
fraction=+0.0000392783238833
Numerator=58870668456604/
Denominator=3698160658676859375
fraction=+0.0000159189050693
Numerator=8374643517010684/
Denominator=1298054391195577640625
fraction=+0.0000064516892157
Numerator=689005380505609448/
Denominator=263505041412702261046875
fraction=+0.0000026147711513
Numerator=129848163681107301953/
Denominator=122529844256906551386796875
fraction=+0.0000010597268320
Numerator=1736640792209901647222/
Denominator=4043484860477916195764296875
fraction=+0.0000004294911078

Numerator=41878123149529303891392/
Denominator=2405873491984360136479756640625
fraction=+0.0000001740661896
Numerator=56518638202982204522669764/
Denominator=801155872830791925447758961328125
fraction=+0.0000000705463695
Numerator=3220768631915895659445562/
Denominator=112648292555525012667322464609375
fraction=+0.0000000285913666
Numerator=1410211493828985228276049834684/
Denominator=12169958286236144743514182502054828125
fraction=+0.0000000115876444
Numerator=5160980834397049135153489556653804/
Denominator=109894723324712387033933067993555591796875
fraction=+0.0000000046962954
Numerator=1035375040055127494672889426221064087/
Denominator=5439788804573263158179686865681001793945 3125
fraction=+0.0000000019033368
Numerator=4536110558498399564704425293784780891 8/
Denominator=5880411697743697473992241501801162939254 8828125
fraction=+0.0000000007713934
Numerator=8717651789054950079574518394375055320 4/
Denominator=2788453288930075898957611292789583716356 34765625
fraction=+0.0000000003126340
Numerator=1396470103398938597044980843456514101 088564/
Denominator=1102136162449612499062995863475082963889 8464111328125
fraction=+0.0000000001267058
Numerator=3889519624659603623233621014917891151 93414088/
Denominator=7593718159277830118544041499343321621201 041772705078125
fraction=+0.0000000000513519
Numerator=3210557356226802182662764416900242116 23548948/
Denominator=1542636315530448389334870263546488728793 9188826904296875
fraction=+0.0000000000208121
Numerator=3795167528416671713366863919447162754 5621910540728/
Denominator=4499391915144503512689122748983408210385 9352659543493652334375
fraction=+0.0000000000084348
Numerator=6418851823388724300172760419514057427 41480681339128/
Denominator=1877673065076157441514899761831856450724 4720097677784 7900390625
fraction=+0.0000000000034185
Numerator=9759387159544076997817707959584835600 4391550882021 73136/
Denominator=7044090503633204641843146456512209474892 8567446438209639831 54296875
fraction=+0.0000000000013855
Numerator=7724760729208487305545342963324697288 40538058657990426 9441/
Denominator=1375710875359564866551966502956834510446 5749222289382342659100341796875
fraction=+0.0000000000005615

How to calculate trig (trigonometric) functions

In a search for web sites that deal with the expansion series for trig functions. Most of the sites showed the standard series for Sin(X^r) and Cos(X^r), with only a few listing an approximation series, here are the ones I found.

Note all formulas listed here do not work with degrees rather with radians. I normally specified that the range in degrees as most people do not understand radians, but do understand degrees. For most formulas work between 0° to 90° degrees which is the same as 0 to PI/2 radians, keep this in mind. There are four different kinds of angle measurement the most common is 12 degrees 44 minutes 55 seconds is also written as 12° 44' 55" which also can be written as decimal degrees as 12.7486111°. The gradian is a unit of plane angle used in Europe along with the metric system, equivalent to 1⁄400 of a turn or 400 grads to one revaluation. It is also sometimes known as gon, grad, or grade and is written as 400^g with a small g and the small are just like the degree symbol ° lets everyone know which symbol you are using. One grad is equals to 9⁄10 of a degree or π⁄200 of a radian. Just as with degrees 12 grsd 44 minutes 55 seconds is sometimes also written as 12 ^{g} 74' 95"to convert to decimal place the decimal point and drop the two symbols as 12.7495 ^{g} and can be converted to decimal grads very easy. Yes minutes and seconds can be greater than 59 all the way up to 99. An angular mil, also mil, is a unit of angle is mostly used in the military artillery. The definition of a mil is at 1000 units and then a movement of one unit sideways. The correct numbers of mils would be 6283.185mils in a circle; the accepted value is 6400 or 1600 in a right angle a better number to work with. When firing an artillery shell you can optically measure the distant and using a known size of object at that distant it will give a mil adjustment for the next shoot. Radians is the math or natural system with a unit circle has 2 * PI units in circumference around a circle, or 2* PI = 360° or PI = 180°. All the formulas in the trig functions use only radians, it is the only natural angles to use in the formulas, the others are manmade and don't count. All angles are always written in decimal format or a fraction of PI and sometime came with a small r to designate as radians as 0.5235987755^r which is the same as 30°

http://www.hpmuseum.org/cgi-sys/cgiwrap/hpmuseum/archv021.cgi?read = 236969

Message #6 Posted by Dieter on 9 Jan 2013, 3:48 p.m.,
in response to message #2 by Eddie W. Shore
You can easily set up your own polynomial approximation with exactly taylored errors using standard tools like Excel and a few minutes time. I tried something similar to the Sin approximation you mentioned and came up with a result with 10-digit accuracy:
Sin x ^{r} = x * (1 + x^2 * (a2 + x^2 * (a4 + x^2 * (a6 + x^2 * (a8 + a10 * x^2)))))

a2 = -0,16666 66660
a4 = 0,00833 33303
a6 = -0,00019 84078 2
a8 = 0,00000 27521 57
a10 = -0,00000 00238 29
Max. absolute error in [0; pi/2] is approx. + /- 2 E-11\
Max. relative error in [0; pi/2] is less than + 5 / -2 E-11
A rational approximation should perform even better.
Dieter

Another value from the same article was
Namir,
I tend to lean towards Sin. However, I find the convergence for the Taylor Series for Sin to be super slow. The approximations listed are stated to be good for eight-digit accuracy for the interval 0 to 90 degrees or 0 to pi/2 radians.

From "Scientific Analysis on the Pocket Calculator" by Jon M. Smith (published 1975):
Sin and Cos: error < 2 x 10^-9 with 0 < = x < = pi/2

Sin x ^{r} = x * (1 + x^2 * (a2 + x^2 * (a4 + x^2 * (a6 + x^2 * (a8 + a10 * x^2)))))

a2 = -0.16666 66664
a4 = 0.00833 33315
a6 = -0.00019 84090
a8 = 0.00000 27526
a10 = -0.00000 00239

Cos x ^{r} = 1 + x^2 * (a2 + x^2 * (a4 + x^2 * (a6 + x^2 * (a8 + a10 * x^2)))))

a2 = -0.49999 99963
a4 = 0.04166 66418
a6 = -0.00138 88397
a8 = 0.00002 47609
a10 = -0.00000 26050

The two following approximate series are found in the "Handbook of Mathematical functions" along series for many other functions see page 76 at the following link.

google.com/url?sa = t&rct = j&q = &esrc = s&source = web&cd = 1&ved = 0CB4QFjAA&url = http%3A%2F %2Fpeople.math.sfu.ca%2F~cbm%2Faands%2Fabramowitz_and_stegun.pdf&ei = UZrWVIurC5KcyATtvoCQAw&usg = AFQjCNGxyr8M6NCdyWOaXyG1FoqBCab7tg&sig2 = GAf6EYvq5rwtRgl_2ecCww&bvm = bv.85464276,d.aWw&cad = rja

Sin(X ^{r}) = X − 0.1666666664 * X^3 + 0.0083333315 * X^5 − 0.0001984090 * X^ 7 + 0.0000027526 * X^9 - 0.0000000239 * X^11 X = 0-90 degrees or 0 to PI/2 in radians

Cos(X ^{r}) = 1 − 0.4999999963 * X^2 + 0.0416666418 * X^4 − 0.0013888397 * X^6 + 0.0000247609 * X^8 − 0.0000002605 * X^10 X = 0-90 degrees or 0 to PI/2 in radians.

The reason most approximation series did eight digits accuracy that was what all the programming language of the time could do. The first two computers that I use, they only had single precision calculations of eight digits. In 1972 that all changed when Hewlett Packard produced the first pocket advanced calculator with 10 digit display and used 12 digit internal calculations for the HP35. The fifteen-digit LED display was capable of displaying a ten-digit mantissa plus its sign and a decimal point and a two-digit exponent plus its sign. Yes I did buy one for $400.00 in March of 1973, which I still have and it still works in the plug in version only. Today you can buy one with more power for as little as $9.00. In 1972 there were no formulas like the ones above to do 12 digits which were greater than available at the time. The HP team created their own equations for the first time; now 15 digits are very common in all programs with double precision math functions. As computers advanced in the 80's they could do double precision math including the trig and log functions.

The two basic series that will work for any degree of accuracy are as follows. All you need is determining what degrees of accuracy you want; just keep up the math until the new term does not change the total value. These two formulas will work for any real or imaginary numbers unlike all the other formulas it has no limit. You could do in 1000 radians or Sin(1000 ^{r}) = 0.82687954053200256025588742910922 which would produce the same answer as Sin(0.97353615844575016887940411711808 ^{r}) = 0.82687954053200256025588742910922 for a value. The second value would take fewer terms to arrive at the answer. The real question was there any error introduced by changing the input to a smaller value the correct answer should be 0.82687954053200256025588742910921(8142), as you can see it must do a larger calculation and just round

up. I checked the accuracy of the windows calculator it seams to do 36 digits accuracy while displaying only 32 digits. The purpose of this exercise is to show you must be careful not to trust your answer to be 100% correct there might be errors introduced by your work at the end of the number.

$Sin(X^r) = X - X^3/3! + X^5/5! - X^7/7! ...$
$Cos(X^r) = 1 - X^2/2! + X^4/4! - X^6/6! ...$

The number X is in radians, there are PI radians in 180° degrees so to convert from degrees to radians multiple the degrees by PI the same degree accuracy you want to obtain and divide by 180°. The numbers "7!" is 7 factorial = 1 * 2 * 3 * 4 * 5 * 6 * 7 = 5040.

Here are my two series for Sin and Cos they produced by my regression program. The program I created can do regression for Logs, exponential and polynomial for the nth degree, which is what I used for this work.
Here is my Sin which gives 13 digits accuracy I first divided by X and produced this series.
$Sin (X^r) =$
$1.000000000000044 * X -0.1666666666675063 * X^3 + 0.0083333333352483 * X^5 -0.0001984126956936 * X^7 + 0.0000027557206205 * X^9 - 0.0000000250404976 * X^{11} + 0.0000000001556569 * X^{13}$

Here is my Cos which gives 12 digits accuracy.
$Cos(X^r) =$
$1.00000000000035 -.5000000000054727 * X^2 + 0.041666666663996 * X^4 -0.001388888795086 * X^6 + 0.000024801376295 * X^8 - 0.000000275383919 * X^{10} + 0.000000002011627 * X^{12}$

By forcing the coefficient of X to be 1 by dividing by X then subtracting 1 and then dividing by X^2 the rest of the numbers changed by a small amount see the equation below, and gave one more digit answer.
$Sin (X^r) =$
$X -0. 1666666666666370 * X^3 + 0.0083333333323302 * X^5 -0.0001984126925161 * X^7 + 0.0000027557195536 * X^9 - 0.0000000250406232 * X^{11} + 0.0000000001557439 * X^{13}$

This time I subtracted 1 and divided by X^2 forcing the first term the 1 to remain as a 1, the rest of the numbers changed by a small amount see the equation below. This version has one more term and gives almost 14 digits.

$Cos(X^r) =$
$1. -.5000000000000475 * X^2 + 0.0416666666676828 * X^4 - 0.0013888888929993 * X^6 + 0.0000248015935120 * X^8 - 0.0000002755772434 * X^{10} + 0.0000000020886199 * X^{12} -0.0000000000113854 * X^{14}$

If you want to see how the regular series are used to calculate 15 digits for 1 to 45 degrees see my file at. To calculate Sin(45°) took 9 terms, Cos(45°) took 10 terms and tan(45) took 26 terms, very seldom do you see the tangent function calculate as very few terms, four or five are normally the most listed, I have included the first 33 terms of the 53 terms that I have. My one program is calculating tan(45) the 53 terms only produces 38 digits of all 9's which is very close to "1" the number is 0.99999 99999 99999 99999 99999 99999 99999 99900 22094.

When calculating trig functions normally you do only do the first only the first 45 degrees.
To do this you must reduce the angle start if the angle is negative $Sin(-X^r) = -Sin(X^r)$ and $Cos(-X^r) = Cos(X^r)$. If the angle is greater than 360° you can just subtract any multiply of 360° next there are 4 quadrants first quadrant is 0° - 90° (0 - PI/2) second is 90° - 180° (pi/2 - PI) third is 180° - 270° (PI – 3 * PI/2) and fourth is 270° - 360° (3 * PI/2 – 2 * PI) for $Sin(X^r)$ the third and fourth quadrants are negative while the $Cos(X^r)$ the second and third are negative, so reduce it to 0° - 90°. Next reduce the angle to 0° - 45° degrees $Sin(90° - X°) = Cos(X°)$ and $Cos(90° - X°) – Sin(X°)$. Let's start with $Sin(-1000°) = -Sin(1000°)$, subtract 720° and we have $-Sin(280°)$ which is forth quadrant which is negative and two negatives is a positive which gives $Sin(10°)$. Humans like to work with degrees while the formula only works with radians, remember there are PI radians in

180° degrees so multiply 10° degrees by PI/180° or 10° * 3.1415926535/180° or 3.1415926535/18 = 0.1745329251 radians. Now you are ready to use the formula listed above, and get the answer of 0.1736481776 or something close to that. These are some of the steps your calculator or computer program has to do each time you ask it do a trig function.

Now for $\tan(X^r)$ use the relationship $\tan(X^r) = \sin(X^r)/\cos(X^r)$ as the series for $\tan(X^r)$ is very hard to deal with for the fun of it here is a very rare listing $\tan(X^r) = X + 1/3 * X^3 + 2/15 * X^5 + 17/315 * X^7 + 62/2835 * X^9 + 1382/155925 * X^{11} + 21844/6081075 * X^{13} + 929569/638512875 * X^{15} + 6404582/10854718875 * X^{17} + 443861162/1856156927625 * X^{19} + 18888466084/194896477400625 * X^{21}$.

or

$\tan(X^r) = X + 0.3333333333333333 * X^3 + 0.1333333333333333 * X^5 + 0.0539682539682540 * X^7 + 0.0218694885361552 * X^9 + 0.0088632355299022 * X^{11} + 0.0035921280365725 * X^{13} + 0.0014558343870513 * X^{15} + 0.0005900274409456 * X^{17} + 0.0002391291142436 * X^{19} + 0.0000969153795693 * X^{21}$. As you can see the fractions are a little hard to deal with, even the coefficients do not reduce very much to get a fast answer see the samples above. Most listings for the Tan function only list the first four terms, in High School I tried to produce the next four terms but one of them was in error. To use the above equation for calculating 15 digits you are limited to only 14 degrees for the max input angle.

The following equation is from the "Handbook of Mathematical Functions".
$\tan(X^r) = X + 0.3333314936 * X^3 + 0.1333923995 * X^5 + 0.0539740603 * X^7 + 0.0245650893 * X^9 + 0.0029005250 * X^{11} + 0.0095168091 * X^{13}$ Good for 0° to 45° degrees or 0 to PI/4 radians only.