

Sheet1

| Trigonometric | Hyperbolic | Area      | Temperatures  | Trigonometric    |
|---------------|------------|-----------|---------------|------------------|
| -----         | -----      | -----     | -----         | -----            |
| sin(x)        | SINH(X)    | Circle    | C to Fahrenh. | @SIN(C4)         |
| COS(X)        | COSH(X)    | -----     | C to Kelvine  | @COS(C4)         |
| TAN(X)        | TANH(X)    | Volume    | C to Rankine  | @TAN(C4)         |
| ASIN(X)       | CTANH(X)   | -----     | C to Reaumur  | @ASIN(C4)        |
| ACOS(X)       | SECH(X)    | Cube      | F to Centi.   | @ACOS(OUT)       |
| ATAN(X)       | CSCH(X)    | Sphere    | F to Kelvine  | @ATAN(OUT)       |
| SEC(X)        | ASINH(X)   | -----     | F to Rankine  | 1/@COS(C4)       |
| CSC(X)        | ATANH(X)   | Perimeter | F to Reaumur  | 1/SIN(OUT)       |
| COT(X)        | ACTANH(X)  | -----     | K to Centi.   | 1/@TAN(OUT)      |
| ASEC(X)       | ASECH(X)   | Circle    | K to Fahrenh. | @ACOS(1/OUT)     |
| ACSC(X)       | ACSCH(X)   |           | K to Rankine  | @ASIN(1/OUT)     |
| ACOT(X)       |            |           | K to Reaumur  | @PI/2-@ATAN(OUT) |
|               |            |           | Ra. to Centi. |                  |
|               |            |           | Ra. to Fahre. |                  |
|               |            |           | Ra. to Kelvin |                  |
|               |            |           | Ra. to Reaumu |                  |
|               |            |           | Re. to Centi. |                  |
|               |            |           | Re. to Fahre. |                  |
|               |            |           | Re. to Kelvin |                  |
|               |            |           | Re. to Rankin |                  |

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| Hyperbolic                                    | Area           | Temperatures         |
|---|----------------|----------------------|
| -----   | -----          | -----                |
| 0.5*(@EXP(C4)-@EXP(C4))                       | @PI*T^2        | +1.8*OUT+32          |
| 0.5*(@EXP(C4)+@EXP(-C4))                      | -----          | +OUT+273.15          |
| (@EXP(OUT)-@EXP(-OUT))/(@EXP(OUT)+@EXP(-OUT)) | Volume         | +1.8*OUT+491.67      |
| (@EXP(OUT)+@EXP(-OUT))/(@EXP(OUT)-@EXP(-OUT)) | -----          | +0.8*OUT             |
| 2/(@EXP(OUT)+@EXP(-OUT))                      | +out^3         | +5*(OUT-32)/9        |
| 2/(@EXP(OUT)-@EXP(-OUT))                      | +4*@pi*out^3/3 | +5*(OUT-32)/9+273.15 |
| @LN(OUT+@SQRT(OUT^2+1))                       | -----          | +OUT+459.67          |
| 0.5*@LN((1+OUT)/(1-OUT))                      | Perimeter      | +0.8*(5*(OUT-32)/9)  |
| 0.5*@LN((OUT+1)/(OUT-1))                      | -----          | +OUT-273.15          |
| @LN(1/OUT+@SQRT(1/(OUT^2)-1))                 | @pi*OUT*2      | +1.8*OUT-459.67      |
| @LN(1/OUT+@SQRT(1/(OUT^2)+1))                 |                | +1.8*OUT             |
| +RG1^RG2                                      |                | +0.8*OUT-218.52      |
|   |                | +5*OUT/9-273.15      |
|   |                | +OUT-459.67          |
|   |                | +5*OUT/9             |
|   |                | +4*OUT/9-218.52      |
|   |                | +1.25*OUT            |
|   |                | +2.25*OUT+32         |
|   |                | +1.25*OUT+273.15     |
|   |                | +2.25*OUT+491.67     |

Sheet1

Trigonometric

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This function calculates the sine function  
fnssss

Hyperbolic

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Area

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Circle area where the radius=out

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Volume

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Perimeter

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| Temperatures             | Length units             | Area units               | Volume units            | Mass          |
|--------------------------|--------------------------|--------------------------|-------------------------|---------------|
| Centigrade to Fahrenheit | Angstrom                 | meter <sup>2</sup>       | Bushel (US)             | Cental (UK)   |
| Centigrade to Kelvine    | Centimeter               | millimeter <sup>2</sup>  | Bushel (UK)             | Dram,av.      |
| Centigrade to Rankine    | Decameter                | centimeter <sup>2</sup>  | centimeter <sup>3</sup> | Grain         |
| Centigrade to Reaumur    | Decimeter                | decimeter <sup>2</sup>   | decimeter <sup>3</sup>  | Gram          |
| Fahrenheit to Centigrade | Dis. of siriu            | decameter <sup>2</sup>   | Dry pint                | Hund.weight.s |
| Fahrenheit to Kelvin     | Foot                     | hectometer <sup>2</sup>  | Dry quart               | Hund.weight   |
| Fahrenheit to Rankine    | Inch                     | kilometer <sup>2</sup>   | Fluid dr (US)           | Hund.weight.l |
| Fahrenheit to Reaumur    | Hectometer               | Circular inch            | Fluid dr (UK)           | Kilogram      |
| Kelvin to Centigrade     | Light year               | inch <sup>2</sup>        | Fluid oz (US)           | Metric ton    |
| Kelvin to Fahrenheit     | Kilometer                | yard <sup>2</sup>        | Fluid oz (UK)           | Microgram     |
| Kelvin to Rankine        | Knot(UK)                 | Foot <sup>2</sup>        | Foot <sup>3</sup> (US)  | Miligram      |
| Kelvin to Reaumur        | Knot(INTL.)              | Acre                     | Foot <sup>3</sup> (UK)  | Ounce,av.     |
| Rankine to Centigrade    | Meter                    | Mile <sup>2</sup>        | Gallon (US)             | Pound,av.     |
| Rankine to Fahrenheit    | Micrometer               | -----                    | Gallon (UK)             | Ton (UK)      |
| Rankine to Kelvin        | Mile(US)                 | Acceleration             | Gill (US)               | Ton long (US) |
| Rankine to Reaumur       | Mile(UK)                 | -----                    | Gill (UK)               | Ton short(US) |
| Reaumur to Centigrade    | Milimeter                | cm/sec <sup>2</sup>      | inch <sup>3</sup> (US)  | -----         |
| Reaumur to Fahrenheit    | Nanometer                | Foot/sec <sup>2</sup>    | inch <sup>3</sup> (UK)  | Troy weight   |
| Reaumur to Kelvin        | Parsec                   | Galilei                  | Liter                   | -----         |
| Reaumur to Rankine       | Siriometer               | km/hour/sec              | Liquid pt(US)           | Carat         |
|                          | X-unit                   | Meter/sec <sup>2</sup>   | Liquid qt(US)           | Dram,ap (US)  |
|                          | Yard(US)                 | Mile/hour/sec            | meter <sup>3</sup>      | Drachm,ap(UK) |
|                          | Yard(UK)                 | -----                    | Micrometer <sup>3</sup> | Grain         |
|                          | -----                    | Angular accel            | milimeter <sup>3</sup>  | Gram          |
|                          | Pressure                 | -----                    | Minim (US)              | Ounce,troy    |
|                          | -----                    | Degree/sec <sup>2</sup>  | Minim (UK)              | Pennyweight   |
|                          | Atm. (tech.)             | Grade/sec <sup>2</sup>   | Peck (US)               | Pound,troy    |
|                          | Atm.(physic.)            | Radian/sec <sup>2</sup>  | Peck (UK)               | Pound,av      |
|                          | Bar                      | rev/min/sec              | Pint (UK)               | Scruple,ap    |
|                          | Foot-water               | rev/min <sup>2</sup>     | Quart (UK)              | -----         |
|                          | gr-force/cm <sup>2</sup> | -----                    | yard <sup>3</sup> (US)  | Force         |
|                          | Inch-water               | Energy                   | yard <sup>3</sup> (UK)  | -----         |
|                          | Inch-mercury             | -----                    | -----                   | Dyne          |
|                          | Lb-force/ft <sup>2</sup> | BTU                      | Power                   | Grain-force   |
|                          | Lb-force/in <sup>2</sup> | Calorie                  | -----                   | Gram-force    |
|                          | kg-force/m <sup>2</sup>  | Centimeter <sup>-1</sup> | BTU/sec                 | kg-force      |
|                          | Milibar                  | Degree Kelvin            | Calorie/sec             | Kilopond      |
|                          | mm of water              | Electron-volt            | Erg/sec                 | Newton        |
|                          | mm of mercury            | Erg                      | Horsepower              | Pond          |
|                          | Newton/m <sup>2</sup>    | Gram                     | Kilo-watt               | Poundal (US)  |
|                          | Ton-forc/ft <sup>2</sup> | Hpower-hour              | Meter-kgf/sec           | Pound-force   |
|                          |                          | Joule                    | Watt                    |               |
|                          |                          | Kilo-calorie             | -----                   |               |
|                          |                          | Kwatt-hour               | Work                    |               |
|                          |                          | Liter-atm                | -----                   |               |
|                          |                          | Mass unit                | BTU*second              |               |
|                          |                          | Meter-kg-forc            | Calorie*sec             |               |

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|           |               |
|-----------|---------------|
| Ryberg    | Erg*second    |
| Second^-1 | eV*second     |
|           | Joule*second  |
|           | Meter-kgf*sec |
|           | Plank's const |

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| Plane angles  | Length units  | Area units        | Volume units | Mass             | Angles      |               |
|---------------|---------------|-------------------|--------------|------------------|-------------|---------------|
| Cent.minute   | 0.00000001    |                   | 10000        | 35239.27667212   | 45359.24    | 0.009         |
| Cent.second   | 1             |                   | 0.01         | 39368.8022956    | 1.771845    | 0.00009       |
| Degree        | 1000          |                   | 1            | 1                | 0.06479892  | 1             |
| Minute        | 10            |                   | 100          | 1000.028         | 1           | 0.016         |
| Rad           | 1.541873E+019 |                   | 1000000      | 550.752567552    | 45359.24    | 57.29578      |
| Right angle   | 30.48         |                   | 100000000    | 1101.227833516   | 50802.35    | 90            |
| revolution    | 2.54          |                   | 10000000000  | 3.69671350508    | 50802.35    | 360           |
| Second        | 10000         |                   | 5.067057     | 3.551633442952   | 1000        | 0.9           |
| -----         | 9.46053E+017  |                   | 6.451626     | 29.57370804064   | 1000000     | -----         |
| Spher. angles | 100000        |                   | 8361.307     | 28.41306554356   | 0.000001    | Spher. angles |
| -----         | 185318.1      |                   | 929.0341     | 28317.02         | 0.001       | -----         |
| Square degree | 185200        |                   | 40468730     | 28316.7          | 28.34953    | 1             |
| Square grade  | 100           |                   | 25899980000  | 3785.434989212   | 453.5924    | 0.81          |
| Steradian     | 0.0001        |                   | -----        | 4546.090286964   | 1016047     | 3826.806      |
| -----         | 160934.7      | Acceleration      |              | 118.2981122544   | 1016047     | -----         |
| Velocity      | 160934.1      | -----             |              | 142.0652777164   | 907184.9    | Velocity      |
| -----         | 0.1           |                   | 1            | 16.38716         | -----       | -----         |
| cm/sec        | 0.0000001     |                   | 30.48        | 16.38698         | Troy weight | 0.01          |
| Feet/minute   | 3.083745E+018 |                   | 1            | 1000             | -----       | 0.00508       |
| Feet/sec      | 1.495042E+019 |                   | 27           | 473.1793486508   | 0.2         | 0.3048        |
| Kilometer/hr  | 1.002E-11     |                   | 100          | 946.3850980408   | 3.887935    | 0.27          |
| Kilometer/sec | 91.44018      |                   | 44.704       | 1000000          | 3.887935    | 1000          |
| Knots (Intl.) | 91.43984      | -----             |              | 1E-12            | 0.06479892  | 0.514         |
| Knots (UK)    | -----         | Angular accel     |              | 0.001            | 1           | 0.5147724     |
| Meter/sec     | Pressure      | -----             |              | 0.06161188508448 | 31.10348    | 1             |
| Meter/minute  | -----         |                   | 10           | 0.05919388738244 | 1.555174    | 0.016         |
| Miles/hour    | 98066.65      |                   | 9            | 8809.820668072   | 373.2418    | 44.704        |
| Miles/sec     | 101325        |                   | 572.9578     | 9092.180573928   | 453.5924    | 1609.344      |
| -----         | 100000        |                   | 60           | 568.2613108712   | 1.295978    | -----         |
| Ang. velocity | 2988.983      |                   | 1            | 1136.522821748   | -----       | Ang. velocity |
| -----         | 98.0665       | -----             |              | 764559.4         | Force       | -----         |
| Grades/minute | 249.0824      | Energy            |              | 764550.9         | -----       | 3.6           |
| Grades/sec    | 3386.395      | -----             |              | -----            | 1           | 216           |
| rad/minute    | 47.88027      | 1.17473587E-11    | Power        |                  | 63.54603    | 229.1831      |
| rad/sec       | 6894.758      | 4.656996575E-14   | -----        |                  | 980.665     | 1.375099      |
| rev/day       | 9.80665       |                   | 0            | 1055.8           | 980665      | 1             |
| rev/hour      | 100           |                   | 0            | 4.1855           | 980665      | 24            |
| rev/minute    | 9.806375      |                   | 0            | 0.0000001        | 100000      | 1440          |
| rev/sec       | 133.3224      |                   | 0            | 735.4988         | 980.665     | 86400         |
|               | 1             |                   | 1            | 1000             | 13825.52    |               |
|               | 1072518       | 2.9460702194E-08  |              | 9.80665          | 448222      |               |
|               |               | 1.1E-14           |              | 1                |             |               |
|               |               | 4.656996575E-11   | -----        |                  |             |               |
|               |               | 0.0000000400554   | Work         |                  |             |               |
|               |               | 1.1274237667E-12  | -----        |                  |             |               |
|               |               | 0                 |              | 1055.8           |             |               |
|               |               | 1.09113691225E-13 |              | 4.1855           |             |               |

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|   |           |
|---|-----------|
| 0 | 0.0000001 |
| 0 | 0         |
|   | 1         |
|   | 9.80665   |
|   | 0         |

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Area

-----

|                    |                   |                          |               |
|--------------------|-------------------|--------------------------|---------------|
|                    | Square meter      |                          | Rectangle     |
|                    | Square millimeter |                          | Ellipse       |
|                    | Square centimeter |                          | Parabola      |
|                    | Square decimeter  |                          | Polygon 1     |
| Distance of sirius | Square decameter  | Hundredweight,short (US) | Polygon 2     |
|                    | Square hectometer | Hundredweight (UK)       | Polygon 3     |
|                    | Square kilometer  | Hundredweight,long (US)  | Triag_area    |
|                    |                   |                          | Circle sector |



Square centimeter

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| Volume     | Perimeter |
|------------|-----------|
| Cone       | Ellipse   |
| Cylinder   | Polygon 2 |
| Paraboloid | Polygon 3 |
| Torus      |           |

| Area                             |
|----------------------------------|
| +E118*G118                       |
| +@PI*A*B                         |
| +2*A*B/3                         |
| +E118*G118^2/@TAN(@PI/E118)/4    |
| 0.5*E118*G118^2*@SIN(2*@PI/E118) |
| +E118*G118^2*@TAN(@PI/E118)      |
| 0.5*E118*G118                    |
| +A^2*B/2                         |

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Volume

Perimeter

-----  
@pi\*rg1^2\*rg2/3

-----  
2\*@pi\*@sqrt(0.5\*(rg1^2+rg2^2))

@pi\*rg1^2\*rg2

2\*rg1\*rg2\*@sin(@pi/rg1)

@pi\*rg1^2\*rg2/2

2\*rg1\*rg2\*@tan(@pi/rg1)

@PI^2\*((E118+G118)\*(E118-G118)^2)/4

Area

-----

Ellipse of semi-major axis RG1 and semi-minor axis RG2

Segment of a parabola with height RG1 and base RG2

Regular polygon of RG1 sides each of length RG2

Regular polygon of RG1 sides inscribed in a circle of radius RG2

Regular polygon of RG1 sides circumscribing a circle of radius RG2

TRIANGLE AREA: GIVEN, ALTITUDE=RG1 AND BASE=RG2

Sector of a circle of radius RG1 and angle RG2 (RADIANS)

Volume

-----

Right cone of base radius  $R_{G1}$  and height  $R_{G2}$

Right cylinder of radius  $R_{G1}$  and height  $R_{G2}$

Paraboloid of revolution of radius  $R_{G1}$  and height  $R_{G2}$

Torus of inner radius  $R_{G1}$  and outer radius  $R_{G2}$

Perimeter

-----

Ellipse of semi-major axis  $RG1$  and semi-minor axis  $RG2$

Regular polygon of  $RG1$  sides inscribed in a circle of radius  $RG2$

Regular polygon of  $RG1$  sides circumscribing a circle of radius  $RG2$

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| Area          | Radius        | Volume    |
|---------------|---------------|-----------|
| PARALLELOGRAM | CIR. IN TRIAN | Ellipsoid |
| TRAPEZOID     | TRIAN. IN CIR |           |

Area  
+E118\*G118\*@SIN(rg3)  
+0.5\*A\*(B+C)

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Radius

Volume

$$\frac{A \cdot B \cdot C}{\sqrt{0.5(A+B+C) \cdot 0.5(B+C-A) \cdot 0.5(A+C-B) \cdot 0.5(A+B-C)}} \quad \frac{4 \cdot \pi \cdot r_1 \cdot r_2 \cdot r_3}{3}$$



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Area

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Parallelogram area with BASE=RG1, SIDE=RG2, ANGLE=RG1

Trapezoid of altitude (RG1) and parallel sides RG2 and RG3

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Radius

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Radius of a circle inscribed in a triangle of sides  $RG_1$ ,  $RG_2$ ,  $RG_3$   
Radius of a circle circumscribing a triangle of sides  $RG_1$ ,  $RG_2$ ,  $RG_3$

Volume

-----

Ellipsoid of semi-axes  $RG_1$ ,  $RG_2$ ,  $RG_3$

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mmmmmmmmmm

mmmmmmmmmm

mmmmmmmmmm

mmmmmmmmmm

mmmmmmmmmm

SSSS

mmmmmmmmmm

SSSS

mmmmmmmmmm

mmmmmmmmmm

SUM  
AVG  
MAX  
MIN  
STD  
VAR  
COUNT  
RANGE

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@SUM(FA1..FA8192)  
@AVG(FA1..FA8192)  
@MAX(FA1..FA8192)  
@MIN(FA1..FA8192)  
@STD(FA1..FA8192)  
@VAR(FA1..FA8192)  
@COUNT(FA1..FA8192)  
@MAX(FA1..FA8192)-@MIN(FA1..FA8192)  
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## Sheet1

calculate the sum of a list of numbers  
Calculate the average of a list of values  
Find the largest value in the list  
Find the smallest value in a list of numbers  
Calculate the standard deviation of the list of values  
Calculate the variance of the values in the list