

West Central Steel, Inc.

PHONE: 320-235-4070 DIRECT SALES FAX: 320-235-1816
1-800-992-8853 1-800-328-8994

FORMULAS

ELLIPSE

Area = short diameter x long diameter x .78545

HEXAGON

Area = width of side x 2.598 x width of side

PARALLELOGRAM

Area = base x distance between the two parallel sides

PYRAMID

Area = 1/2 perimeter of base x slant height + area of base

Volume = area of base x 1/3 of the altitude

RECTANGLE

Area = length x width

RECTANGULAR PRISM

Volume = width x height x length

SPHERE

Area of surface = diameter x diameter x 3.1416

Side of inscribed cube = radius x 1.1547

Volume = diameter x diameter x diameter x .5236

SQUARE

Area = length x width

TRIANGLE

Area = one-half of height times base

TRAPEZOID

Area = one-half of the sum of the parallel sides x the height

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FORMULAS

CIRCLE

Circumference = diameter x 3.1416

Circumference = radius x 6.2832

Diameter = radius x 2

Diameter = square root of (area/.7854)

Diameter = square root of area x 1.1283

Diameter = circumference x .31831

Radius = diameter/2

Radius = circumference x .15915

Radius = square root of area x .56419

Area = diameter x diameter x .7854

Area = half of the circumference x half of the diameter

Area = square of the circumference x .0796

Arc length = degrees x radius x .01745

Degrees of arc = length/(radius x .01745)

Radius of arc = length/(degrees x .01745)

Side of equal square = diameter x .8862

Side of inscribed square = diameter x .7071

Area of sector = area of circle x degrees of arc/360

CONE

Area of surface = one-half of circumference of base x slant height + area of base

Volume = diameter x diameter x .7854 x one-third of the altitude

CUBE

Volume = width x height x length

CYLINDER

Area of surface = diameter x 3.1416 x length + area of the two bases

Area of base = diameter x diameter x .7854

Area of base = volume/length

Length = Volume/area of base

Volume = length x area of base

Capacity in gallons = volume in inches/231

Capacity in gallons = diameter x diameter x length x .0034

Capacity in gallons = volume in feet x 7.48

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DECIMAL EQUIVALENTS

	Fraction		Decimal	Millimeter
9/16	17/32	33/64	.51563	13.097
			.53125	13.494
		35/64	.54688	13.891
			.5625	14.288
5/8	19/32	37/64	.57813	14.684
			.59375	15.081
		39/64	.60938	15.478
			.625	15.875
11/16	21/32	41/64	.64063	16.272
			.65625	16.669
		43/64	.67188	17.066
			.6875	17.463
3/4	23/32	45/64	.70313	17.859
			.71875	18.256
		47/64	.73438	18.653
			.750	19.050
13/16	25/32	49/64	.76563	19.447
			.78125	19.844
		51/64	.79688	20.241
			.8125	20.638
7/8	27/32	53/64	.82813	21.034
			.84375	21.431
		55/64	.85938	21.828
			.875	22.225
15/16	29/32	57/64	.89063	22.622
			.90625	23.019
		59/64	.92188	23.416
			.9375	23.813
1	31/32	61/64	.95313	24.209
			.96875	24.606
		63/64	.98438	25.003
			1.00000	25.400

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DECIMAL EQUIVALENTS

Fraction		Decimal	Millimeter	
1/16	1/32	1/64	.01563	0.397
			.03125	0.794
		3/64	.04688	1.191
			.0625	1.588
1/8	3/32	5/64	.07813	1.984
			.09375	2.381
		7/64	.10938	2.778
			.125	3.175
3/16	5/32	9/64	.14063	3.572
			.15625	3.969
		11/64	.17188	4.366
			.1875	4.763
1/4	7/32	13/64	.20313	5.159
			.21875	5.556
		15/64	.23438	5.953
			.250	6.350
5/16	9/32	17/64	.26563	6.747
			.28125	7.144
		19/64	.29688	7.541
			.3125	7.938
3/8	11/32	21/64	.32813	8.334
			.34375	8.731
		23/64	.35938	9.128
			.375	9.525
7/16	13/32	25/64	.39063	9.922
			.40625	10.319
		27/64	.42188	10.716
			.4375	11.113
1/2	15/32	29/64	.45313	11.509
			.46875	11.906
		31/64	.48438	12.303
			.500	12.700

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WEIGHTS AND MEASURES

Metric Measures and Equivalents

Length

1 millimeter.....	0.03937 in
1 centimeter.....	10 mm.....0.3937 in
1 meter.....	1000 mm.....1.0936 yd
1 meter	3.2808 ft
1 kilometer	1000 m.....0.6214 mi

Area

1 square centimeter	100 sq mm	0.155 sq in
1 square meter	10,000 sq cm	1.196 sq yd
1 hectare	10,000 sq m	2.4711 acres
1 square kilometer	100 ha	0.3861 sq mi

Weight

1 milligram	0.0154 grain
1 gram.....	1000 mg.....0.0353 oz
1 kilogram	1000 g.....2.2046 lb
1 kilogram/meter.....	0.6719 lb/ft
1 tonne.....	1000 kg.....2204.6 lb
1 tonne	1.1023 short tons
1 tonne	0.9842 long ton

Volume

1 cubic centimeter.....	0.061 cu in	
1 cubic decimeter	1000 cu cm	0.0353 cu ft
1 cubic meter.....	1000 cu dm.....	1.3079 cu yd
1 liter	1 cu dm.....	0.2642 gallon
1 hectoliter.....	100 liter	2.8378 bu

1 megapascal

1 Newton/sq mm 145.03 psi

To convert Celsius into Fahrenheit, multiply by 9, divide by 5, add 32.

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WEIGHTS AND MEASURES

United States Measures and Equivalents

Length

1 inch	2.54 cm
1 foot	12 in.....0.3048 m
1 yard.....	3 ft.....0.9144 m
1 mile.....	1,760 yd.....1.6093 km
1 nautical mi.....	1.152 mi.....1.856 km

Area

1 square inch.....	6.4516 sq cm
1 square foot.....	144 sq in.....0.093 sq m
1 square yard.....	9 sq ft.....0.8361 sq m
1 acre.....	4,840 sq yd.....4046.86 sq m
1 square mile.....	640 acres.....2.59 sq km

Weight

1 ounce	437.5 grains.....28.35 g
1 pound.....	16 oz.....0.4536 kg
1 short ton.....	2,000 lb.....0.9072 tonne
1 long ton.....	2,240 lb.....1.0161 tonne

Volume

1 cubic inch.....	16.387 cu cm
1 cubic foot.....	1,728 cu in.....0.028 cu m
1 cubic yard.....	27 cu ft.....0.7646 cu m
1 fluid ounce.....	2.957 cl
1 liquid pint.....	16 fl oz.....0.4732 liter
1 liquid quart.....	2 pt.....0.946 liter
1 gallon.....	4 qt.....3.7853 liter
1 dry pint.....	0.5506 liter
1 bushel.....	64 dry pt.....35.2381 liter

To convert Fahrenheit degrees into Celsius, subtract 32, multiply by 5, divide by 9.