

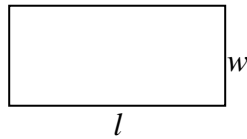
# Geometric Formulas

## PLANE GEOMETRY

### Rectangle

Area:  $A = lw$

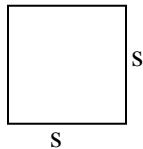
Perimeter:  $P = 2l + 2w$



### Square

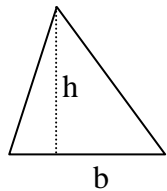
Area:  $A = s^2$

Perimeter:  $P = 4s$



### Triangle

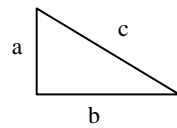
Area:  $A = \frac{1}{2}bh$



### Right Triangle

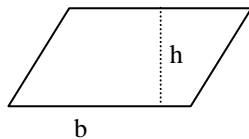
Pythagorean Theorem:

$$a^2 + b^2 = c^2$$



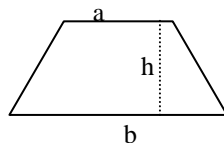
### Parallelogram

Area:  $A = bh$



### Trapezoid

Area:  $A = \frac{1}{2}h(a + b)$

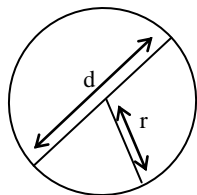


### Circle

Area:  $A = \pi r^2$

Circumference:

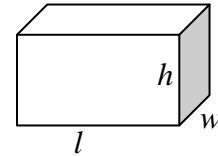
$$C = \pi d = 2\pi r$$



## SOLID GEOMETRY

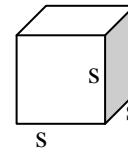
### Rectangular solid

Volume =  $lwh$



### Cube

Volume:  $s^3$

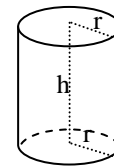


### Right Circular Cylinder

Volume:  $V = \pi r^2 h$

Surface Area:

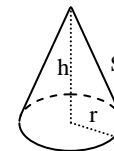
$$S = 2\pi r h + 2\pi r^2$$



### Right Circular Cone

Volume:  $V = \frac{1}{3}\pi r^2 h$

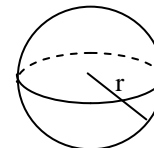
Surface Area:  $S = \pi r^2 + \pi r s$



### Sphere

Volume:  $V = \frac{4}{3}\pi r^3$

Surface Area:  $S = 4\pi r^2$



## Conversion Factors

### Length

English	Metric
12 in = 1 ft 1 yd = 3 ft 1 yd = 36 in 1 mi = 5280 ft	1000 mm = 1 m 100 cm = 1 m 10 dm = 1 m 1 dam = 10 m 1 hm = 100 m 1 km = 1000 m

#### English / Metric

2.54 cm = 1 in  
 1 m = 3.28 ft  
 1.61 km = 1 mi

### Volume

English	Metric
1 cup (c) = 8 fl oz 1 pint (pt) = 2 c 1 quart (qt) = 2 pt 1 gallon (gal) = 4 qt	1 mL = 1 cc = 1 cm <sup>3</sup> 1 liter(L) = 1000 mL 1 liter = 100 cL 1 liter = 10 dL 1000 liters = kL

16.39 mL = 1 in<sup>3</sup>  
 1.06 qt = 1 L  
 3.79 L = 1 gal

### Temperature

$$C = \frac{5(F - 32)}{9} \qquad F = \frac{9}{5}C + 32$$

### Area

English	Metric
1 ft <sup>2</sup> = 144 in <sup>2</sup> 1 yd <sup>2</sup> = 9 ft. <sup>2</sup> 1 acre = 43,560 ft <sup>2</sup> 640 acres = 1 mi <sup>2</sup>	1 a (are) = 100 m <sup>2</sup> 1 ha (hectare) = 100 a

#### English / Metric

1 ha = 2.47 acres

### Weight (mass)

English	Metric
1 lb = 16 oz 1 T (Ton) = 2,000 lb	1 g = 1,000 mg 1 g = 100 cg 1000 g = 1kg 1,000 kg = 1 metric ton (t)

#### English / Metric

28.3 g = 1 oz  
 2.20 lb = 1 kg

### Time

60 sec = 1 min  
 60 min = 1 hr  
 3600 sec = 1 hr

Interest Formula  
 $I = Prt$