

# Measures and Formulas

## Metric Units

kilometre (km)	hectometre (hm)	decametre (dam)	<b>metre (m)</b>	decimetre (dm)	centimetre (cm)	millimetre (mm)
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metric units of area: 1 hectare (ha) = 10,000 square metres (m<sup>2</sup>)

kilogram * (kg)	hectogram (hg)	decagram (dag)	<b>gram (g)</b>	decigram (dg)	centigram (cg)	milligram ** (mg)
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\* 1 metric tonne (t) = 1000 kilograms

\*\* 1 milligram = 1000 micrograms (mcg or µg)

kilolitre (kL)	hectolitre (hL)	decalitre (daL)	<b>litre (L)</b>	decilitre (dL)	centilitre (cL)	millilitre *** (mL)
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1 cubic metre (m<sup>3</sup>) = 1000 litres (L)

\*\*\* 1 millilitre (mL) = 1 cubic centimetre (cm<sup>3</sup> or cc)

## Imperial & American Units and Conversions to Metric

length and distance	weight and mass	capacity	time and temperature
1 mile (mi) = 5280 feet (ft)	1 ton(T) = 2000 pounds(lb)	1 gallon (gal) = 4 quarts (qt)	1 year (yr) = 365 days
1 foot = 12 inches (in)	1 pound = 16 ounces (oz)	1 quart = 2 pints (pt)	1 week (wk) = 7 days
1 yard (yd) = 3 ft = 36 in		1 pint = 2 cups	1 day = 24 hours (hr)
		1 cup = 8 fluid ounces (fl oz)	1 hour = 60 minutes (min)
		1 fl oz = 2 tablespoons (tbs)	1 min = 60 seconds (sec)
		1 tbs = 3 teaspoons (tsp)	
		1 ft <sup>3</sup> = 7.49 US gal = 6.24 Imp gal	
1 inch = 2.54 cm = 25.4 mm	1 ounce = 28.35 grams	1 teaspoon ≈ 5 mL	$F = \frac{9}{5} \cdot C + 32$
1 centimetre = 0.394 inches	1 pound = 453.59 grams	1 tablespoon ≈ 15 mL	$C = \frac{5}{9} \cdot (F - 32)$
1 foot = 0.305 metres	1 pound = 0.454 kilograms	1 US fluid ounce = 29.57 mL	
1 metre = 3.281 feet	1 kilogram = 2.205 pounds	1 US quart = 0.946 L	
1 yard = 0.914 metres	1 metric tonne = 2205 lb	1 litre = 1.057 US qt	
1 metre = 1.094 yards		1 US gallon = 3.785 litres	
1 mile = 1.609 kilometres		1 litre = 0.264 US gallons	
1 kilometre = 0.621 miles		1 Imp gallon = 4.546 litres	
		1 litre = 0.22 Imp gallons	

**units of area:** 1 acre = 0.4047 hectare (ha) = 4047 m<sup>2</sup>; 1 hectare (ha) = 2.471 acres = 10,000 m<sup>2</sup>

## Geometric Formulas (π = 3.14) (more on page 2)

geometric figure	perimeter	area	volume
square	$P = 4 \cdot s$	$A = s^2$	
rectangle	$P = 2 \cdot l + 2 \cdot w$	$A = l \cdot w$	
triangle		$A = \frac{1}{2} \cdot b \cdot h$	
parallelogram		$A = b \cdot h$	
trapezoid		$A = \frac{1}{2} \cdot h \cdot (a + b)$	
circle	$C = \pi \cdot d = 2 \cdot \pi \cdot r$	$A = \pi \cdot r^2$	
		<b>surface area</b>	
rectangular solid		$S = 2 \cdot l \cdot w + 2 \cdot l \cdot h + 2 \cdot w \cdot h$	$V = l \cdot w \cdot h$
cylinder		$S = 2 \cdot \pi \cdot r \cdot h + 2 \cdot \pi \cdot r^2$	$V = \pi \cdot r^2 \cdot h$
sphere		$S = 4 \cdot \pi \cdot r^2$	$V = \frac{4}{3} \cdot \pi \cdot r^3$
cone		$S = \pi \cdot r^2 + \pi \cdot r \cdot s$	$V = \frac{1}{3} \cdot \pi \cdot r^2 \cdot h$

### Interest Formulas

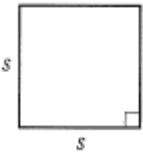
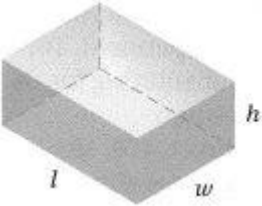
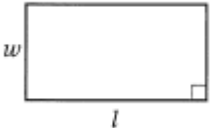
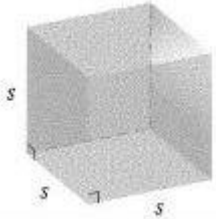
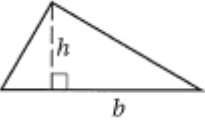

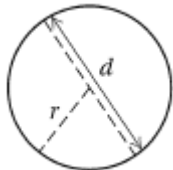
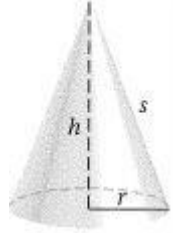
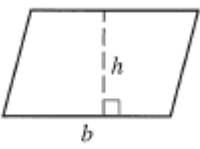
simple:  $I = P \cdot r \cdot t$

compound:  $A = P \cdot \left(1 + \frac{r}{n}\right)^{nt}$

# Geometric Formulas

## Plane Geometry

## Solid Geometry

<p><b>Square</b> Area: <math>A = s^2</math> Perimeter: <math>P = 4 \cdot s</math></p>		<p><b>Rectangular Solid</b> Volume: <math>V = l \cdot w \cdot h</math> Surface Area: <math>S = 2 \cdot l \cdot w + 2 \cdot l \cdot h + 2 \cdot w \cdot h</math></p>	
<p><b>Rectangle</b> Area: <math>A = l \cdot w</math> Perimeter: <math>P = 2 \cdot l + 2 \cdot w</math></p>		<p><b>Cube</b> Volume: <math>V = s^3</math> Surface Area: <math>S = 6 \cdot s^2</math></p>	
<p><b>Triangle</b> Area: <math>A = \frac{1}{2} \cdot b \cdot h</math></p>		<p><b>Circular Cylinder</b> Volume: <math>V = \pi \cdot r^2 \cdot h</math> Surface Area: <math>S = 2 \cdot \pi \cdot r \cdot h + 2 \cdot \pi \cdot r^2</math></p>	
<p><b>Circle</b> Area: <math>A = \pi \cdot r^2</math> Circumference: <math>C = \pi \cdot d = 2 \cdot \pi \cdot r</math></p>		<p><b>Circular Cone</b> Volume: <math>V = \frac{1}{3} \cdot \pi \cdot r^2 \cdot h</math> Surface Area: <math>S = \pi \cdot r^2 + \pi \cdot r \cdot s</math></p>	
<p><b>Parallelogram</b> Area: <math>A = b \cdot h</math></p>		<p><b>Sphere</b> Volume: <math>V = \frac{4}{3} \cdot \pi \cdot r^3</math> Surface Area: <math>S = 4 \cdot \pi \cdot r^2</math></p>	