

Measurement

Shape	Perimeter	Area
Square	$L \times L \times L \times L$	L^2
Kite	$A + B + C + D$	$(D \times D^2) \div 2$
Rhombus	$S \times S \times S \times S$	S^2

Conversions

Converting LENGTH Units
We usually use a conversion table of figures for the units.
 Km $\xrightarrow{\div 1000}$ m $\xrightarrow{\div 100}$ cm $\xrightarrow{\div 10}$ mm
 mm $\xrightarrow{\times 10}$ cm $\xrightarrow{\times 100}$ m $\xrightarrow{\times 1000}$ Km
5km = 5m Need to $\times 1000$ 5 x 1000 = 5000m
 120cm = 7m Need to $\div 100$ 120 $\div 100 = 1.2m$

Converting VOLUME Units
VOLUME consists of Cube Units, so we need to CUBE all our Lengths.
 Km³ $\xrightarrow{\div 1000^3}$ m³ $\xrightarrow{\div 100^3}$ cm³ $\xrightarrow{\div 10^3}$ mm³
 mm³ $\xrightarrow{\times 10^3}$ cm³ $\xrightarrow{\times 100^3}$ m³ $\xrightarrow{\times 1000^3}$ Km³
VOLUME conversions use powers of 1, and usually create very large results.
 3 x 100 x 100 x 100 = 3 000 000 cm³
 Need to $\div 100^3$ 3 x 100 x 100 x 100 = 3 000 000 cm³

Converting AREA Units
AREA consists of Square Units, so we need to SQUARE all our Lengths.
 Km² $\xrightarrow{\div 1000^2}$ m² $\xrightarrow{\div 100^2}$ cm² $\xrightarrow{\div 10^2}$ mm²
 mm² $\xrightarrow{\times 10^2}$ cm² $\xrightarrow{\times 100^2}$ m² $\xrightarrow{\times 1000^2}$ Km²
5km² = 7 m² Need to $\times 1000^2$ 5 x 1000 x 1000 = 5 000 000 m²
 1200cm² = 7 m² Need to $\div 100^2$ 1200 $\div 100 \times 100 = 0.12 m^2$

Converting CAPACITY Units
The Volume of Liquids and Solids is usually measured as "Capacity".
 In the Metric System, Capacity is based on the Litre or "L" unit.
 ML $\xrightarrow{\div 1000}$ kL $\xrightarrow{\div 1000}$ L $\xrightarrow{\div 1000}$ mL
 mL $\xrightarrow{\times 1000}$ L $\xrightarrow{\times 1000}$ kL $\xrightarrow{\times 1000}$ ML
CAPACITY conversions use 1000s, and usually create fairly large results.
 22ML = 7 L Need to $\times 1000$ twice 22 x 1000 x 1000 = 22 000 000 L

Measurement 3D

Shape	Surface Area	Volume
Cube	$6 \times L^2$	a^3
Rectangular Prism	$2(LW + WD + LD)$	$L \times W \times H$
Triangular Prism - equilateral	$BH + 3BD$	$BH \times D$
Triangular Prism - isocoles	$BH + BD + 2SD$	$BH \times D$
Triangular Prism - scalene	$BH + BD + S'D + S^2D$	$BH \times D$



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Not published yet.

Last updated 4th November, 2018.

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