Year 8 foundation topic 2

Area and volume

Area formulae

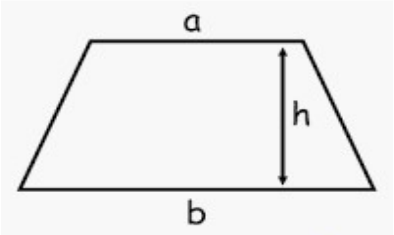
Rectangle = length x width

Triangle = $\frac{\text{base x height}}{2}$

Parallelogram

= base x perpendicular height

Trapezium = ½ (a+b) h



What careers would use these skills?

Gardeners, builders, architects, decorator, farmer, carpet fitter, engineer.

Metric conversions

1km = 1000m

1m = 100cm

1cm = 10mm

1kg = 1000g

1l = 100cl = 1000ml

Metric/imperial conversions

5 miles ≈ 8 kilometres

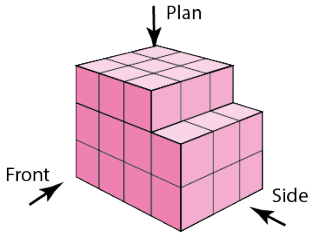
1 gallon ≈ 4.5 litres

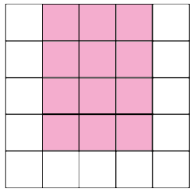
2.2 pounds ≈ 1 kilogram

1 inch ≈ 2.5 centimetres

Plans

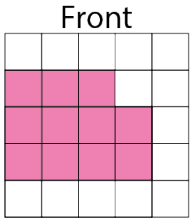
A plan in the view on a 3D shape from above. It is a 2D representation.

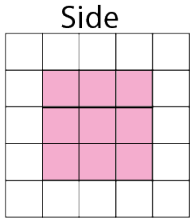




Elevations

An elevation is what a shape looks like from the front or side. It is a 2D representation.

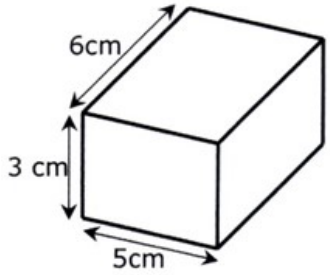




Cuboid volume

= length x width x height

Eg.



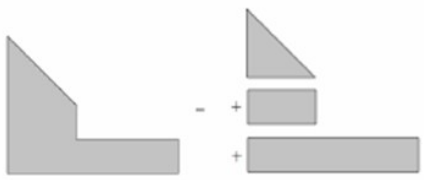
volume = 6 x 5 x 3

= 90 cm^3

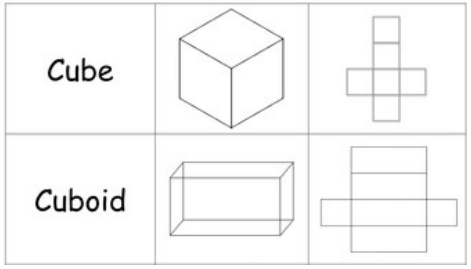
Compound shape area

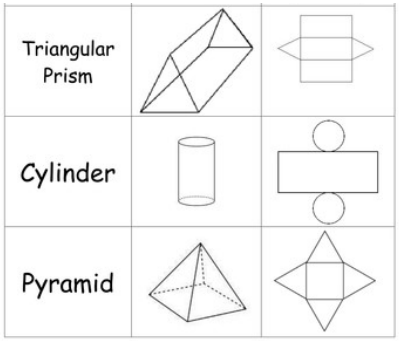
Split your shape into smaller shapes that are easier to calculate. Calculate them separately and then add them together.

Eg. Split this shape into two rectangles and a triangle.

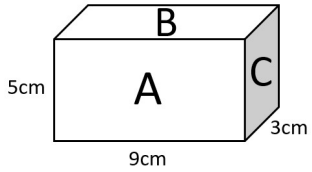


Nets





Cuboid surface area



Area A = 5 x 9

= 45cm^2

Area B = 9 x 3

= 27cm^2

Area C = 3 x 5

= 15cm^2

Surface area = 45 + 45 + 27 + 27 + 15 + 15

= 174cm^2