



Mathematics Knowledge Organiser

Y6: Measure and geometry

Measure

10mm = 1cm
100cm = 1m
1,000m = 1km

1,000g = 1kg
1,000ml = 1L

METRIC

8 km = 5 miles (1 km = 5/8 mile)

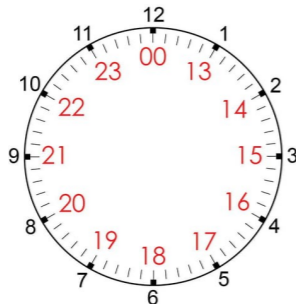
1 inch = 2.5cm
1 ounce = 28g
1 pound = 0.45kg

IMPERIAL



30 days have September, April, June and November.
All the rest have 31, except February, which has 28 days clear, and 29 every leap year!

1 minute = 60 seconds
1 hour = 60 minutes
1 day = 24 hours

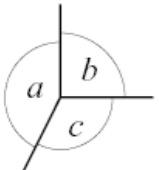


12 hour clock (pm) $\xrightarrow{\text{Add 12}}$ 24 hour clock

1 year = 365 days = 52 weeks = 12 months

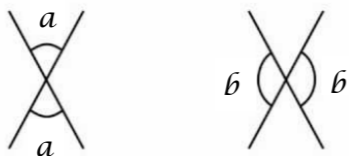
Angles

Angles around a point.

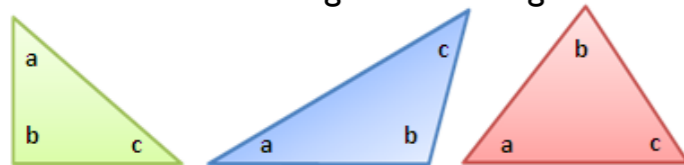


$$a + b + c = 360^\circ$$

Vertically opposite angles are the same.

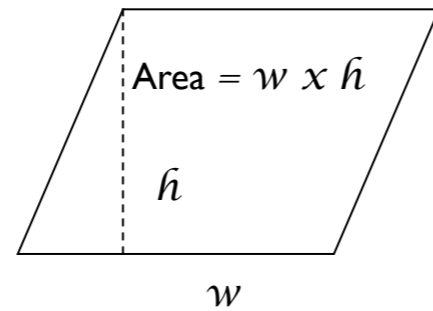


Internal angles of a triangle



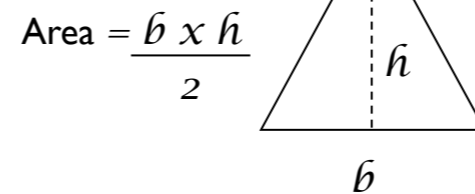
$$a + b + c = 180^\circ$$

Perimeter/Area/Volume



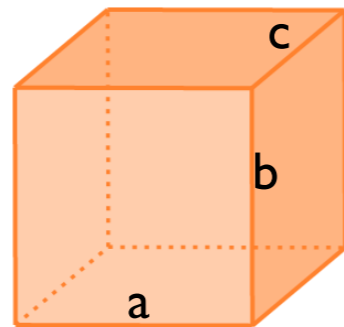
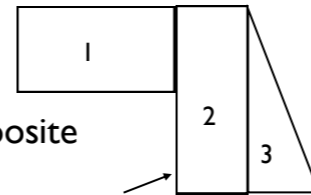
$$\text{Area} = w \times l$$

$$\text{Perimeter} = 2(w + l)$$



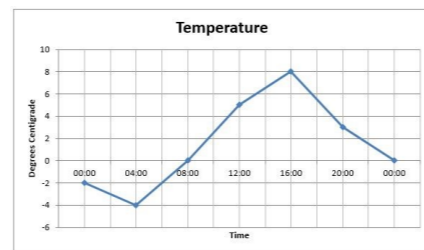
Total area = area shape 1 + area shape 2 + area shape 3

Composite shape



Volume = 3D space taken up
E.g. $a \times b \times c$ (cm/m³)

Statistics



Line graph shows a trend. E.g. temperature over time.

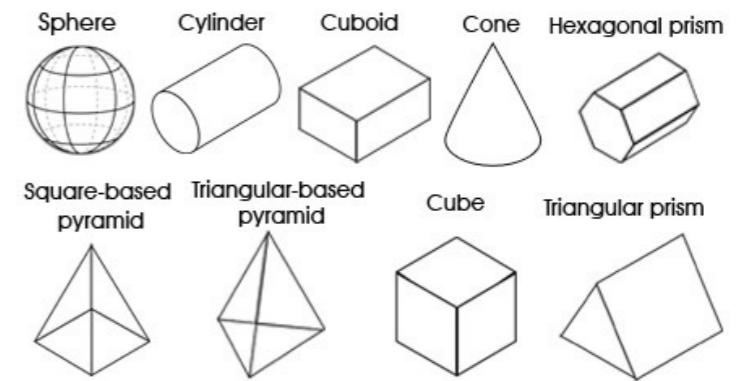


Pie charts show the proportion compared to the whole

$$\text{Mean (average)} = \frac{\text{sum of all parts}}{\text{number of parts}}$$

20					Sum of parts
6	2	7	1	4	5 parts
4	4	4	4	4	20 ÷ 5 = 4

2D/3D shapes



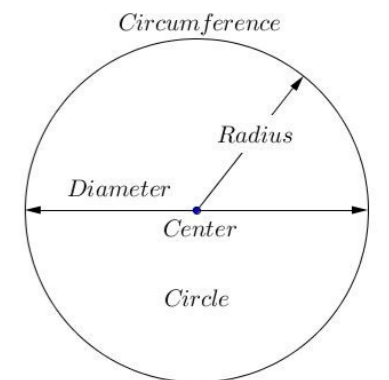
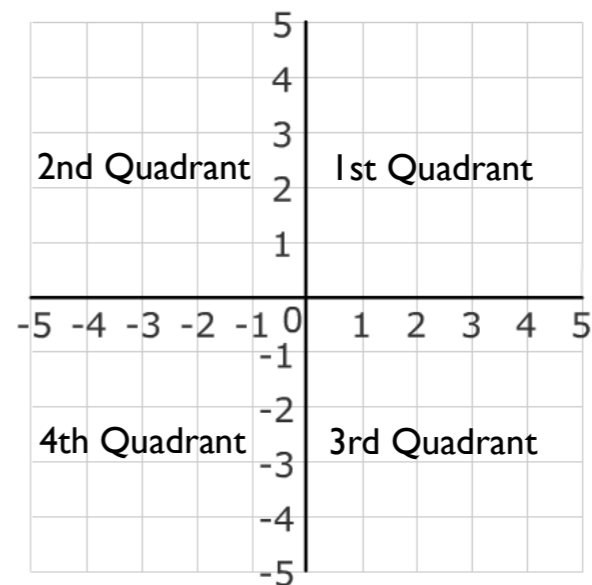
3D— edges, faces, vertices.
2D— sides, angles.

Regular = All sides/angles equal

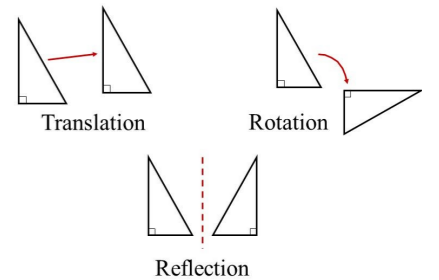
Irregular = All sides/angles not equal

Position and direction

Four Quadrants



Diameter = Radius x 2



Co-ordinates: (x, y)