

Y5- Geometry- Properties of Shape

measuring using a protractor

1) Estimate the angle. If it is an acute angle, it will be less than 90°

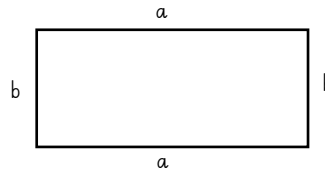


2) Line up the centre of the protractor with the centre of the angle.

3) Count around the protractor from one line to the other, starting from zero.

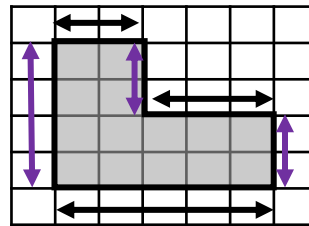
sides in a rectangle

Use $2a+2b$ to find missing sides.

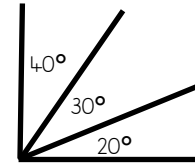


$$2a+2b = 28\text{cm}$$

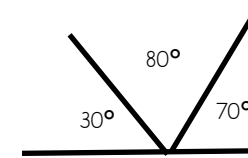
$$\text{If } a = 10 \text{ cm, } b = 4 \text{ cm.}$$



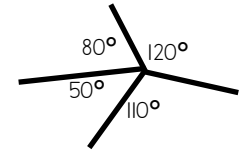
Angles in a right angle add up to 90°



Angles in a straight line add up to 180°

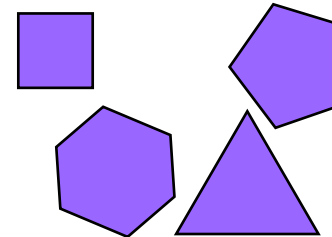


Angles around a point add up to 360°

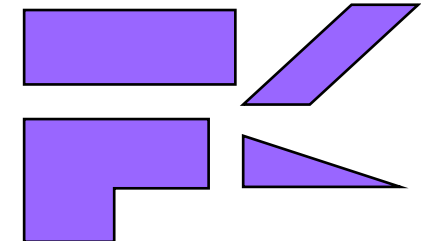


regular and irregular polygons

In a regular polygon, all angles and sides are the same size.



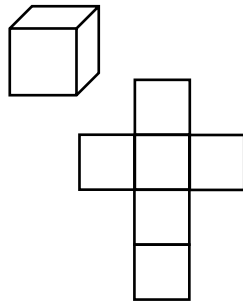
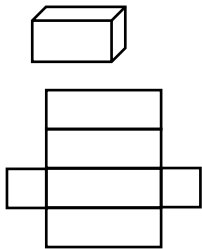
In an irregular polygon, the angles and sides are **not** all the same size



3D shapes and their nets

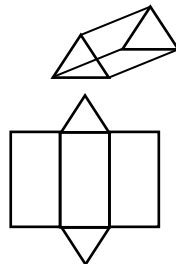
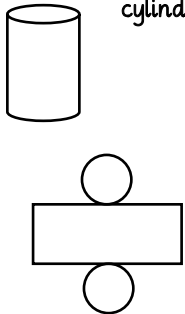
cuboid

cube



cylinder

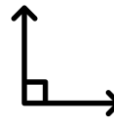
triangular prism



angles



acute angle
less than 90°



right angle
exactly 90°



obtuse angle
more than 90°
less than 180°



acute angle
more than 180°
less than 360°

cube

6 square faces
12 edges
8 vertices

cuboid

6 faces
12 edges
8 vertices

sphere

1 curved surface
0 edges
0 vertices

tetrahedron

4 triangular faces
6 edges
4 vertices

triangular prism

5 faces
9 edges
6 vertices

cylinder

2 circular faces
1 curved surface
2 curved edges
0 vertices

cone

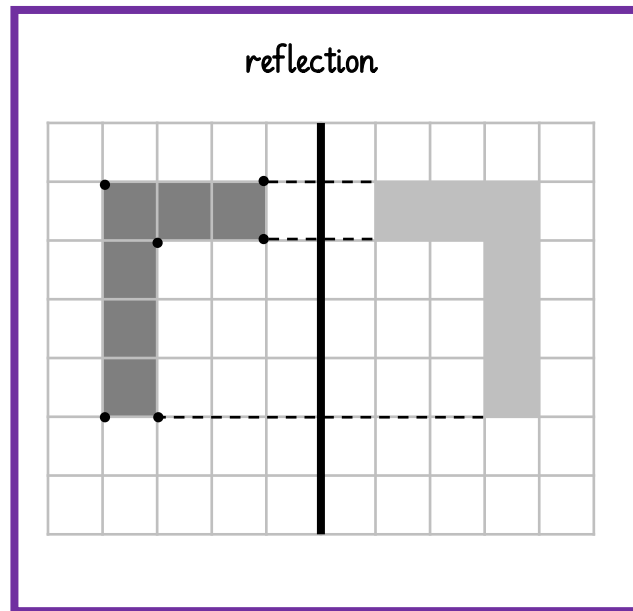
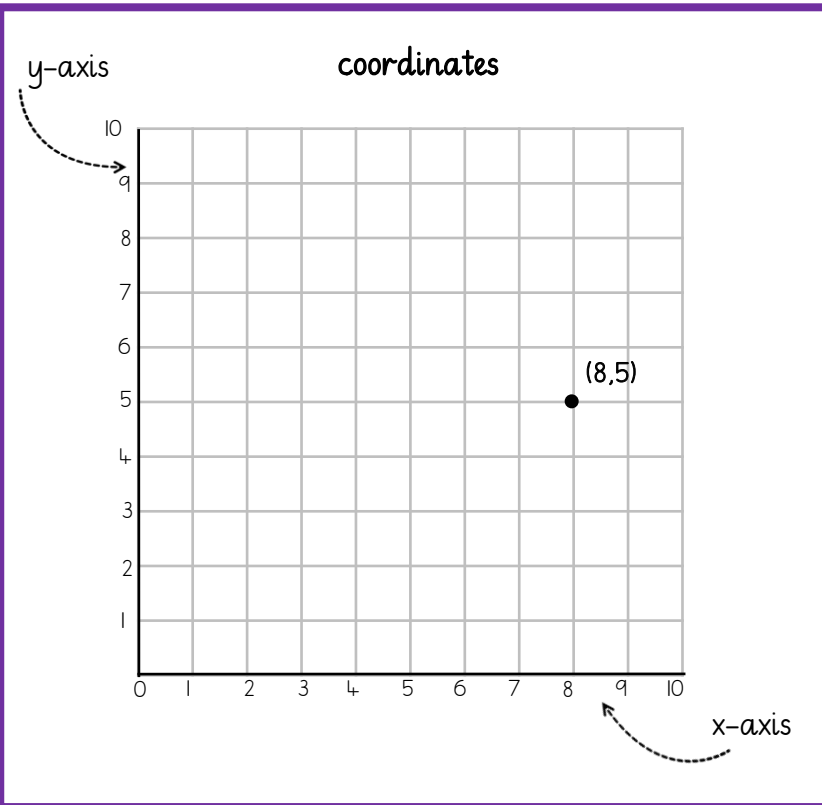
1 circular face
1 curved surface
1 curved edge
1 apex

square-based pyramid

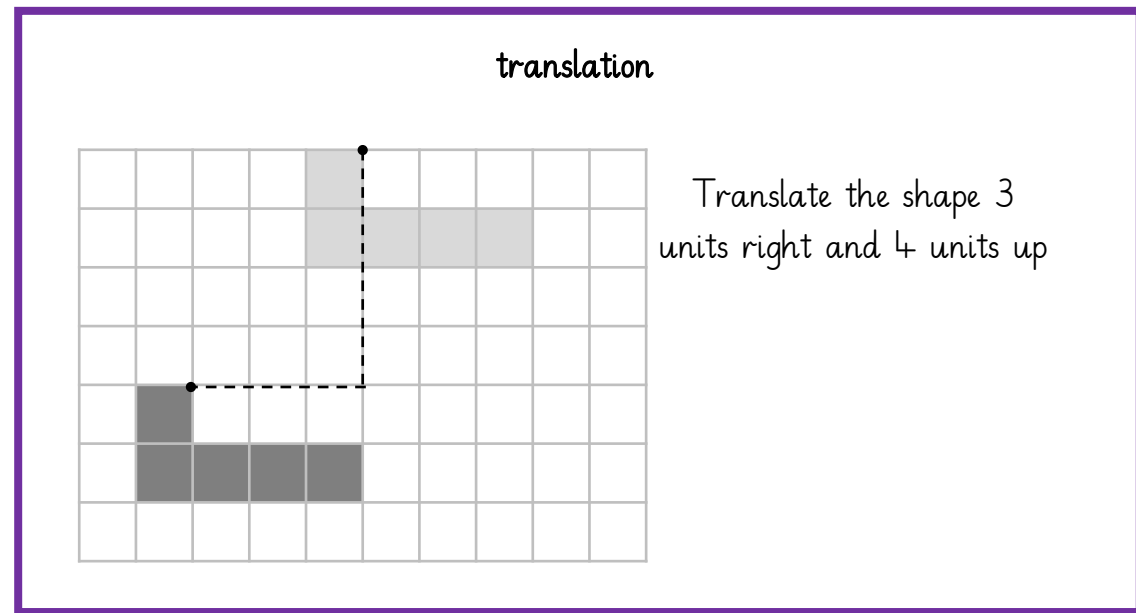
5 faces
8 edges
5 vertices

octahedron

8 faces
12 edges
6 vertices



When a shape is translated or reflected, it does not change.



table

hockey	tennis	football	rugby	total
21	41	16	22	100

If one part is missing, add the other parts together and subtract from the total

hockey	tennis	football	rugby	total
21	41		22	100

If the total is missing, add the parts together

hockey	tennis	football	rugby	total
21	41	16	22	

two-way table

	football	tennis	rugby	
Year 4	9	13	5	27
Year 5	11	9	8	28
	20	22	13	55

total year 4

total year 5

total children

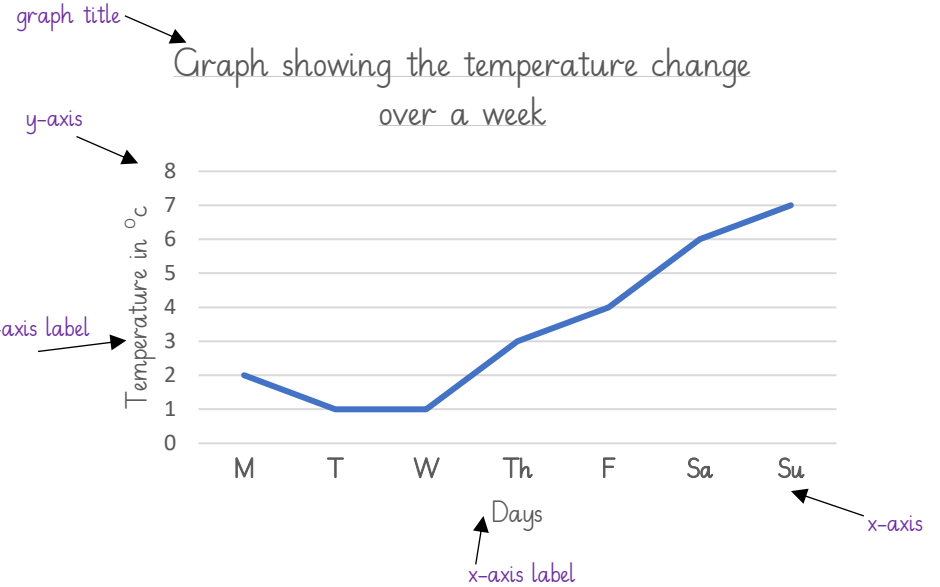
total children who like football

total children who like tennis

total children who like rugby

line graphs

Line graphs show a change over time



timetables

Here is part of a bus timetable from Kingston to Clevemont

Kingston	10:01	10:24	11:01	11:24
Marchdean	10:23	-	11:23	-
East Bridgate	10:35	10:55	11:35	11:55
Clevemont	11:06	11:15	12:06	12:15

The time the bus leave Kingston

This shows that it didn't stop at Marchdean

This bus takes 1 hour and 5 minutes (65 minutes) to go from Kingston to Clevemont