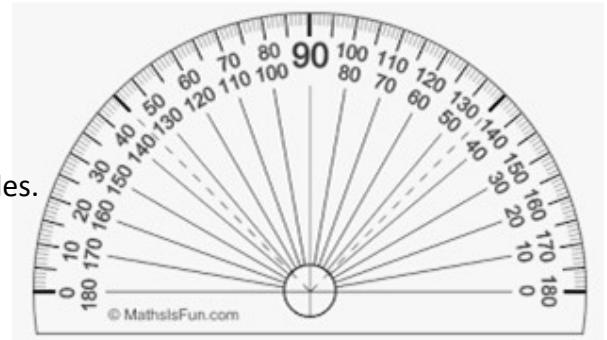


Section 1: Angles

- An angle is formed when two straight lines meet.
- The angle is the amount of turn around the point.
- We can classify angles as acute, obtuse, reflex or right angles.



<p>Acute angles are less than 90°.</p> <p>Acute Angles</p>	<p>Obtuse angles are between 90° and 180°.</p> <p>Obtuse Angles</p>
Angles	
<p>Reflex angles are between 180° and 360°.</p> <p>Reflex Angles</p>	<p>© Teaching lifelines www.teachinglifelines.co.uk</p>

Measuring angles

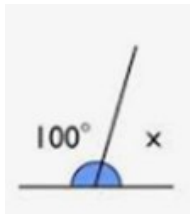
- Angles are measured with protractors.
- Angles are measured in degrees ($^\circ$)
- When using a protractor to measure an angle, make sure you use the correct scale on the protractor.

Section 2: Calculating Missing Angles

Angles on a straight line

The angles on a straight line add up to 180°

To calculate a missing angle along a straight line, subtract the given angle (or angles) from 180°



$$180^\circ - 100^\circ = 80^\circ$$

Angles on a straight line always add up to 180° .

$130^\circ + 50^\circ = 180^\circ$

$20^\circ + 160^\circ = 180^\circ$

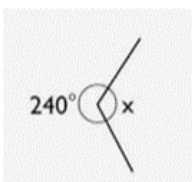
© Teaching **lifelines**
www.teachinglifelines.co.uk
Image © Teachit

Angles in a full turn

A full turn is 360°

Angles around a full turn will always add up to 360°

To calculate a missing angle around a point in the middle of a full turn, subtract the given angle (or angles) from 360°



$$360^\circ - 240^\circ = 120^\circ$$

Angles are measured in degrees.

There are 360° in a circle.

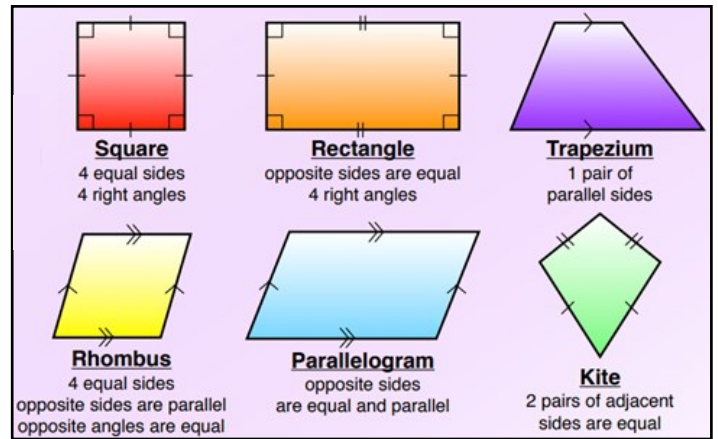
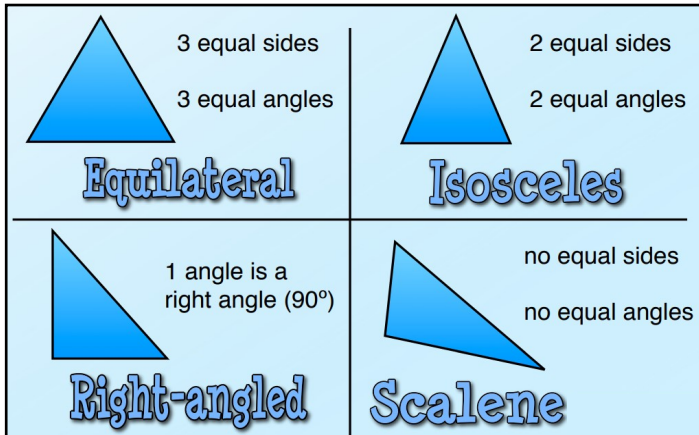
$90^\circ =$ a right angle.

$180^\circ =$ a straight line.

© Teaching **lifelines**
www.teachinglifelines.co.uk
Image © Teachit

Section 3: Triangles and Quadrilaterals

- Triangles have three sides, three vertices (corners) and three angles.
- The angles inside a triangle add up to 180° .



- Quadrilaterals have four sides, four vertices and four angles.
- The angles inside a quadrilateral add up to 360° .

Section 4: Polygons

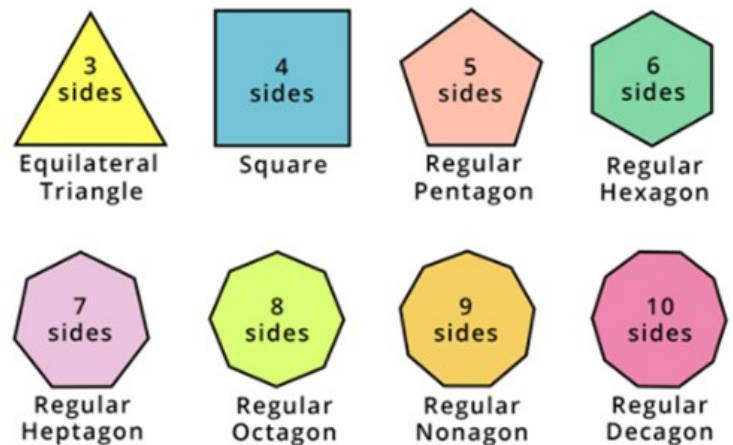
The word **poly** comes from Greek words:

- *polys* meaning **many**
- *gonos* meaning **angled**

A polygon is a **2D shape** which has at least three angles.

Regular polygons have angles and side lengths which are **all the same**.

Irregular polygons have some angles and side lengths which are **not the same**.



Section 5: Co-ordinates

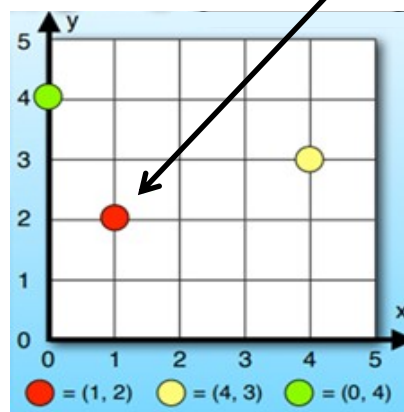
Co-ordinates help us find the position of something.

Co-ordinate grids have two axes:

- horizontal (x) axis
- vertical (y) axis

Points along a horizontal line have the same y co-ordinate.

Points along a vertical line have the same x co-ordinate.



Look at the **red circle**.

It is **1 square across** and **2 squares up**.

We call this **(1,2)**

x co-ordinate (across) **y co-ordinate** (up)

(1,2)

Remember:

Along the Corridor →

Then **up** the Stairs ↑