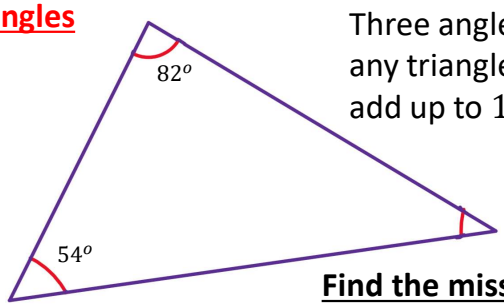
Level 2 Functional Skills Maths Knowledge Organiser

Module 17 – Angles

Calculator usually allowed

Triangles



Three angles inside any triangle always add up to 180^o

Find the missing angle

Add the angles together then subtract from 180^o

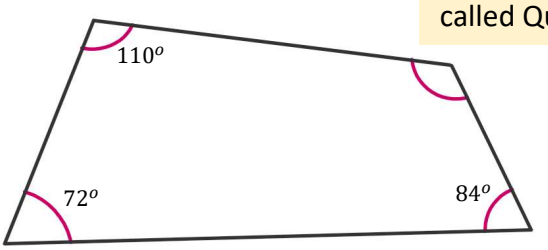
$54 + 82 = 136$

$180 - 136 = 44$

Missing angle is 44^0

Quadrilaterals

Four sided shapes are called Quadrilaterals



Four angles inside any quadrilateral add up to 360^o

Find the missing angle

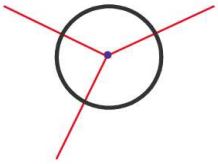
Add the angles together then subtract from 360^o

$110 + 72 + 84 = 266$

$360 - 266 = 94$

Missing angle is 94^0

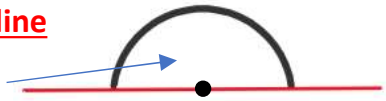
Angles around a point



The three angles add up to 360^o

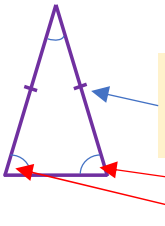
Angles on a straight line

This angle is 180^o



Isosceles triangles

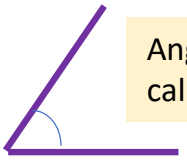
Two angles and two sides are the same in an isosceles triangle.



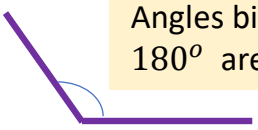
The dashes mean the sides are the same length.

These two angles are the same.

Recognising different angles

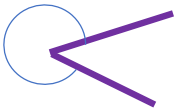


Angles less than 90^o are called **acute** angles.

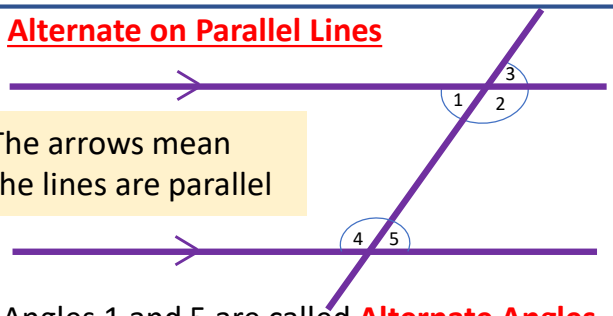


Angles bigger than 90^o and less than 180^o are called **obtuse** angles.

Angles bigger than 180^o are called **reflex** angles.



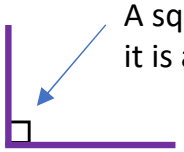
Alternate on Parallel Lines



The arrows mean the lines are parallel

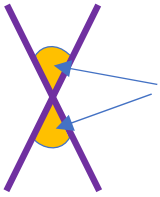
- Angles 1 and 5 are called **Alternate Angles** – they are the same.
- Angles 2 and 5 are called **Allied Angles** – they add up to 180^o.
- Angles 3 and 5 are called **Corresponding Angles** – they are the same.

Right angle notation



A square written in an angle shows it is a right-angle which is 90^o

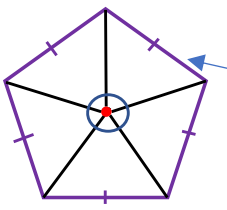
Vertically Opposite angles



Vertically opposite angles are the same.

The other two angles are therefore also the same.

Find each angle at the centre



The dashes mean each side is the same length, which means each of the 5 angles are the same.

The angle around the point is 360^o

$360^o \div 5 = 72^o$

Each angle at the centre is 72^o