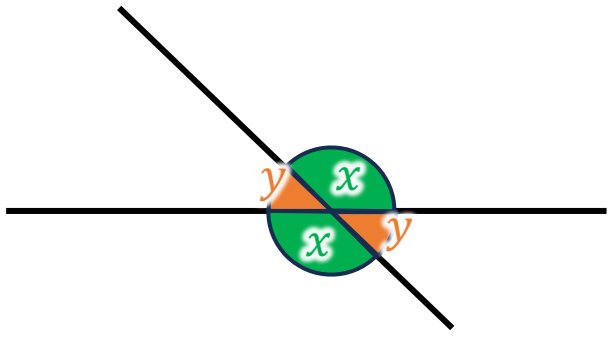
Scan for a GCSE playlist- all topics!

GCSE Angle Facts

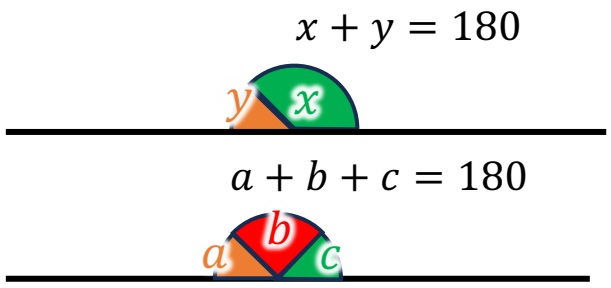
Vertically Opposite Angles

Vertically opposite angles are equal.



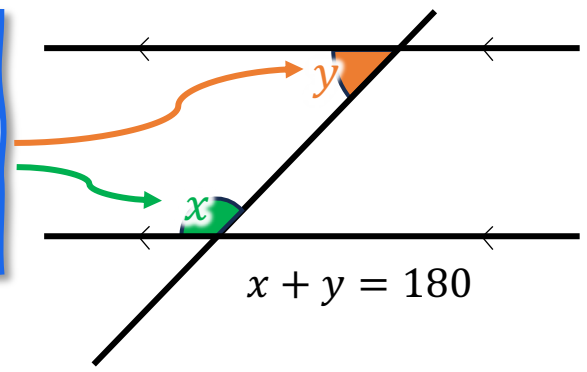
Angles on a Straight Line

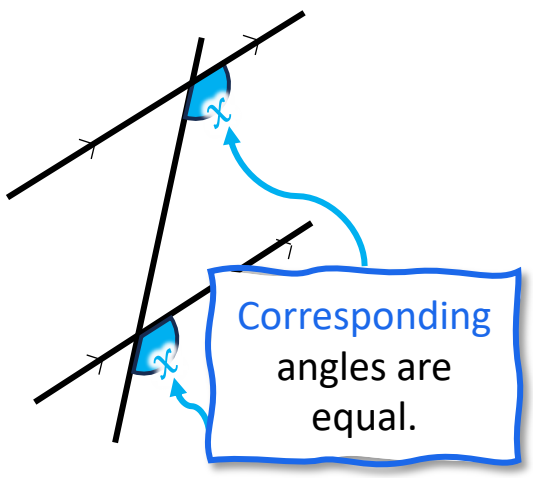
Angles on a straight-line sum to $180°$.



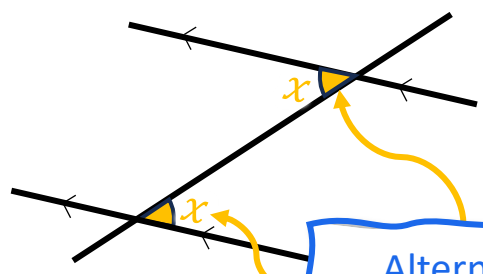
Angles in Parallel Lines

Co-interior angles sum to $180°$.





Corresponding angles are equal.



Alternate angles are equal.

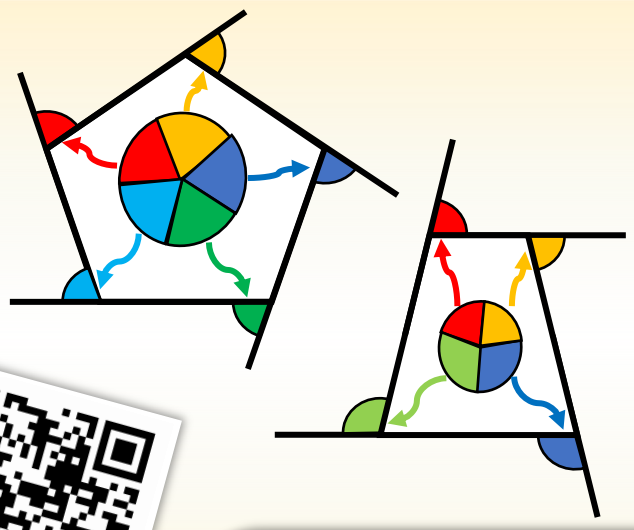
Angles in Polygons

Rule 1

An interior and exterior angle always sum to $180°$.

Rule 2

The exterior angles of a polygon always add up to $360°$.



Scan the QR code to watch a short animation of exterior angles in action!

Example! (Rule 2)

The exterior angle of a regular polygon is $20°$. How many sides does it have?

$$20n = 360°$$

$\div 20$ $\qquad$ $\div 20$

$$n = 18$$

Rule 3

$$180(n-2)°$$

$$Sum\ of\ interior\ angles = 180(number\ of\ sides - 2)°$$

Example! The interior angle of a regular n-sided polygon is $120°$. What is the value of n?

Method 1

$$180(n-2)°$$
$$120n = 180(n-2)°$$
$$120n = 180n - 360$$
$$360 = 180n - 120n$$
$$360 = 60n$$
$$n = 6$$

Method 2

$$Ext + Int = 180$$
$$Ext + 120 = 180$$
$$Ext = 60$$
$$60n = 360°$$
$$n = 6$$

Tip: If a questions asks to find the number of sides, and provides an interior angle, it is easier to solve with the exterior angle.

Click the link below to find more Angles revision:
www.addvancemaths.com/anglefacts/