

Angles

1. What is an acute angle?
2. What is a reflex angle?

Angles

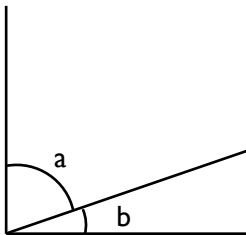
1. What is an obtuse angle?
2. What is a right angle?

Angles

1. What does 'perpendicular' mean?
2. What does 'parallel' mean?

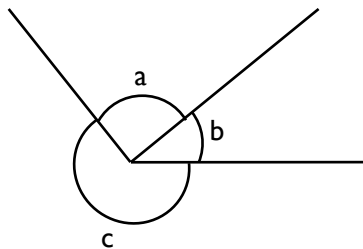
Angles

What do you know about these angles?



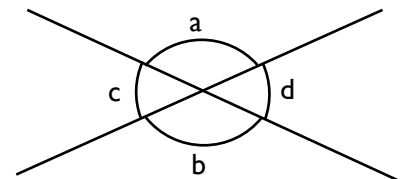
Angles

What do you know about these angles?



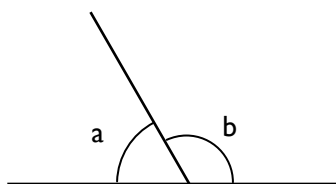
Angles

What do you know about these angles?



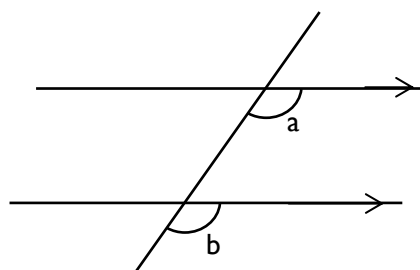
Angles

What do you know about these angles?



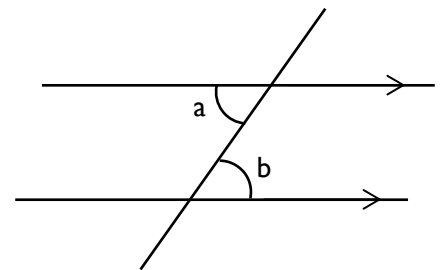
Angles

1. What are these angles called?
2. What is special about them?



Angles

1. What are these angles called?
2. What is special about them?



Angles

1. Perpendicular lines cross or meet at right angles.
2. Parallel lines always stay the same distance apart. They never meet.

Angles

1. An obtuse angle is greater than  $90^\circ$  but less than  $180^\circ$ .
2. A right angle measures  $90^\circ$ .

Angles

1. An acute angle is greater than  $0^\circ$  but less than  $90^\circ$ .
2. A reflex angle is greater than  $180^\circ$  but less than  $360^\circ$ .

Angles

2 straight lines that cross contain **vertically opposite** angles.

Opposite angles are equal.

$$a = b \quad c = d$$

Angles

**Angles at a point** sum to  $360^\circ$ .

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

Angles

These angles sum to  $90^\circ$  and are known as **complementary angles**.

$$a + b = 90^\circ$$

Angles

1. Known as **alternate angles**.
2. They are equal.

$$a = b$$

(Hint: look out for the 'Z' shape)

Angles

1. Known as **corresponding angles**.
2. They are equal

$$a = b$$

(Hint: look out for the 'F' shape)

Angles

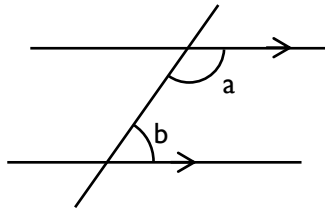
Known as **supplementary angles** or **angles on a line**.

They add up to  $180^\circ$ .

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

### Angles

1. What are these angles called?
2. What is special about them?

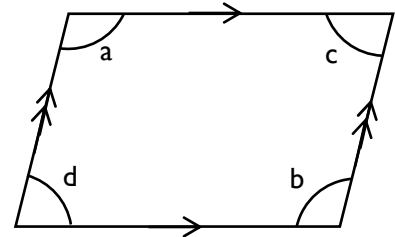


### Angles

1. What is the sum of interior angles in a triangle?
2. What is the sum of interior angles in a quadrilateral?

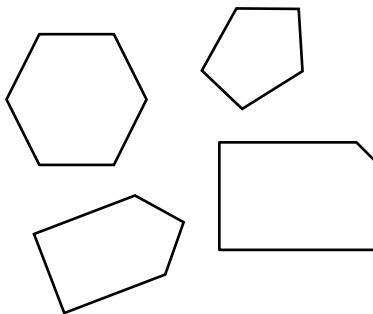
### Angles

What do you know about the angles in a parallelogram?



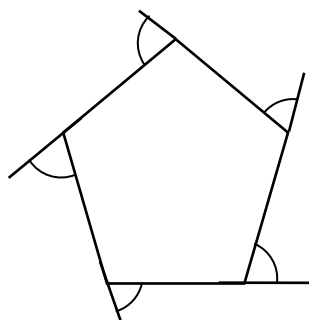
### Angles

What do the interior angles of a polygon add up to?



### Angles

What do the exterior angles of a polygon add up to?

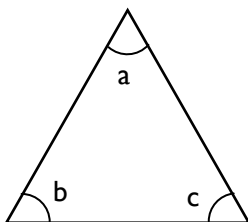


### Angles

If you know the exterior angle of a regular polygon, how can you work out the number of sides the polygon has?

### Angles

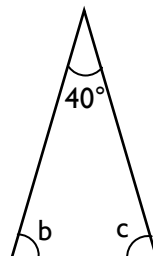
This is an equilateral triangle. Calculate angles a, b and c.



### Angles

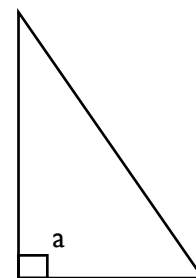
This is an isosceles triangle. One angle is  $40^\circ$ .

Calculate angles b and c.



### Angles

What size is the angle marked a?



Angles

Opposite angles are equal.

$$a = b \quad c = d$$

All four angles sum to  $360^\circ$ .

Angles

1. The angles in a triangle add up to  $180^\circ$ .

2. The angles in a quadrilateral add up to  $360^\circ$ .

Angles

1. Known as **allied angles**.
2. They are supplementary (add up to  $180^\circ$ ).

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

(Hint: look out for the 'C' shape)

Angles

Use the formula:

$$n = 360^\circ \div \text{exterior angle}$$

where n is the number of sides.

For example, if a polygon has an exterior angle of  $60^\circ$ :

$$n = \frac{360^\circ}{60^\circ}$$

$$n = 6 \text{ sides}$$

Angles

The exterior angles of any polygon add up to  $360^\circ$ .

Angles

Use the formula:

$$\text{sum of angles} = (n-2) \times 180^\circ$$

where n is the number of sides.

For example, for a pentagon (5 sides):

$$(5 - 2) \times 180 = 540^\circ$$

Angles

$$90^\circ$$

The square angle symbol shows it is a right angle.

Angles

$$180^\circ - 40^\circ = 140^\circ$$

Angles b and c sum to  $140^\circ$ .  
The triangle is isosceles so b and c are equal.

$$140^\circ \div 2 = 70^\circ$$

$$b = c = 70^\circ$$

Angles

In an equilateral triangle, the angles are the same size.

$$180^\circ \div 3 = 60^\circ$$

$$a = b = c = 60^\circ$$

This is true for any equilateral triangle.

## Teaching notes

This pack contains 18 flash cards (nine per double-sided sheet).

Print or photocopy the sheets back to back, so the questions match up with the answers on the other side. It may be best to print onto thin/scrap paper first to check alignment, before printing onto thicker card or coloured paper.

Collect the cards together into a set with a treasury tag, paper clip, envelope, etc.

Students should be encouraged to take ownership of their cards, either by colour-coding, adding notes, or adding their own cards to the pack.

Cards can be used for independent revision or a 'test' with a friend asking the questions.