



## Vocabulary

angle
right angle
acute
obtuse
horizontal
vertical
diagonal
parallel
perpendicular
two-dimensional
polygon
line of symmetry
reflection
mirror line
isosceles
equilateral
scalene
quadrilateral
rhombus
parallelogram
trapezium

## Triangles

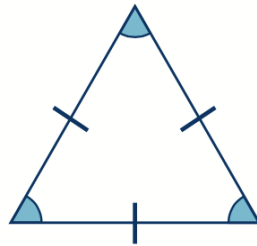
## Year Four Properties of Shape

## Quadrilaterals

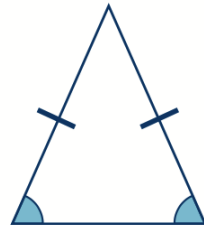


Triangles have 3 sides and 3 vertices. The total of the angles in a triangle is  $180^\circ$ .

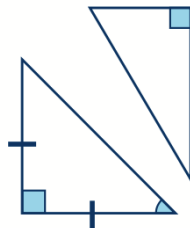
A quadrilateral is a polygon with four sides.



An equilateral triangle is a regular polygon. It has sides of equal length and each angle is  $60^\circ$ .

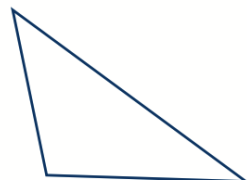


An isosceles triangle has two sides of equal length and two angles of equal size.

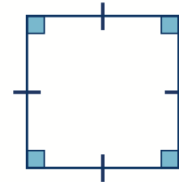


A right-angled triangle always has one  $90^\circ$  angle.

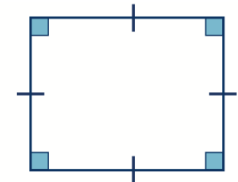
It can be isosceles or scalene.



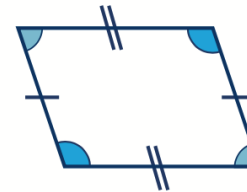
A scalene triangle has no equal sides or angles.



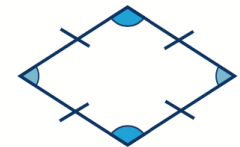
A square has four sides of equal length and four right angles ( $90^\circ$ ). A square is also a rectangle, a rhombus and a parallelogram.



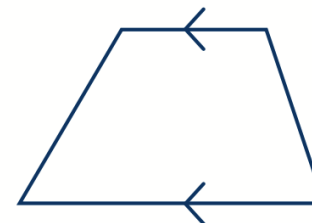
A rectangle has two pairs of parallel, equal sides and four right angles. A rectangle is also a parallelogram.



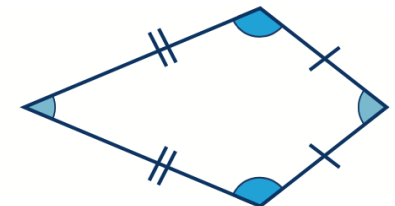
A parallelogram has two pairs of parallel, equal sides and opposite equal angles.



A rhombus has four sides of equal length and opposite equal angles. A rhombus is also a parallelogram.



A trapezium only has one pair of opposite parallel sides.



A kite has two pairs of adjacent equal sides and one pair of opposite equal angles.

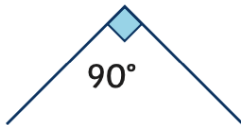
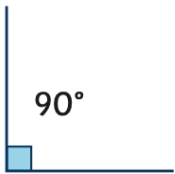


## Angles

An angle is created when two straight lines meet at a point or intersect.

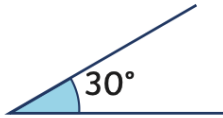
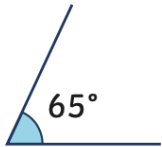
### Right angle

The intersection of perpendicular lines creates a right angle.



### Acute angle

Any angle measuring more than 0 degrees and less than 90 degrees is acute.



### Obtuse angle

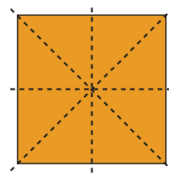
Any angle measuring more than 90 degrees but less than 180 degrees is obtuse.



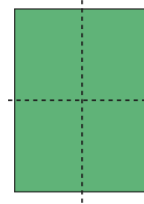
## Lines of symmetry

Lines of symmetry may be horizontal, vertical or diagonal. Some shapes will have no lines of symmetry and some 2D shapes will have multiple lines of symmetry.

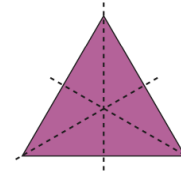
A square has four lines of symmetry.



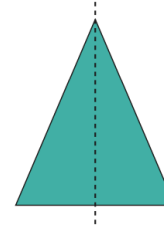
A rectangle has two lines of symmetry.



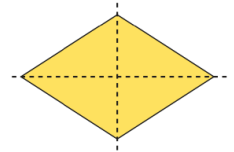
An equilateral triangle has three lines of symmetry.



An isosceles triangle has one line of symmetry.



A rhombus has two lines of symmetry.



## Symmetric figures

Patterns and shapes can be reflected in a mirror line. Mirror lines can be vertical, horizontal or diagonal.

