

Learning Objectives

- ❖ To compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes
- ❖ To identify acute and obtuse angles and compare and order angles up to two right angles by size
- ❖ To identify lines of symmetry in 2-D shapes presented in different orientations
- ❖ To complete a simple symmetric figure with respect to a specific line of symmetry.
- ❖ To describe positions on a 2-D grid as coordinates in the first quadrant
- ❖ To describe movements between positions as translations of a given unit to the left/right and up/down
- ❖ To plot specified points and draw sides to complete a given polygon

Angles

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

Right angle

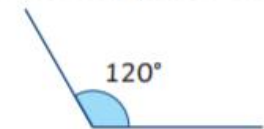
The intersection of perpendicular lines creates a right angle.

**Acute angle**

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

**Obtuse angle**

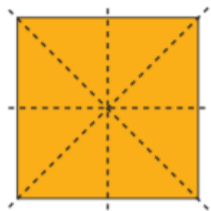
Any angle measuring more than 90 degrees but less than 180 degrees is obtuse.



Lines of Symmetry

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

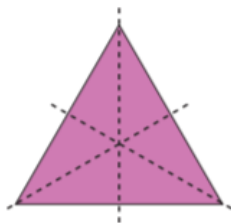
A square has four lines of symmetry.



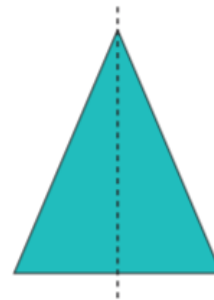
A rectangle has two lines of symmetry.



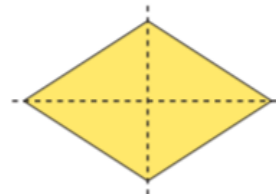
An equilateral triangle has three lines of symmetry.



An isosceles triangle has one line of symmetry.



A rhombus has two lines of symmetry.

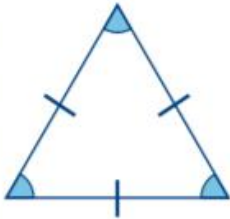


Key Vocabulary

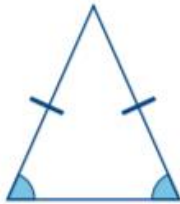
Quarter turn
 Half turn
 Three-quarter turn
 Angle
 Right-angle
 Acute
 Obtuse
 Horizontal
 Vertical
 Diagonal
 Parallel
 Perpendicular
 Polygon
 Two-dimensional
 Three-dimensional
 Flat face
 Curved surface
 Edge
 Curved edge
 Vertex
 Vertices
 Apex
 Line of symmetry
 Reflection
 Mirror line
 Isosceles
 Equilateral
 Scalene
 Quadrilateral
 Parallelogram

Triangles

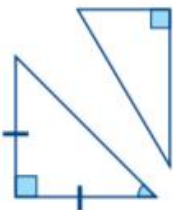
Triangles have 3 sides and 3 vertices. The total of the angles in a triangle is 180° .



An equilateral triangle is a regular polygon. It has sides of equal length and each angle is 60° .

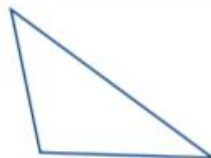


An isosceles triangle has two sides of equal length and two angles of equal size.



A right-angled triangle always has one 90° angle.

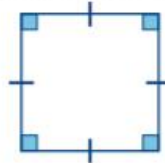
It can be isosceles or scalene.



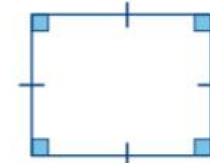
A scalene triangle has no equal sides or angles.

Quadrilaterals

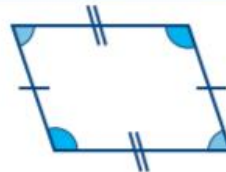
A quadrilateral is a polygon with four sides.



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



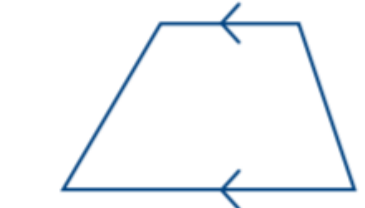
A rectangle has two pairs of parallel, equal sides and four right angles. A rectangle is also a parallelogram.



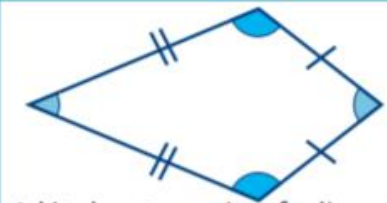
A parallelogram has two pairs of parallel, equal sides and opposite equal angles.



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.

What I Should Already Know:

- How to draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them
- How to recognise angles as a property of shape or a description of a turn
- How to identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn
- How to identify whether angles are greater than or less than a right angle
- How to identify horizontal and vertical lines and pairs of perpendicular and parallel lines