

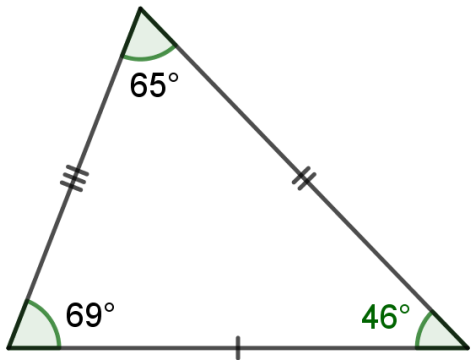
GEOMETRY OF 2-D SHAPES**OUTCOMES:**

- Identify and write clear definitions of triangles in terms of the sides and angles.
- Distinguish between scalene, equilateral, isosceles and right-angled triangles.
- Identify and write clear definitions of quadrilaterals in terms of their sides and angles.
- Distinguish between a parallelogram, rectangle, square, rhombus, trapezium and kite.

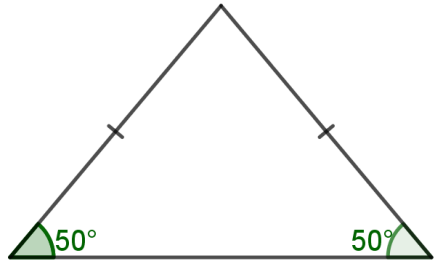
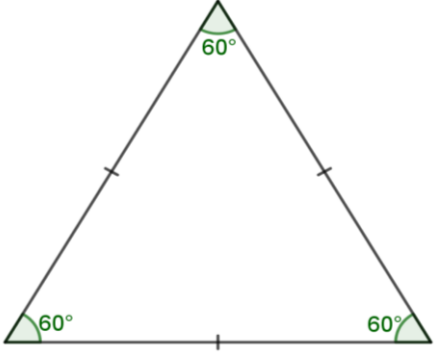
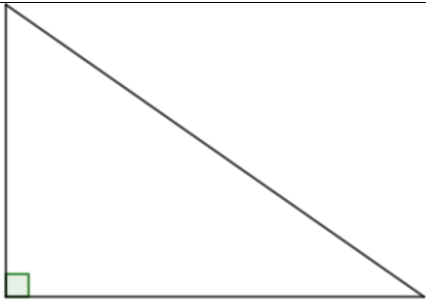
TRIANGLES

A triangle is a closed 2D shape with three straight sides. We can classify or name different types of triangles according to the lengths of their sides and according to the sizes of their angles.

IDENTIFY AND CLASSIFY TRIANGLES

Classification of triangle	Properties	Drawing
Scalene triangle	• No equal sides • No equal angles	

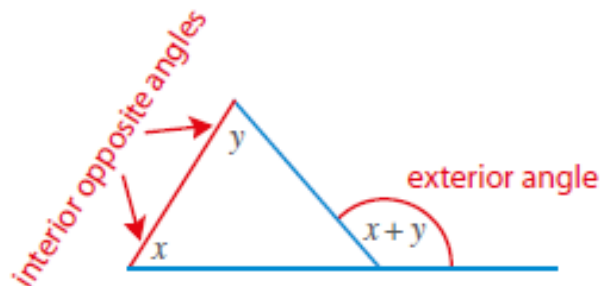
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Isosceles triangle	• Two equal sides • Two equal angles	
Equilateral triangle	• Three equal sides • Three angles each equal to 60°	
Right-angled triangle	• One angle equals to 90°	

ANGLE PROPERTIES OF TRIANGLES

Triangles have two important properties which are true for all triangles:

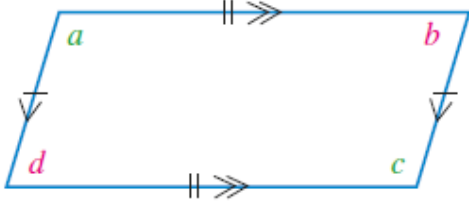
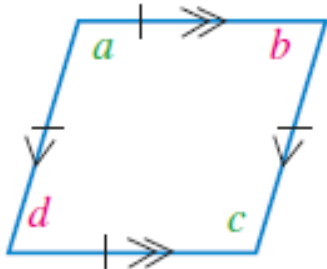
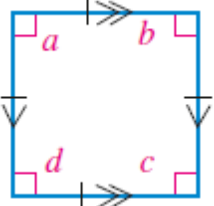
- The sum of the interior angles is equal to 180° .
- The exterior angle of a triangle is equal to the sum of the two interior opposite angles.



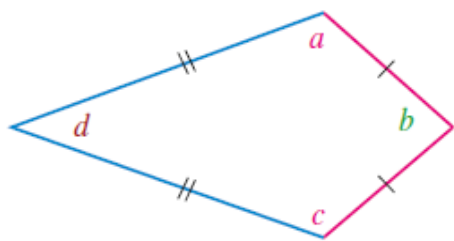
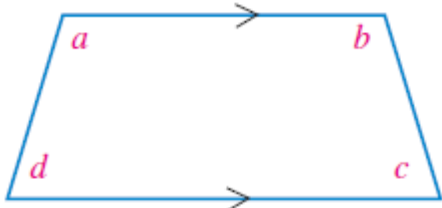
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IDENTIFY AND CLASSIFY QUADRILATERALS

A quadrilateral is a 2D plane with four straight lines, joined together to form **FOUR** corners. Quadrilaterals can be identified by the **SIZES** of their **ANGLES OR LENGTHS** of their sides. The **SIX** different quadrilaterals are summarised below.

Classification of triangle	Properties	Drawing
Parallelogram	Both pairs of opposite sides parallel and equal $\angle a = \angle c$ (opposite angles) $\angle b = \angle d$ (opposite angles)	
Rhombus	Both pairs of opposite sides parallel and all FOUR sides equal $\angle a = \angle c$ (opposite angles) $\angle b = \angle d$ (opposite angles)	
Rectangle	Both pairs of opposite sides parallel and equal All angles equal to 90°	
Square	Both pairs of opposite sides parallel All sides equal All angles equal to 90°	

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Kite	Two pairs of adjacent sides equal $\angle a = \angle c$ (opposite angles)	 A kite-shaped quadrilateral with two pairs of adjacent sides marked as equal with double tick marks (blue sides) and single tick marks (pink sides). The top-left angle is labeled d and the bottom-right angle is labeled c. The top-right angle is labeled a and the bottom-left angle is labeled b.
Trapezium	One pair of opposite sides parallel $\angle a + \angle d = 180^\circ$ $\angle b + \angle c = 180^\circ$	 A trapezium with two horizontal parallel sides indicated by arrows. The top-left angle is labeled a, the top-right angle is labeled b, the bottom-left angle is labeled d, and the bottom-right angle is labeled c.