

Maths - Year 4

Geometry 3: Investigating angles in shapes

Key Vocabulary

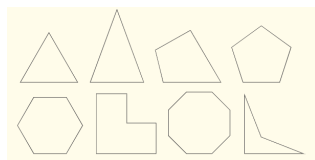
Regular polygon	A polygon with congruent sides (equal) and equal angles.
Irregular polygon	A polygon without equal sides or angles.
Side	A straight line joining the vertices of a polygon.
Vertex/vertices	A point where two sides meet in a flat shape, or a point where three or more edges meet in a 3D shape.
Straight angle	An angle exactly 180° .
Right angle	An angle exactly 90° .
Acute angle	An angle smaller than 90° .
Obtuse angle	An angle larger than 90° .
Turn	To rotate a shape or object around a fixed point. Quarter turn (90°), half turn (180°), three-quarter turn (270°), full turn (360°).
Tessellation/tessellate	Fitting shapes into a pattern where the shapes touch with no gaps.
Align	To arrange in a line, or to align edges or centres according to a position.

Mathematical Skills

- Name polygons according to the number of sides or vertices.
- Recognise and test whether angles in polygons are acute, right, obtuse, or of equal size.
- Order angles by size.
- Recognise tessellations.
- Approach problems systematically.

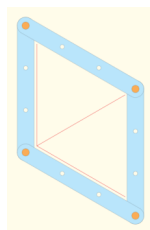
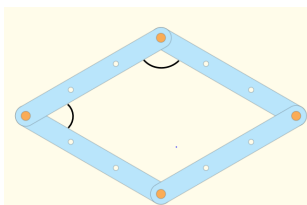
Mathematical Methods

- Investigating types of angle in polygons.

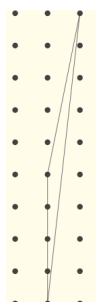
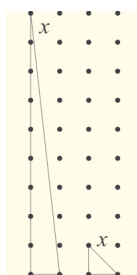


Name	Number of sides	Number of vertices
Triangle	3	3
Quadrilateral	4	4
Pentagon	5	5
Hexagon	6	6
Heptagon	7	7
Octagon	8	8
Nonagon	9	9
Decagon	10	10
Hendecagon	11	11
Dodecagon	12	12

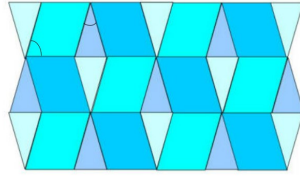
- Angles in regular polygons.



- Investigating angles in a triangle.

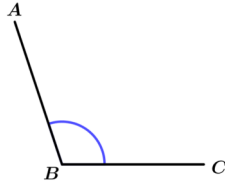


- Investigating angles in tessellations.



Can you..?

- Identify the type of angle.



- Identify the regular polygons.



- Draw a triangle with 3 acute angles. What type of triangle have you created?