Geometry
Properties of Shape

Year 5

This acute angle is 50°

This obtuse angle is 130°

An acute angle is less than 90°

An obtuse angle is more than 90° and less than 180°

The sum of the angles at a point on a straight line is 180°

The sum of the angles at a point is 360°

What size is the reflex angle?

The acute angle is 40°

A reflex angle is more than 180° and less than 360°

The reflex angle is 360° – 40° = 320°

protractor acute obtuse reflex degrees regular

Regular polygons have all sides equal and all angles equal

Year 6

The sum of the angles at a point on a straight line is 180°

The sum of the angles at a point is 360°

Vertically opposite angles are equal

vertically opposite radius diameter circumference

quadrilaterals

at least 2 lines of symmetry

Parts of circle

circumference

diameter radius

The sum of the angles in a triangle is 180°

The sum of the angles in a quadrilateral is 360°

properties symmetrical parallel prism pyramid

curved surface

no curved surface

prism

not a prism

The net of a cube has 6 squares that fold to make a cube.

The net of a cuboid has 6 rectangles that fold to make a cuboid.

The net of a pyramid has triangles and a polygon that can be folded to make a pyramid.

The net of a prism has rectangles and two identical polygons that can be folded to make a prism.

prism pyramid net polygon

Year 4

Equilateral Triangles – 3 equal sides

parallelogram – opposite sides parallel

rectangles – 4 right angles

squares – 4 equal sides

rhombus – 4 equal sides

Quadrilaterals – 4 straight sides

Trapezium – exactly one pair of parallel sides

Isosceles Triangles – 2 equal sides

Kites – 2 pairs of equal adjacent sides

Scalene Triangles – all sides different

trapezium rhombus kite adjacent scalene isosceles

Year 5

An acute angle is smaller than a right angle

An obtuse angle is greater than a right angle

obtuse angle

acute angle acute angle

acute angle acute angle

obtuse angle

acute angle obtuse angle

Smallest angle Largest angle

The greater the amount of turn the larger the angle

angle acute obtuse right angle

The angle is the amount of turn

The angle is less than a right angle

The angle is more than a right angle

One right angle makes one quarter turn

2 right angles make one half turn

3 right angles make three quarters of a turn

This shape has 2 right angles

This shape has 4 angles

angle right angle turn quarter

Year 3

horizontal

vertical

parallel

perpendicular

parallel

parallel

perpendicular

Polygons have all straight sides

horizontal vertical parallel perpendicular polygon prism pyramid

Pyramids

face vertex edge

Prisms

Rectangles are 2D shapes with 4 straight sides and 4 right angles

Triangles are 2D shapes with 3 straight sides

Circles are 2D shapes where the distance from the centre to the edge is always the same

Squares are special rectangles with all the sides equal

rectangle triangle square circle side straight

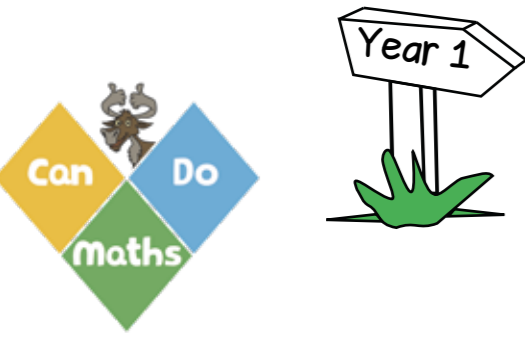Pentagons – 5 straight sides

Hexagons – 6 straight sides

Octagons – 8 straight sides

A vertex is the corner of a 3D shape. This cube has 8 vertices.

An edge joins 2 vertices. This cube has 12 edges.

The flat surface is a face. This cube has 6 faces.

pentagon hexagon octagon vertex edge face

Year 1

Cuboids are 3D shapes with 6 rectangle faces

Pyramids have a base and triangle faces.

Spheres are 3D shapes like balls

Cubes are special cuboids with 6 square faces

cuboid cube cone pyramid sphere

Year 2

A cylinder is a 3-D shape with circles at both ends

A cone is a 3-D shape with a circular base and a curved surface that meets at a point

All faces are squares

Some faces are triangles

This face is a pentagon

Clockwise

Anti-clockwise

1 right angle turn clockwise

3 right angle turns or 3 quarter turns anti-clockwise

2 right angle turns or 1 half turn anti-clockwise

Full or whole turn clockwise

cylinder cone face clockwise anti-clockwise