



Maths

Calculation Policy

Shape

2024

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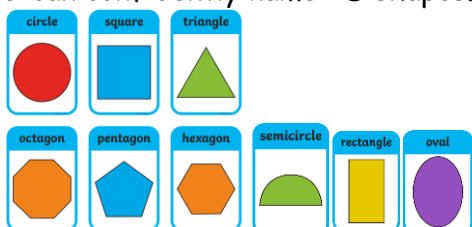
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EYFS

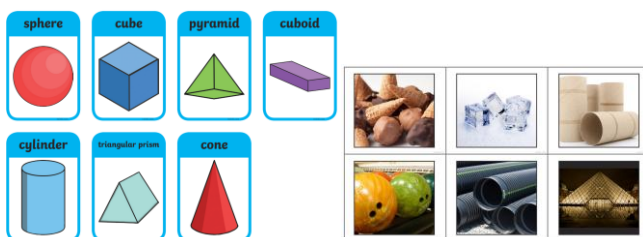
- I can talk about 2D shapes using the correct mathematical language
- I can confidently name 2D shapes.



2D Vocabulary: sides, corners, curved, straight

- I can confidently recognise and name 3D shapes
- I can use correct mathematical language to describe 3D shapes
- I can find 3D shapes in the environment
- I can begin to find 2D shapes within 3D

3D Vocabulary: vertice, vertices, edges, faces, curved, straight



- I can compose and decompose shapes so that children recognise a shape can have other shapes within it

Year One and Two (Both taught in Year One)

- 0→ I can recognise common 2D shapes including squares, circles and triangles
- 0→ I can name common 2D shapes
- 0→ I can read and write the names of 2D shapes
(*where appropriate*)
- 0→ I can recognise and name common 2D shapes in different orientations
 - Using concrete resources
 - Images
 - Everyday objects
- 0→ I can identify and describe properties of 2D shapes
 - 0→ Sides
 - 0→ Corners

0→ Lines of symmetry

0→ I know that rectangles are not always similar

0→ I know that triangles are not always similar

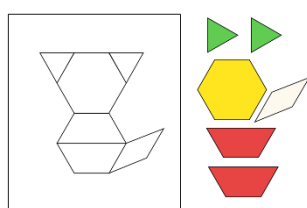
0→ I can compare and sort common 2D shapes

0→ Using shapes

0→ Using everyday objects

0→ I can compose 2D shapes from smaller shapes

0→ Using a template



0→ Using different shapes



0→ I can recognise :

0→ I can name 3D sh

0→ I can read and write the names of 3D shapes
(where appropriate)

0→ I can recognise and name 3D shapes in different orientations

0→ I can identify and describe properties of 3D shapes

0→ Edges

0→ Vertices

0→ Faces

0→ I can identify 2D shapes on the surface of 3D shapes

0→ I can compare and sort common 2D shapes

0→ Using shapes

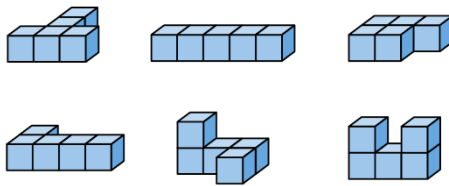
0→ Using everyday objects

0→ I know that cubes are not always similar

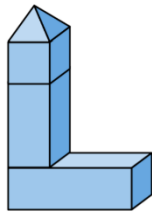
0→ I know that pyramids are not always similar

➡ I can compose 3D shapes from smaller shapes

➡ Using cubes



➡ Using different 3D shapes



Year Three and Four (Both taught in Year Three)

➡ I can identify horizontal and vertical lines

➡ I can identify perpendicular lines and parallel lines

➡ I can recognise angles as a property of shape or a description of a turn

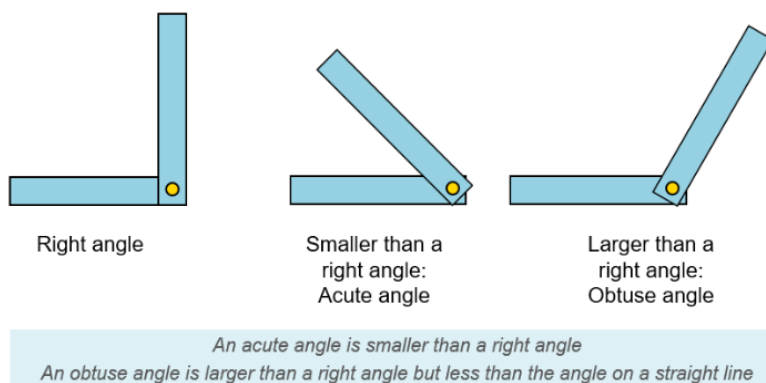
➡ I can identify right angles

➡ I can recognise that two right angles make a half-turn

➡ I can recognise that three right angles make three quarters of a turn

➡ I can recognise that four right angles make a complete turn

➡ I can identify whether an angle is greater than or less than a right angle



➡ I can identify acute and obtuse angles

➡ Angle eaters



➡ I can compare and order angles up to two right angles by size

➡ I can recognise common 2D shapes including squares, circles and triangles

➡ I can name common 2D shapes

➡ I can read and write the names of 2D shapes

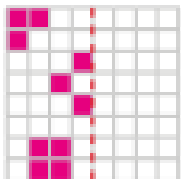
➡ I can recognise and name common 2D shapes in different orientations

➡ I can identify and describe properties of 2D shapes

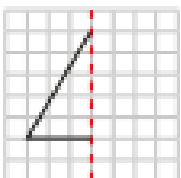
➡ I know that rectangles are not always similar

- 0→ I know that triangles are not always similar
- 0→ I can compare and sort common 2D shapes
- 0→ I can compose 2D shapes from smaller shapes
- 0→ I can describe the properties of 2D shapes using accurate language
 - 0→ Types of angles
 - 0→ Types of lines (perpendicular or parallel)
 - 0→ Sides
 - 0→ corners
- 0→ I can draw 2D shapes
- 0→ I can compare geometric shapes based on their properties and sizes
 - Including:
 - 0→ Quadrilaterals → extend this to classifying different quadrilaterals (parallelogram, rhombus, trapezium etc)
 - 0→ Triangles → extend this to classifying different triangles (isosceles, equilateral, scalene)
- 0→ I can identify lines of symmetry in 2D shapes presented in different orientations
- 0→ I can complete a simple symmetric figure with respect to a specific line of symmetry

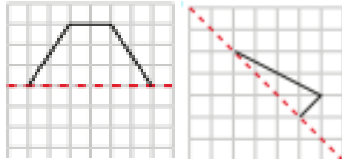
1) Shading squares



2) Drawing the rest of a shape



3) Changing the orientation of the line of symmetry



- 0 ➡ I can recognise 3D shapes
- 0 ➡ I can name 3D shapes
- 0 ➡ I can read and write the names of 3D shapes
- 0 ➡ I can recognise and name 3D shapes in different orientations
- 0 ➡ I can identify and describe properties of 3D shapes
- 0 ➡ I can identify 2D shapes on the surface of 3D shapes
- 0 ➡ I can compare and sort common 2D shapes
- 0 ➡ I know that cubes are not always similar
- 0 ➡ I know that pyramids are not always similar
- 0 ➡ I can compose 3D shapes from smaller shapes
- 0 ➡ I can make 3D shapes using modelling materials
- 0 ➡ I can recognise 3D shapes in different orientations and describe them
- 0 ➡ I can describe the properties of 3D shapes using accurate language

Year Five and Six (Both taught in Year Five)

- 0 ➡ I can identify horizontal and vertical lines
- 0 ➡ I can identify perpendicular lines and parallel lines
- 0 ➡ I can recognise angles as a property of shape or a description of a turn
- 0 ➡ I can identify right angles
- 0 ➡ I can recognise that two right angles make a half-turn

- 0 ➡ I can recognise that three right angles make three quarters of a turn
- 0 ➡ I can recognise that four right angles make a complete turn
- 0 ➡ I can identify whether an angle is greater than or less than a right angle
- 0 ➡ I can identify acute and obtuse angles
- 0 ➡ I can compare and order angles up to two right angles by size
- 0 ➡ I can compare the size of angles where there is a clear visual difference

Language focus

"D is the smallest angle. It is an acute angle."

"C is the largest angle. It is a reflex angle."

- 0 ➡ I can use the terms '*acute*', '*obtuse*' and '*reflex*' when describing the size of angles or amount of rotation

- 0 ➡ Relate this back to right angles



An acute angle is smaller than a right angle

An obtuse angle is larger than a right angle but less than the angle on a straight line

A reflex angle is larger than the angle on a straight line, but less than the angle in a full turn.

Language focus

"An acute angle is less than 90° ."

"An obtuse angle is greater than 90° but less than 180° ."

"A reflex angle is greater than 180° but less than 360° ."

- 0 ➡ I can use a unit called degrees as a standard unit to measure angles

To measure an angle we measure the amount of 'turn' between two lines.

Remember the size of the lines/sides isn't important. We can have long lines which have very little turn between them, or short sides that have a lot of turn.

In fact, we use a unit called a 'degree' to measure how much turn there is between two lines, and how big angles are at vertices.

Let me show you how big 1 degree is:



0→ I can estimate the size of angles in degrees using angle sets

Before pupils learn to use protractors, they should learn to estimate and approximate common angles, and angles that are close to them, including 90° , 180° , other multiples of 10° , and 45° . They should use sets of 'standard angle' measuring tools (for example, cut out from card) for support in approximating, and to check estimates.

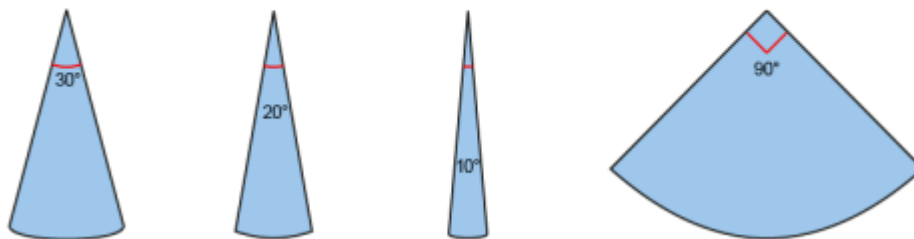
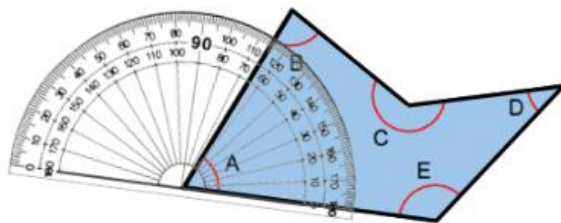


Figure 197: a selection of 'standard angle' measuring tools

0→ I can measure the size of angles accurately using a protractor (up to 180 degrees)

- 1) Just between lines
- 2) Angles within shapes



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- What is your estimate for the size of angle A?
- What are the key features of an angle measurer (protractor)?
- What important parts of the protractor need to be positioned accurately?
- What do you notice about the scales on the protractor? Which should be used? Why?
- What is the size of angle A?

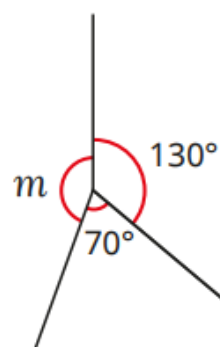
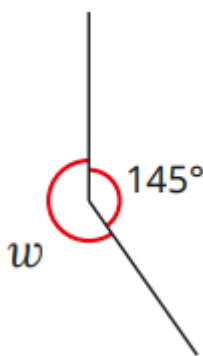
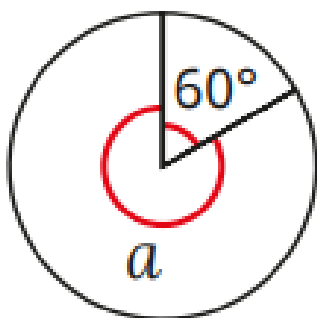
Angle A is an acute angle. It is 66° .

- Repeat measuring other internal angles and those of other shapes given to or drawn by children.

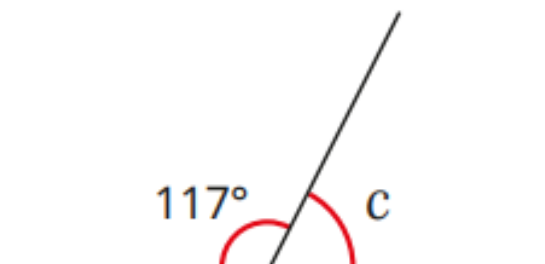
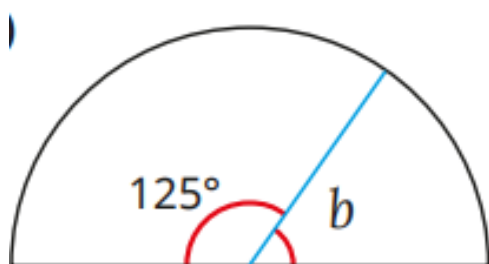


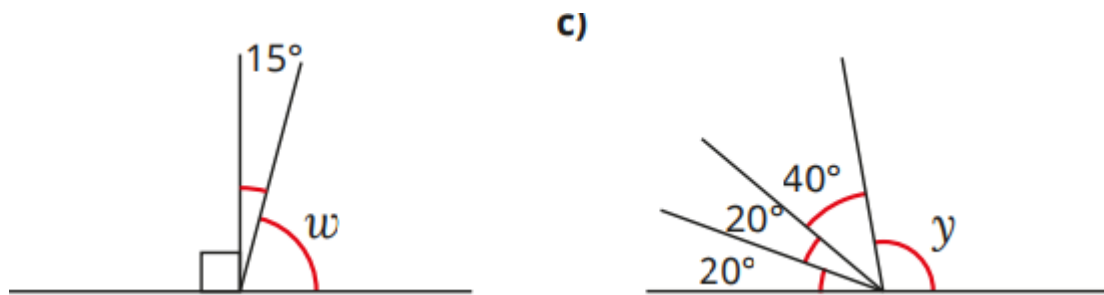
➡ I can draw lines and angles accurately

➡ I know angles around a point equal 360 degrees



➡ I can calculate angles on a straight line





- ➔ I can calculate angles in a shape
- ➔ I can describe the properties of 2D shapes using accurate language
 - Types of angles
 - Types of lines (perpendicular or parallel)
 - Sides
 - corners
- ➔ I can draw 2D shapes
- ➔ I can compare geometric shapes based on their properties and sizes
 - Including:
 - Quadrilaterals → extend this to classifying different quadrilaterals (parallelogram, rhombus, trapezium etc)
 - Triangles → extend this to classifying different triangles (isosceles, equilateral, scalene)
- ➔ I can identify regular and irregular polygons
- ➔ I can recall the properties of regular and irregular polygons
- ➔ I can identify lines of symmetry in 2D shapes presented in different orientations
- ➔ I can complete a simple symmetric figure with respect to a specific line of symmetry
- ➔ I can make 3D shapes using modelling materials
- ➔ I can recognise 3D shapes in different orientations and describe them
- ➔ I can describe the properties of 3D shapes using accurate language
- ➔ I can solve problems about 2D and 3D shapes