Year 5 Starlings Mathematics Summer 1

Geometry
Shape
Position & Direction

Number

Identifying Angles and Using a Protractor

Acute Angles
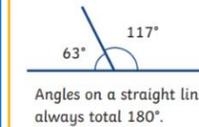Any angle that measures less than 90° is called an **acute** angle.

Obtuse Angles
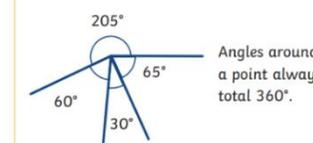Any angle that measures greater than 90° and less than 180° is called an **obtuse** angle.

Reflex Angles
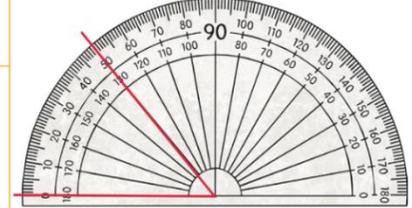Any angle that measures greater than 180° is called a **reflex** angle.

117° 63°
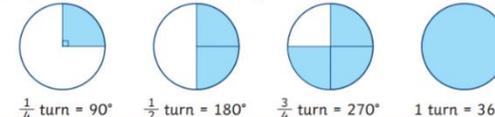Angles on a straight line always total 180°.

205° 65° 60° 30°
Angles around a point always total 360°.

Measuring and Drawing Angles
To measure angles, we use a protractor. Look carefully at how the numbers on the scale count from 0° to 180° in both directions.

Multiples of 90° can be used as descriptions of a turn.

$\frac{1}{4}$ turn = 90° $\frac{1}{2}$ turn = 180° $\frac{3}{4}$ turn = 270°   1 turn = 360°

Key Vocabulary

Key Vocabulary	Definition
Acute	An angle measuring less than 90 degrees.
Angles	The space between 2 intersecting (crossing) lines.
Cuboid	A 3-D shape with 6 rectangular faces.
Degrees	The unit for measuring the size of an angle.
Estimate	To make an educated guess based
Irregular	A shape that has sides, faces or angles that are all different sizes.
Obtuse	An angle between 90 degrees and 180 degrees.
Polygon	A shape with three or more straight sides.
Protractor	An instrument used to measure angles (in degrees.)
Reflex	An angle between 180 degrees and 360 degrees.
Regular	A shape that has all equal sides and angles.
Compass	An item used in navigation that shows direction.
Coordinates	Shows the exact position of a point on a graph.
Directions	The line or direction something is going.
Horizontal	Running parallel to the horizon (left to right).
Mirroring	Where a shape is 'flipped' over the line of reflection to face the opposite direction.
Symmetry	Where one half is a mirror image of the other.
Translation	To move an object in any direction without rotating it.
Vertical	At right angles to the horizon (top to bottom).
Complement	The amount you must add to a number to make a whole number.
Tenth	One of ten equal parts. As a decimal: 0.1
Thousandths	One of a thousand equal parts. As a decimal: 0.001

(Left margin labels: Angles / Position and Direction / Decimals)

Lines of Symmetry

Lines of symmetry may be horizontal, vertical, or diagonal. Some 2D shapes have no lines of symmetry whilst others have multiple lines of symmetry.
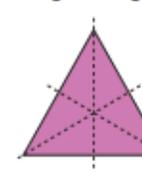
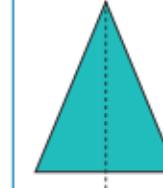A square has four lines of symmetry.
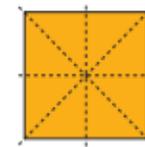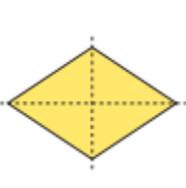
A rectangle has two lines of symmetry.

An equilateral triangle has three lines of symmetry.

An isosceles triangle has one line of symmetry.

A rhombus has two lines of symmetry.

Regular and Irregular Polygons

	Regular Polygons		Irregular Polygons	
With odd number of sides				
With even number of sides				

2D shapes have two dimensions: width and height.

2D shapes are completely flat and cannot be physically held, because they have no depth.

A regular shape is a 2D shape where all interior (inside) angles and sides

Adding and Subtracting Decimals

$$0.8 + 0.001 = 0.801$$

$$1.031 - 0.23 = 0.801$$

$$0.4005 + 0.4005 = 0.801$$

The place value of the digits is important. Tenths digits must be added to tenths digits.

Like other addition, exchanging is important.