Unit 12
Geometry – properties of shapes

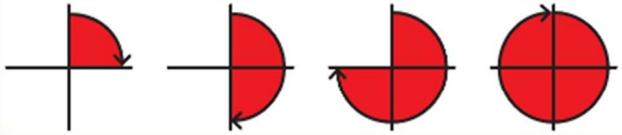
In this unit we will ...

- Measure angles in degrees
- Learn to measure angles with a protractor
- Draw lines and angles accurately
- Calculate missing angles
- Learn about angles in shapes
- Recognise, draw and label parallel and perpendicular lines
- Accurately identify regular and irregular polygons
- Recognise different 3D shapes from different views

We will need some maths words. Which one can mean an angle that is a quarter turn?

angle | whole turn | right angle | acute angle | obtuse angle | degrees (°) | interior angle | clockwise | anticlockwise | parallel | perpendicular | regular | irregular | top view | plan view | side view

Do you remember how to measure angles as turns? How do you describe the direction of the turn?



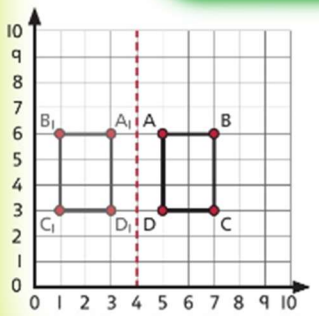
We will need this too! Can you see where the mark for 55 mm is?

Unit 13

Geometry – position and direction

In this unit we will ...

- Read and plot coordinates on a grid
- Find the coordinates of vertices of shapes on a grid
- Learn to reflect simple 2D shapes in vertical and horizontal lines
- Plot and find coordinates of a reflected point on a grid
- Use coordinates to calculate new points of a reflected shape
- Translate 2D shapes on grid paper
- Use coordinates to find translations

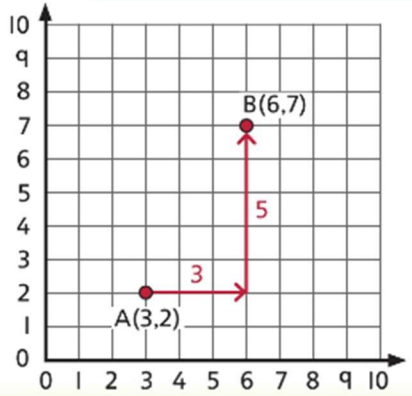


We will be reflecting shapes in a mirror line. What are the coordinates of this reflected shape? Do you notice anything about the reflection?

Here are some maths words we will be using. Are any of these words new?

reflection | translation | vertex | vertices | coordinates | mirror line | horizontal | vertical

We need to be able to work out the distance between coordinates on a grid. How far apart are the coordinates A and B?



Unit 14
Decimals

In this unit we will ...

- Add and subtract decimals with the same number of digits after the decimal point
- Add and subtract decimals with a different number of digits after the decimal point
- Add whole numbers to decimals
- Find decimal complements to 1
- Subtract decimals from whole numbers
- Solve problems involving addition and subtraction of decimals, including money problems
- Multiply and divide decimals and whole numbers by 10, 100 and 1,000

We will need some maths words. Do you know what they all mean?

add, subtract, decimal, tenths, hundredths, thousandths, complement, divide, decimal point, whole, multiply, column, exchange, place value, decimal place, digit

We will need to use column methods. How can we add these two numbers?

H	T	O

	H	T	O
	1	2	6
+		7	5

We also need to be able to subtract numbers.

Can you remember a way of making 500 – 367 easier?

Why are these two calculations the same?

	H	T	O
	5	0	0
–	3	6	7

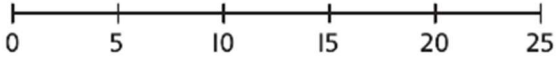
	H	T	O
	4	9	9
–	3	6	6

Unit 15
Negative numbers

In this unit we will …

- Learn how to count back past 0
- Learn how to read and write negative numbers
- Learn how to place negative numbers on a number line
- Learn how to read thermometers with sub-zero temperatures
- Compare and order negative and positive numbers
- Find the difference between two numbers, including negative numbers

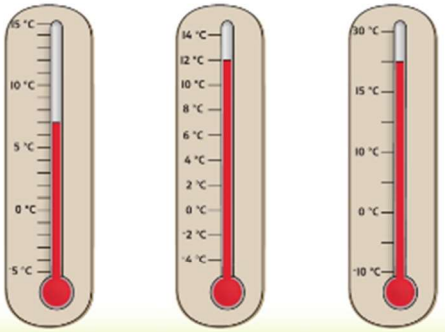
We will use number lines to think about numbers. Can you count on and back on a number line?



We will need some maths words. Which of these do you know?

positive | negative | increase | decrease | temperature | interval | step | counting sequence

We will use thermometers to think about negative and positive numbers in real-life contexts. Can you read these temperatures?

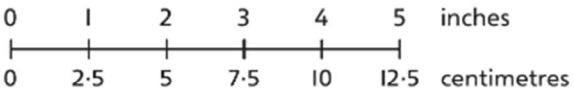


Unit 16
Measure – converting units

In this unit we will ...

- Convert between metric units of length, mass, volume and capacity
- Recognise imperial units and understand how to convert them into metric units
- Convert between units of time
- Read timetables and understand the information they show
- Solve problems based on measures

How many centimetres are approximately the same as 5 inches?



Here are some maths words we will be using. Are any of these words new?

convert | metric units | imperial units | kilo | kilogram | gram | milli | millimetre | centimetre | metre | kilometre | litre | millilitre | pound (lb) | ounce (oz) | inch (in) | foot (ft) | yard (yd) | pint | gallon | stone (st) | approximately | timetable

How many millilitres of orange juice are in this jug?

Unit 17
Measure – volume

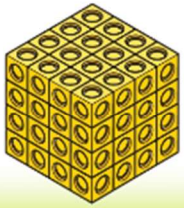
In this unit we will ...

- Learn what the volume of a shape is
- Find volumes of shapes by counting the number of cm^3 cubes
- Draw shapes with different volumes
- Compare the volume of different shapes
- Estimate the volume of different shapes

We will need some maths words. Which of these are new?

volume **cube** **cuboid** **3D shape**
solid **capacity** **cm^3 cube**
estimate **least** **greatest**

How many cm^3 cubes are used to make this cube?



Which shape do you think has the greatest volume? Why?