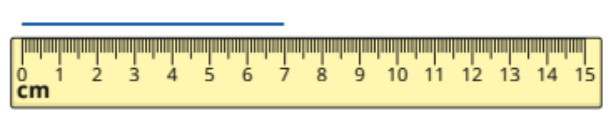
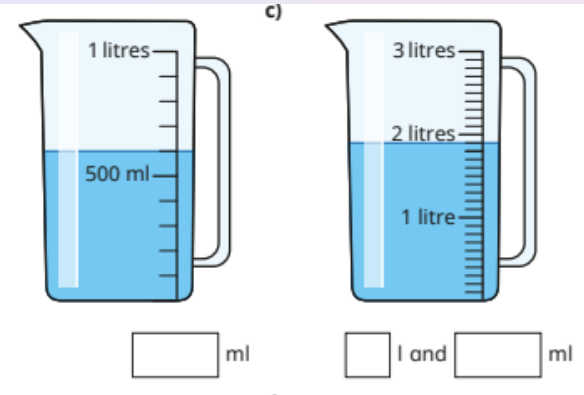
Year 3: Measurement

Children are taught to measure, compare, add and subtract different units of measure.

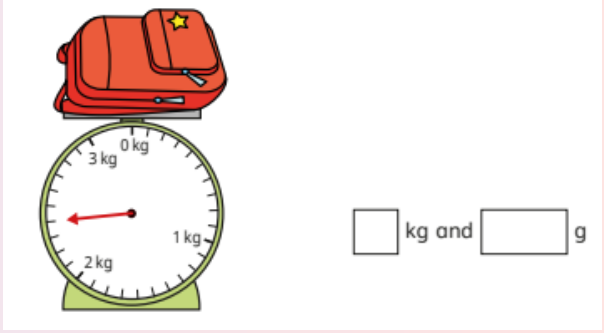
length



volume/capacity



mass



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- They use the symbols **<, > and =** to compare the lengths, weights and capacities.

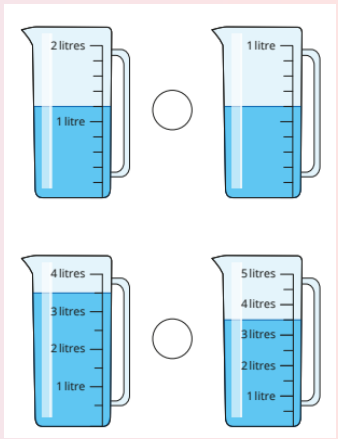
Write <, > or = to compare the lengths.

a) 60 mm ◯ 6 cm **c)** 5 cm ◯ 45 mm

b) 1 m 50 cm ◯ 115 cm **d)** 100 mm ◯ 1 m

How did you work this out?

They order units of measure



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Addition and subtraction

Jack, Tommy and Alex took part in a hop, skip and jump competition.

Complete the table to show the total distance each child travelled.

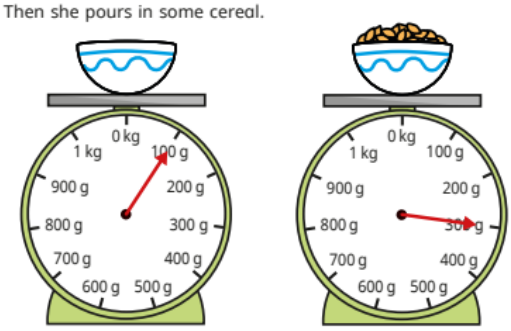
Name	Hop	Skip	Jump	Total
Jack	80 cm	60 cm	1 m 20 cm	
Tommy	70 cm	1 m	1 m 10 cm	
Alex	75 cm	75 cm	1 m	

Finding the difference and total

4 Aisha is weighing out some cereal.

First she puts the bowl on the scales.

Then she pours in some cereal.



What is the mass of the **cereal** in the bowl? ☐ g

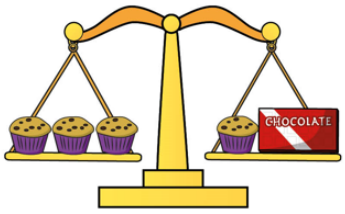
RPS

Is the statement always true, sometimes true or never true?

A length measured in metres will be longer than a length measured in centimetres.

Explain your answer.

The chocolate bar has a mass of 100 g.
What is the mass of one muffin?



Nijah takes the muffins and the chocolate bar off the scales.
She puts 10 muffins on one side.
How many chocolate bars will she need to balance the scales?
How did you work it out?

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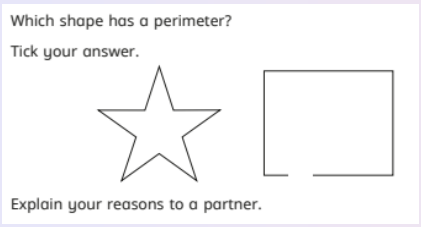
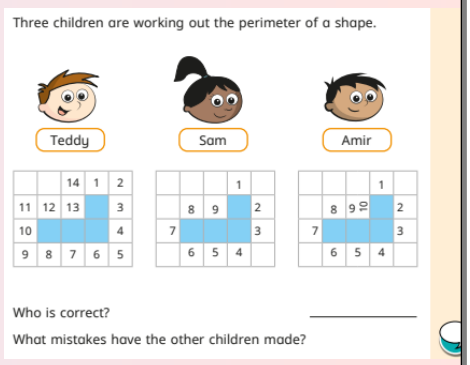
Perimeter

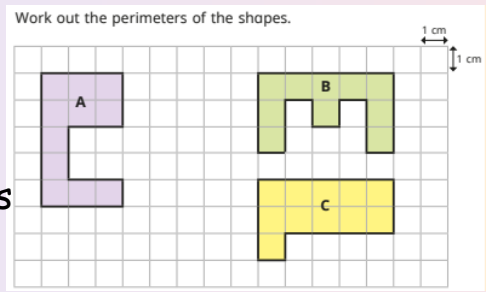
The children are introduced to the perimeter of shapes.



Learn to count the perimeter of shapes and spot errors



Learning to mark squares to count perimeter of shapes



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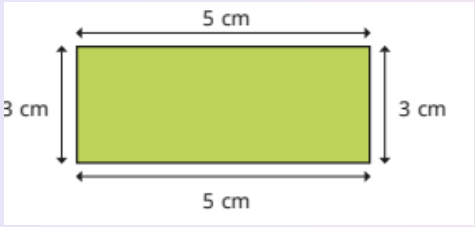
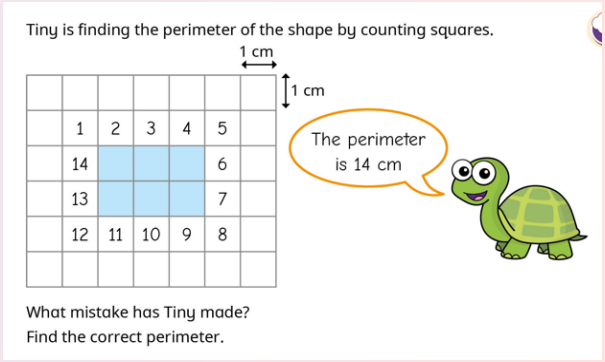
They calculate the perimeter by adding up the lengths of the sides marking them as they go.



5+3+5+3=

Reasoning question to apply skills

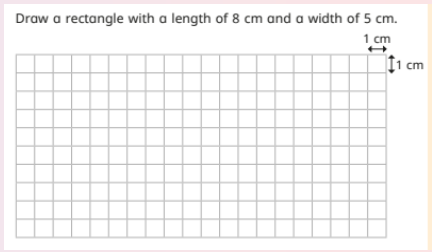


Geometry 2-D Shapes

The children are expected to apply knowledge of 2-shapes from previous years to help draw with increasing accuracy.

triangle

rectangle parallel and perpendicular lines



Building on Year 2 vocabulary they describe using vertices, edges. Extending with perpendicular and parallel lines, and describe angles within shapes.

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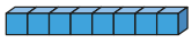
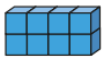
3-D Shapes

The children use modelling materials to make a range of 3-d shapes.

Take eight cubes.

Make each of the 3-D shapes.

a) 

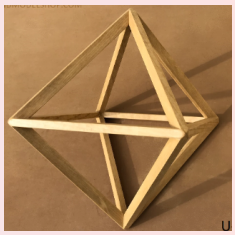
c) 

b) 

d) 

How many straws and marshmallows would you need to make each 3-D shape?

3-D shape	Number of edges (straws)	Number of marshmallows (vertices)
		
		
		



Reasoning and problem solving questions

This shape is a pentagonal prism.

Complete the sentences to describe the shape.

It has _____ faces.

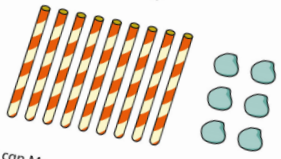
_____ of the faces are rectangles.

It has _____ edges.

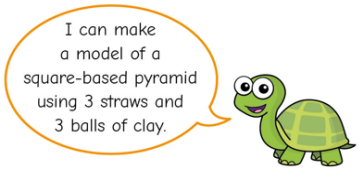
It has _____ vertices.

What do you notice about the face of each end of the prism and the number of rectangular faces?

Max has 9 straws and 6 balls of clay.



What 3-D shape can Max make using all of the straws and clay?
Use straws and clay to make the shape.



Explain the mistake that Tiny has made.

How many straws and balls of clay do you need to make a square-based pyramid?

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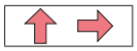
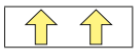
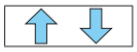
Children build on their knowledge of turns from Year 2 and learn these are linked to right angles.

The arrows are being turned clockwise.

Match the pictures to the turns.



half turn

quarter turn

full turn

three-quarter turn

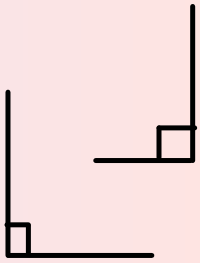
Complete the sentences.

A quarter turn is equal to ☐ right angle.

A half turn is equal to ☐ right angles.

A three-quarter turn is equal to ☐ right angles.

A full turn is equal to ☐ right angles.



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Identifying right angles and describing amounts of turns in shapes.

They use vocabulary of direction clockwise or anticlockwise

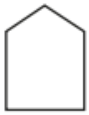
Draw the right angles on each shape.

a)

c)

b)

d)



Here is a compass.

a) Aisha is facing north.
She turns a quarter turn clockwise.
What direction is she facing now? _____

b) Tommy is facing north.
He turns a quarter turn anticlockwise.
What direction is he facing now? _____

c) Annie is facing east.
She turns a three-quarter turn clockwise.
What direction is she facing now? _____

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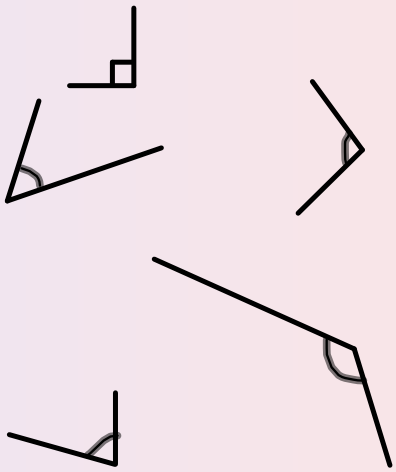
They identify angles that are greater than > or less than < a right angle

Write <, > or = to compare the sizes of the angles.

a)

b)

c)



Angles seen in a different context

a)

b)

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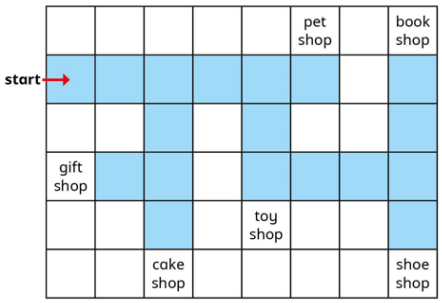
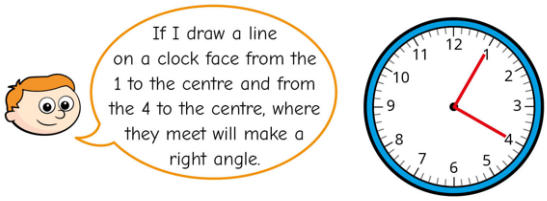
Reasoning and problem solving examples



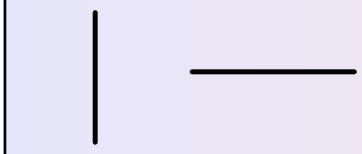
Write instructions for a partner to follow to get from the start to reach any one of the shops. They are not allowed to walk on the white squares.



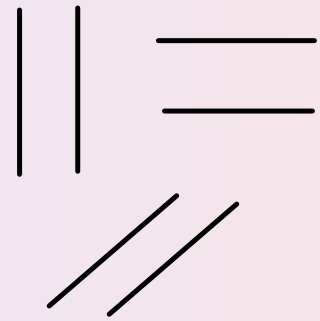
Investigate how many pairs of numbers on a clock face will make a right angle.

How many possibilities are there?

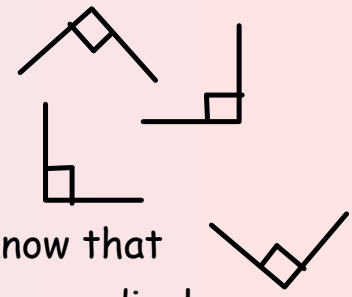
The children will learn the language of vertical and horizontal lines extending this to pairs of parallel and perpendicular lines.



vertical horizontal

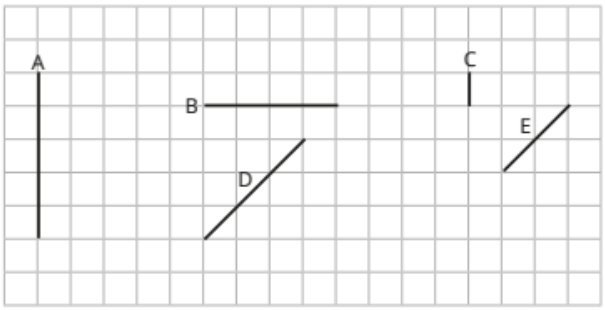


parallel



know that perpendicular means right angle.

Five lines are drawn on the grid.



a) Which two pairs of lines are parallel?

_____ and _____

b) Which two pairs of lines are perpendicular?

_____ and _____

How many horizontal and vertical lines can you see in this picture?

Problem solving

Here is a flag.

Mark three sets of parallel lines and three sets of perpendicular lines.
Draw your own flag with parallel and perpendicular lines.

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