Maths Assessment Year 6 Term 3: Measurement

1. Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate.

a) A 2 pint carton of milk is 1.136 litres. How many litres is 7 pints of milk?

l

1 mark

b) A tin of tuna weighs 160g. The tins are sold in packs of 4.

How much would 3 packs weigh? Write your answer in kilograms.

kg

1 mark

c) Madison swims 15 lengths of a 25 metre swimming pool each day. In a seven day week, how far will Madison swim? Give your answer in kilometres.

km

1 mark

total marks: 60

twinkl

Total for this page

d) A one pence coin weighs 3.56g and a two pence coin 7.12g. Selma has a jar of coins. She knows that an empty jar weighs 210g. What will be the weight of a jar containing £3 worth of 1p and 2p coins? Give your answer in kilograms.

kg

2. Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places.

a) Match up the equivalent units of length:

76 cm	7600m
7.6 cm	0.076cm
7.6 km	760mm
0.76 mm	0.76km
760 m	0.076m

b) Complete the following table to identify the equivalent lengths:

Millimetres	Centimetres	Metres
		0.075 m
5.8 mm		
	40 cm	

c) Write the mass shown on these scales, using both kilograms and grams:
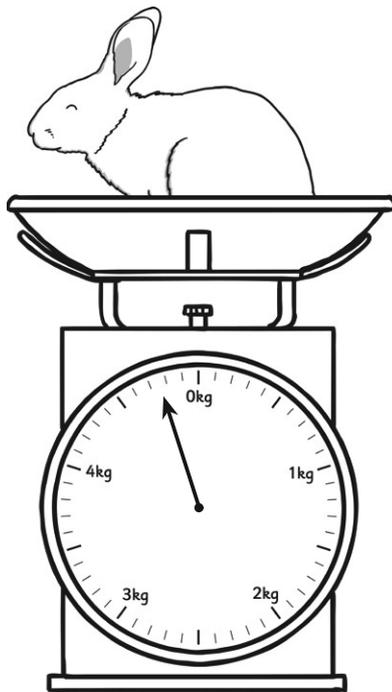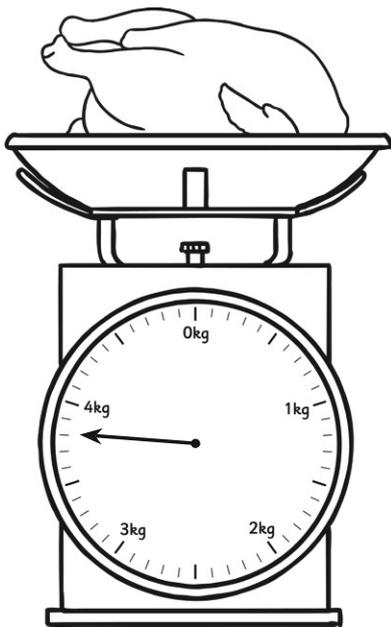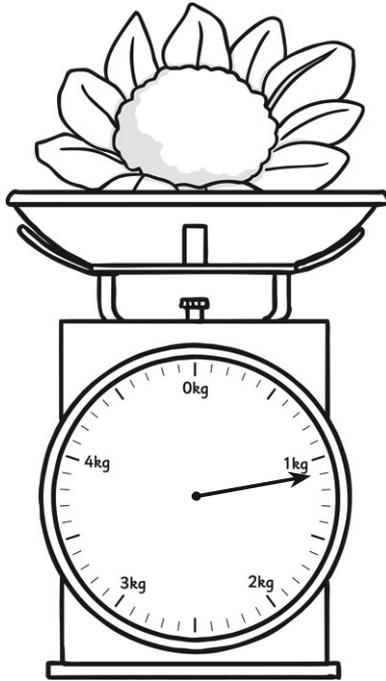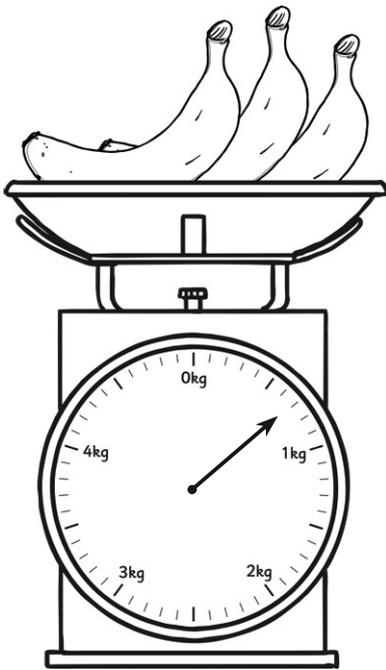
	Mass in grams (for example 500g)	Mass in kilograms (for example 0.5 kg)
Bananas		
Cauliflower		
Chicken		
Rabbit		

5

d) Write the volume of water in each jug, in both millilitres and litres:

i.

ii.

iii.

	Millilitres (for example 1000ml)	Litres (for example 1l)
i.		
ii.		
iii.		

e)

How many minutes are in two and a quarter hours?	
How many minutes is 210 seconds?	
300 minutes is equivalent to how many hours?	
How many minutes is equivalent to three quarters of an hour?	
How many seconds are in 7 minutes?	

3. Convert between miles and kilometres.

a) Identify the equivalent distances in miles and kilometres, rounded to the nearest whole number, by completing the table below:

Distance in miles	Distance in kilometres
2 miles	
5 miles	
	32 km
40 miles	
	160 km

b) This map shows the location of some cities in the world.

Complete the following table.

Journey	Journey in miles	Journey in kilometres
London to Moscow		2400 km
Delhi to Johannesburg		8000 km
Los Angeles to Rio de Janeiro	6300 miles	

4. Recognise that shapes with the same areas can have different perimeters and vice

a) Look at these shapes. The shapes are **not** drawn to scale.

10cm | **a** | 2cm

a
2cm

2cm | **b**
7cm

4cm | **c**
5cm

6cm
3cm | **d**

4cm
7cm | **e**

1cm | **f**
20cm
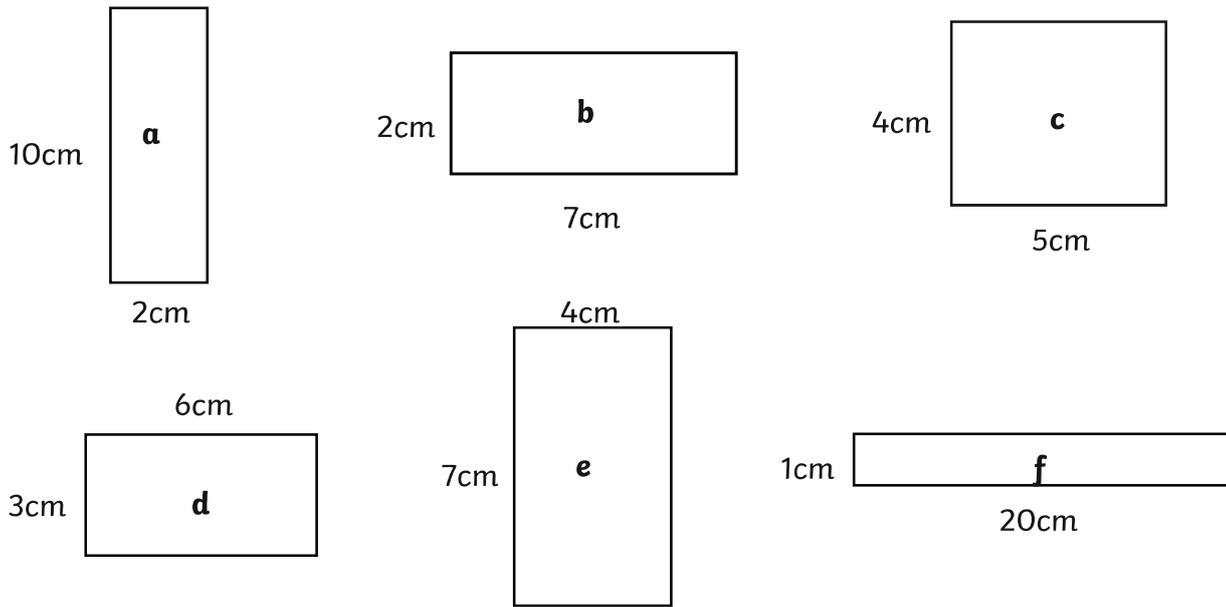
(These shapes are **not** to scale.)

Which **three** shapes have the same area?   ....

Which **three** shapes have the same perimeter?   ....

b) Draw a square with the same area as the rectangle in this grid.
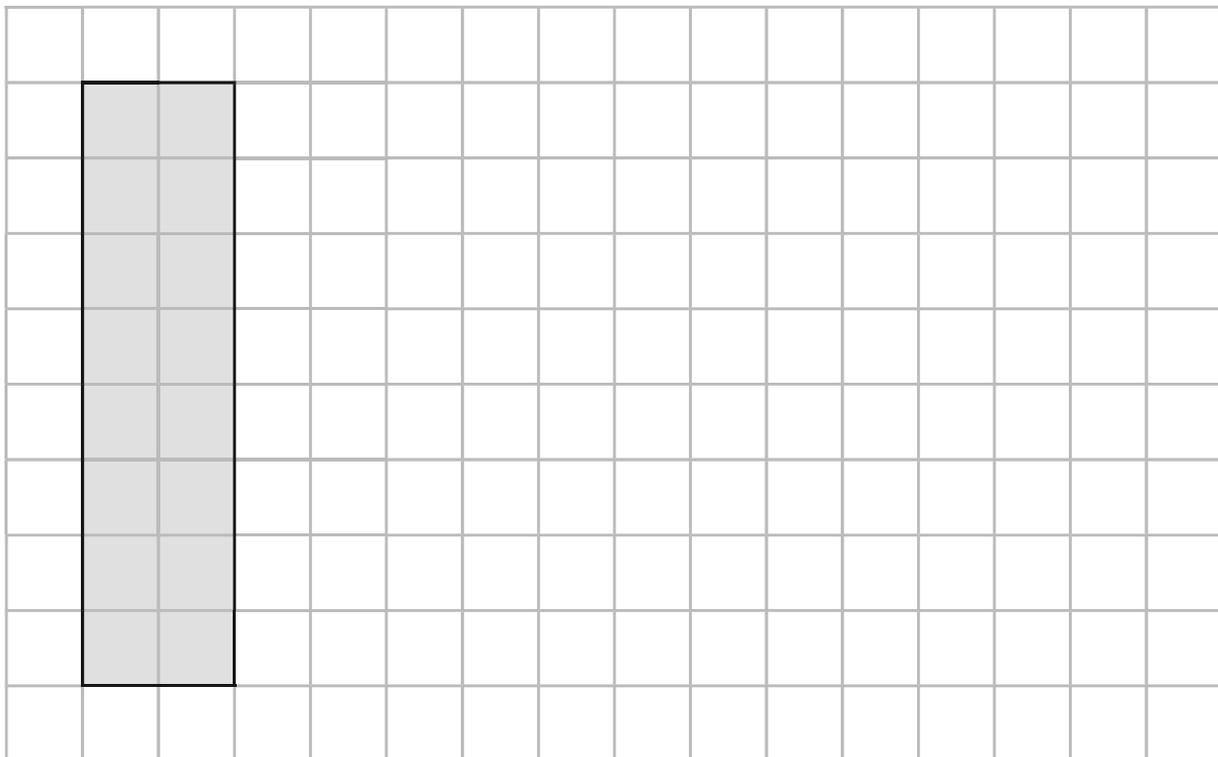
c) Draw a different rectangle with the same perimeter as the one drawn in this grid.

- -
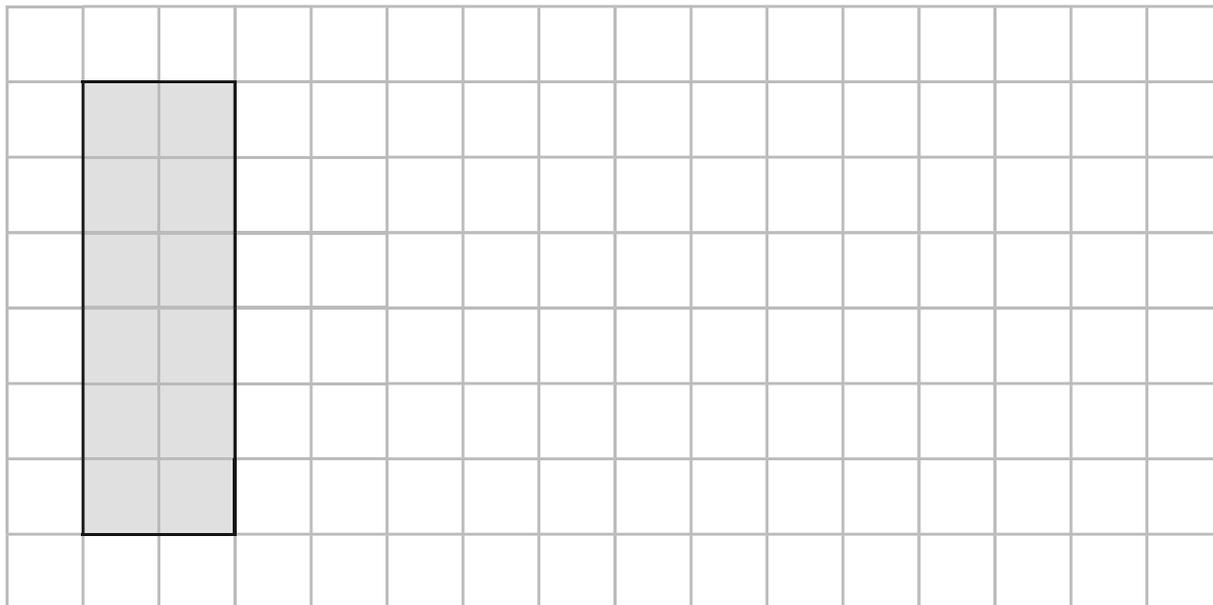
versa.

a) Write a formula you could use to calculate the area of this triangle.
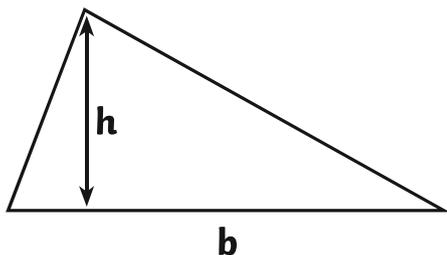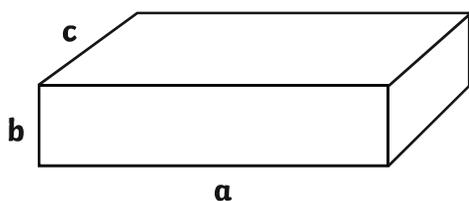
b) Here is a cuboid:

Match the formula to the measurement.

Volume	abc
Surface area	2(ab + ac + bc)

c) Here is a cube.
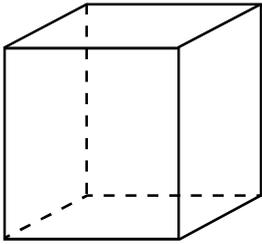
The volume of the cube is 27 cm³ and the surface area is 54 cm².

Calculate the length of each edge of the cube.

cm

- -
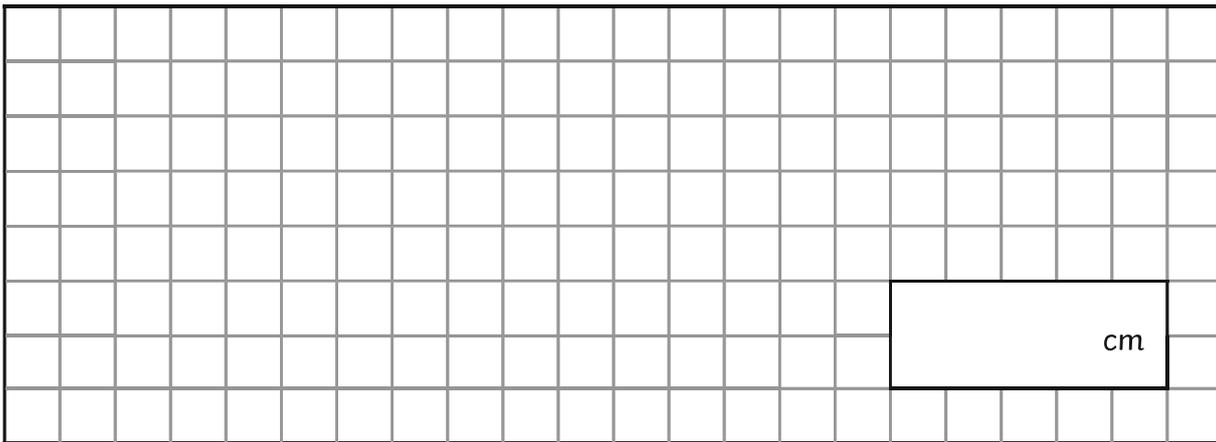
5. Recognise when it is possible to use formulae for area and volume of shapes.
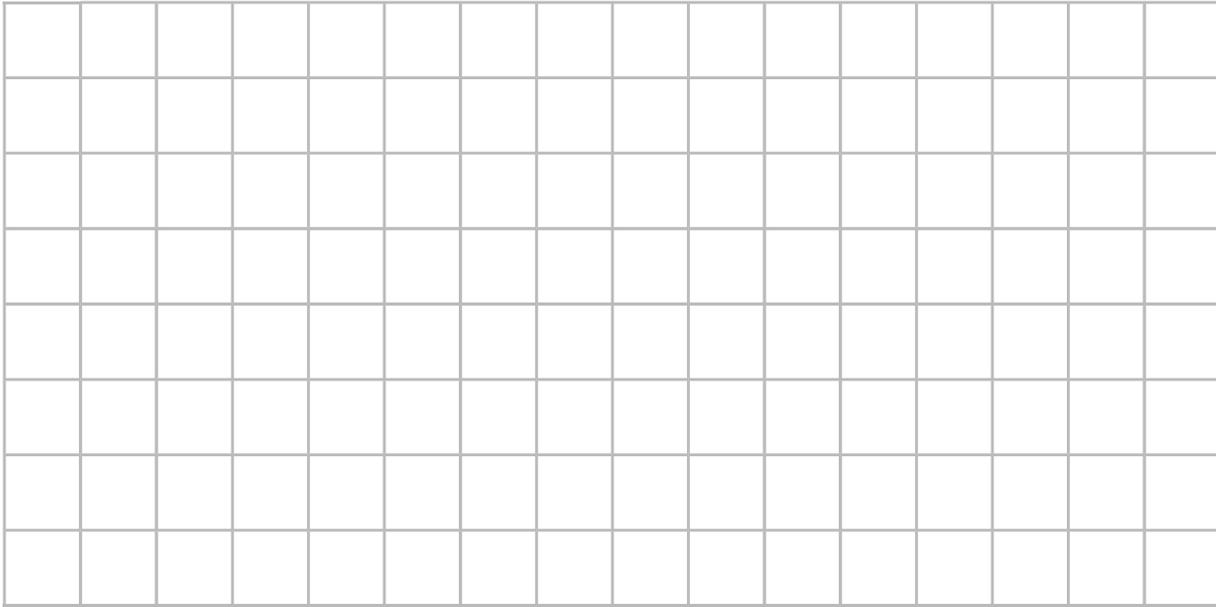
a) Calculate the area of this parallelogram.

cm²
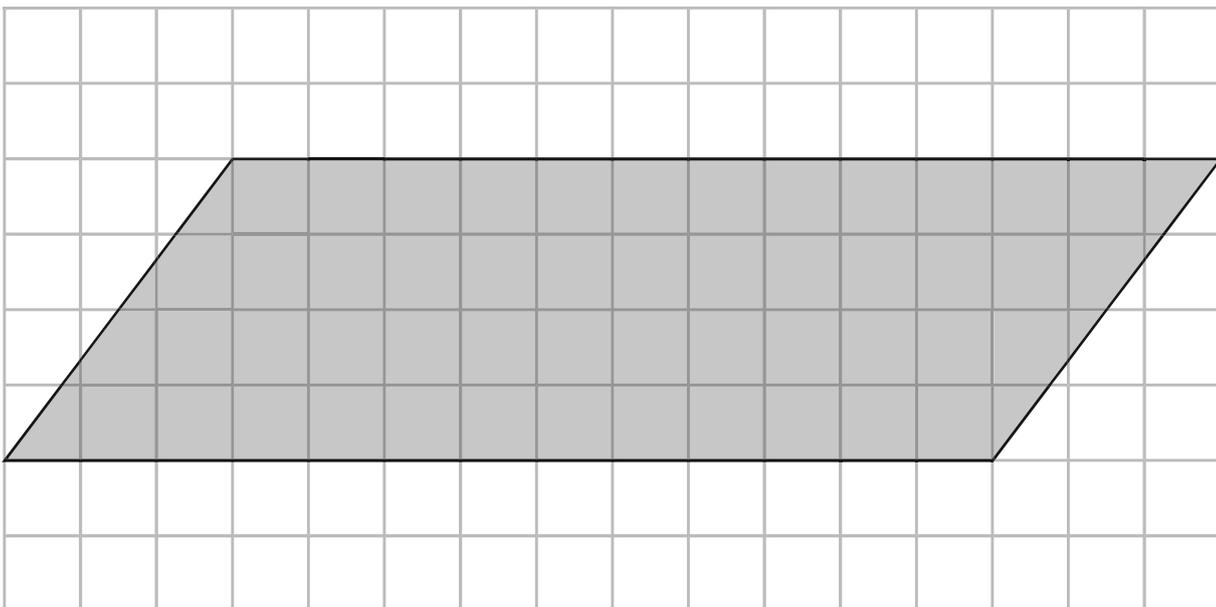
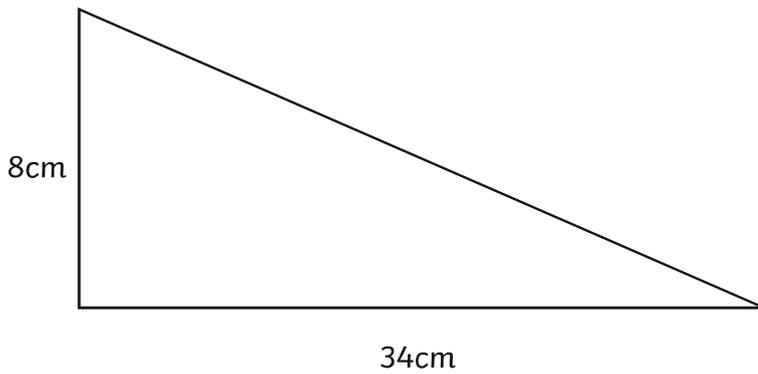**b)** Draw a parallelogram on this grid with an area of 55cm².

c) Calculate the area of this triangle. The triangle is **not** drawn to scale.

8cm
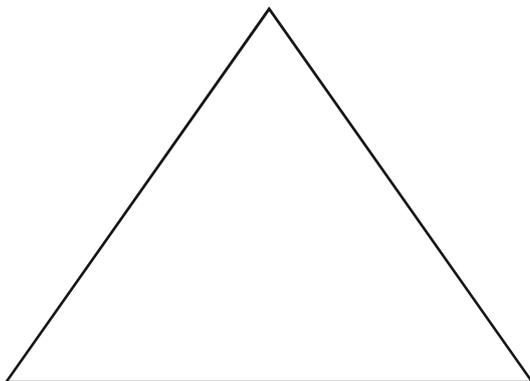
34cm

cm²

d) Calculate the area of this triangle:

This shape is to scale. You can use a ruler for this question.

cm²

6. Calculate the area of parallelograms and triangles.
7. Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm^3) and cubic metres (m^3), and extending to other units [for example, mm^3 and km^3].

a) Here are two gift boxes. Shola wants to work out which box has the greater

8cm

25cm

A

15cm

6cm

40cm

B

14cm

not drawn to scale

Which gift box has the greater volume?

volume.

b) A clothing business wants to build a new warehouse. The area of land is 80m long and 60m wide. The maximum height is 35m. There must be a distance of 5m

What is the maximum volume of the warehouse?

between the edge of the building and the edge of the land, all the way around the
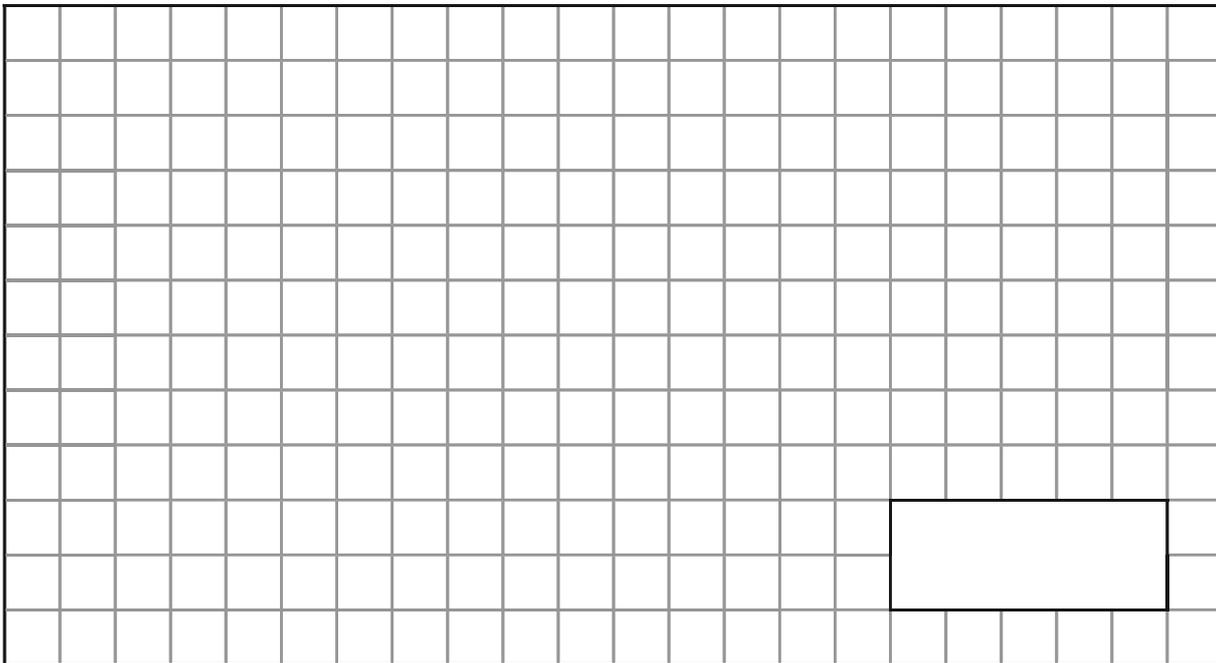
What is the length of one side of the cube?
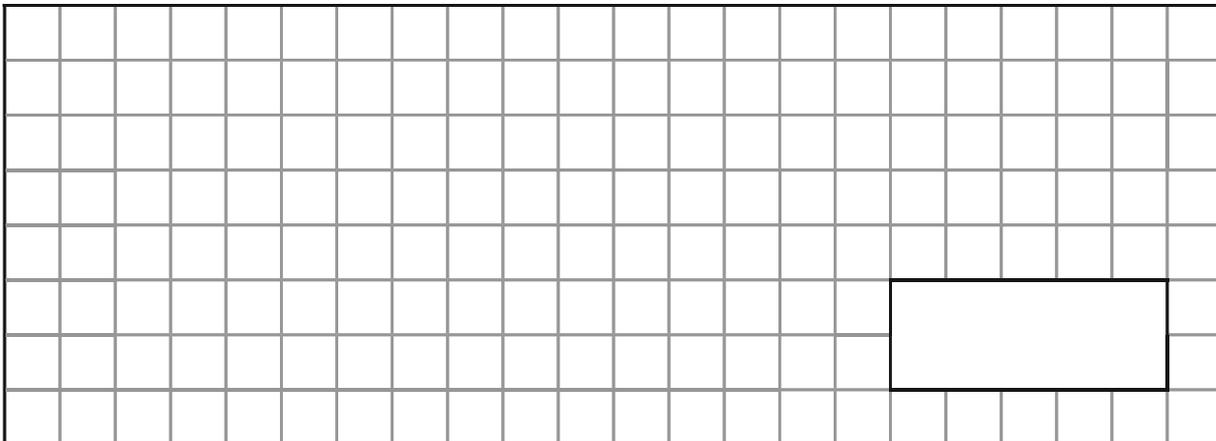
building.

c) A cube has a volume of 125 mm³.

not drawn to scale

150cm

120cm   A

160cm

1.2m

1.5m   B

1.6m
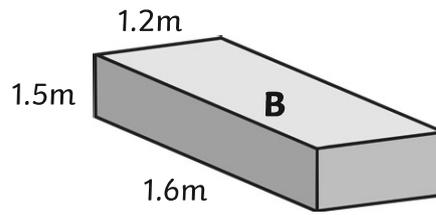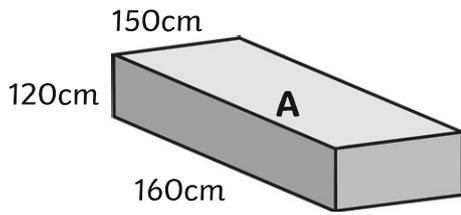
Use one of the signs <, >, or = to compare the volume of the 2 cuboids.

| Volume of A | | Volume of B |