Name:

Maths Assessment Year 5 Term 3: Measurement

1. Convert between different units of metric measure [for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre].
2. Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints.
3. Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres.
4. Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm2) and square metres (m2) and estimate the area of irregular shapes.
5. Estimate volume [for example, using 1 cm3 blocks to build cuboids (including cubes)] and capacity [for example, using water].
6. Solve problems involving converting between units of time.
7. Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling.

Name: Date:

30 total marks

Maths Assessment Year 5 Term 3: Measurement

1. Convert between different units of metric measure [for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre].

Circle the amounts that are equal on each line:

a) 5km	**50mm**	**5cm**	**0.5m**
b) 85mm	**85cm**	**0.85m**	**8.5m**
c) 3.3km	**0.33km**	**33m**	**330m**

3 marks

d) Circle the measurements that match the measurement on the left:

0.55l	**55ml**	**550ml**	**5500ml**
6.7kg	**67g**	**670g**	**6700g**
45ml	**0.045l**	**0.45l**	**4.5l**

3 marks

2. Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints.

a) 1 gallon is 8 pints. How many litres are there in a gallon?

1 pint = 0.56l

Answer:

2 marks

b) 1 mile = 1760 yards. How many metres are there in 1 mile to the nearest 10 metres?

1 yard = 91cm

Answer:

2 marks

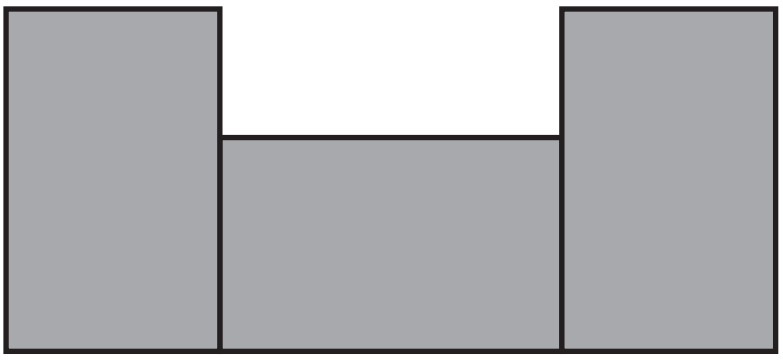
Total for this page

3. Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres.

a) This rectangle measures 8 cm by 5 cm.

Shape not to scale

Calculate the perimeter of this new shape, made by 3 of the above rectangles.



Shape not to scale

Answer: ☐ cm

2 marks

4. Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm2) and square metres (m2) and estimate the area of irregular shapes.

a) These 2 rectangles have the same area, but different lengths and widths. Write possible dimensions so this is true.

_____ cm

_____ cm

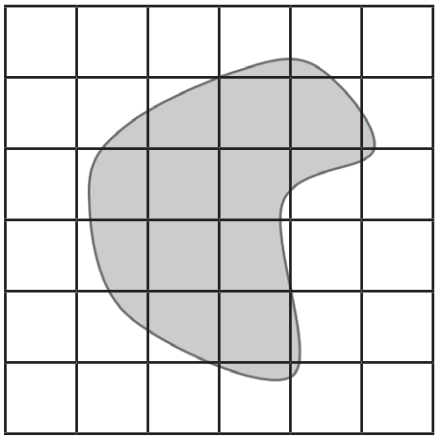
_____ cm

_____ cm

1 mark

Total for this page

b) This grid is made of 1cm squares. Estimate the area of the shaded shape:

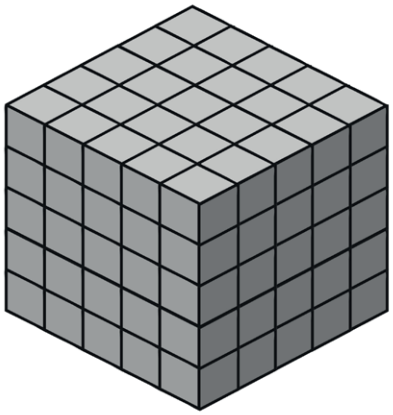


Area = ☐

1 mark

5. Estimate volume [for example, using 1 cm3 blocks to build cuboids (including cubes)] and capacity [for example, using water].

a) If each cube measures 1 cm^3 what is the volume of this cube:

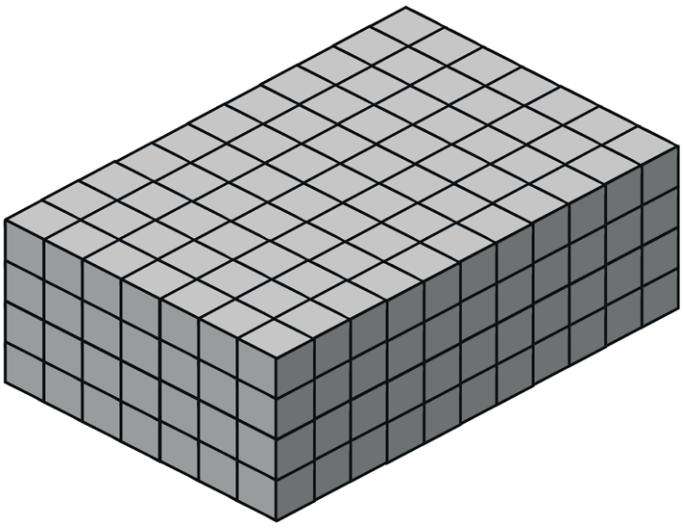


Volume = ☐

1 mark

b) Circle the most appropriate estimate for the volume of this shape:

300cm^3 **400cm^3** **500cm^3**



1 mark

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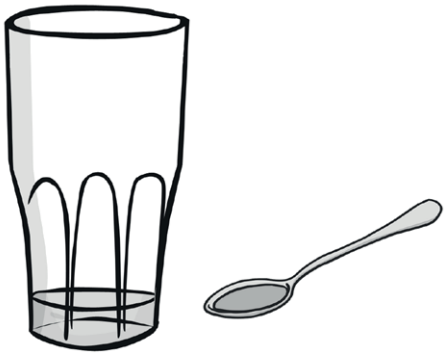
c) A tablespoon holds 15 ml. This glass has 1 tablespoon of oil in it. Estimate the capacity of the glass.



1 mark

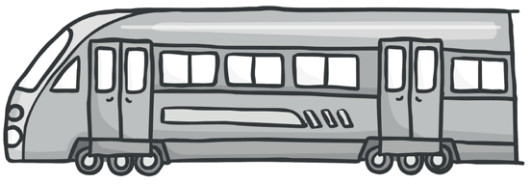
6. Solve problems involving converting between units of time.

a) James goes for a walk. He leaves home at 10.30 am and walks until 12.45 pm, when he spends 40 minutes having lunch. He sets off again and finishes at 3.35 pm. For how long did James walk? Show your working out.

2 marks

Here is the train timetable from Sheffield to Manchester:

Sheffield	07:32	08:04
Dore	07:39	08:10
Chinley	08:03	08:33
Hazel Grove	08:17	
Stockport	08:24	08:52
Manchester	08:36	09:02



b) Mr Jackson needs to arrive at Stockport by half past eight. What time train must he catch from Dore station?

1 mark

Total for this page

c) Over the course of the journey, how much faster is the second train, which leaves at 0804, than the first?

2 marks

d) It's the 19th October. Not including today and Christmas Day, how many days until Christmas?

1 mark

e) Hope says her birthday is in 42 days. How many weeks away is her birthday?

1 mark

7. Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling.

On Red Nose Day, 4 classes raise the following amounts of money:

Class 1	£13.45
Class 2	£22.98
Class 3	£32.06
Class 4	£18.54

a) How much did the children raise altogether?

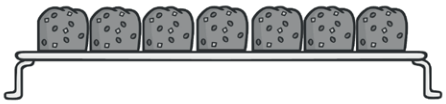
1 mark

b) Sohail says that Class 3 raised £10 more than Class 2. 'Explain why he is correct and show this using calculations.

1 mark

Total for this page

A recipe for individual cakes contains 150g of flour, 125g of butter, 100g of sugar and 55g of chocolate chips to make 25 cakes.



c) The teacher buys four 250g packs of butter. How many cakes can be made?

2 marks

d) If four packs of butter are used, how many 100g bags of chocolate chips will be needed?

2 marks

Total for this page

question	answer	marks	notes
1. Convert between different units of metric measure [for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre].			
a	50mm and 5cm	1	
b	85cm and 0.85m	1	
c	0.33km and 330m	1	
d	550ml	1	
e	6700g	1	
f	0.045l	1	
2. Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints.			
a	4.48l	2	2 marks for correct answer. 1 mark for a correct method with only one mistake in calculation.
b	1600m	2	2 marks for correct answer. 1 mark correctly multiplying 1760 and 91 to get 160,160 or 1760 and 0.91 to get 1601.6.
3. Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres.			
a	58cm	2	2 marks for correct answer. 1 mark if all the lengths of sides are identified but incorrectly calculated.
4. Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm2) and square metres (m2) and estimate the area of irregular shapes.			
a	2 pairs of numbers whose product is the same: e.g. 2 cm x 3 cm and 1 cm x 6 cm or 4 cm x 5 cm and 2 cm x 10 cm	1	The dimensions must be different but do not have to match the shapes. Squares are also permitted.
b	11cm^2	1	Do not accept without a correct unit of measurement. Allow 10 – 12 cm^2
5. Estimate volume [for example, using 1 cm3 blocks to build cuboids (including cubes)] and capacity [for example, using water].			
a	125cm^3 or 125 cubic centimetres	1	Do not accept without a correct unit of measurement.
b	300 cm^3	1	
c	Accept an answer between 120ml and 180ml inclusive (or 0.12 - 0.18l)	1	

question	answer	marks	notes
6. Solve problems involving converting between units of time.			
a	4 hours 25 minutes or 265 minutes	2	Award 1 mark for an incorrect answer but demonstration of a correct method with only one error.
b	07:39	1	
c	6 minutes	2	2 marks for correct answer. 1 mark if correct method used with only one mistake in calculation.
d	66 days	1	October 20-31 is 12 days November 30 days December 24 days
e	6 weeks	1	
7. Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling.			
a	£87.03	1	Must write the unit of measurement.
b	£32.06 - £22.98 = £9.08	2	2 marks where a correct calculation is used to explain (no working necessary). eg £32.06 - £22.98 = £9.08 1 mark is awarded is the calculation needed is shown, but no correct answer is given. eg £32.06 - £22.98 is less than £10
c	200	2	2 marks for a correct answer. 1 mark awarded for correct method, but one mistake in calculation.
d	5 bags	2	Award one mark for correctly identifying 440g of chocolate chips are needed.
		Total 30	