Name:

Maths Assessment Year 5: 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 (cm^2) and square metres (m^2) and estimate the area of irregular shapes.
5. Estimate volume [for example, using 1 cm^3 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: 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].

Choose the correct number to complete each statement:

a) 12 120 1200

There are ☐ metres in 1.2 kilometres.

There are 12 000 millimetres in ☐ metres.

There are ☐ millimetres in 12 centimetres.

3 marks

b) 15 150 1500

There are ☐ grams in 0.15 kilograms

There are 15 000 grams in ☐ kilograms

There are ☐ grams in 1 ½ kilograms

3 marks

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

Circle the best answer for the equivalence of the following:

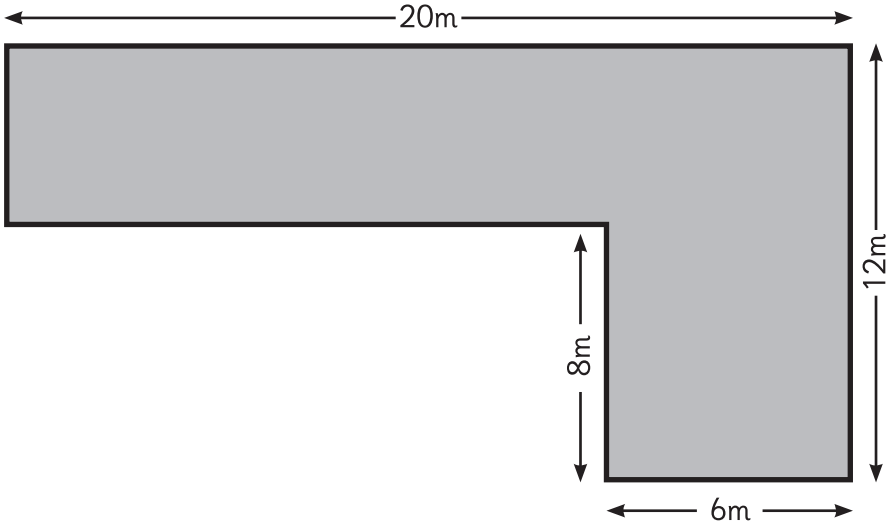
1 inch	=	12.5cm	or	2.5cm
1 mile	=	1.6km	or	11.6km
1 pound	=	453.59g	or	45.35g
1 pint	=	0.57l	or	5.7l

4 marks

Total for this page

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

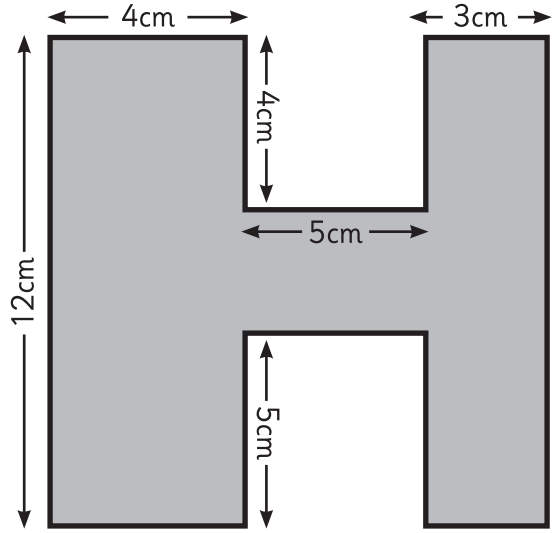
a) Work out the perimeter of this shape:



Answer: ☐ m

1 mark

b) Calculate the perimeter of this shape (not drawn to scale).



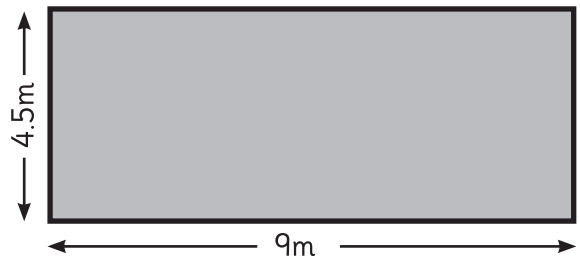
Answer: ☐ cm

1 mark

4. Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm^2) and square metres (m^2) and estimate the area of irregular shapes.

Calculate and write the area of the following shapes:

a)

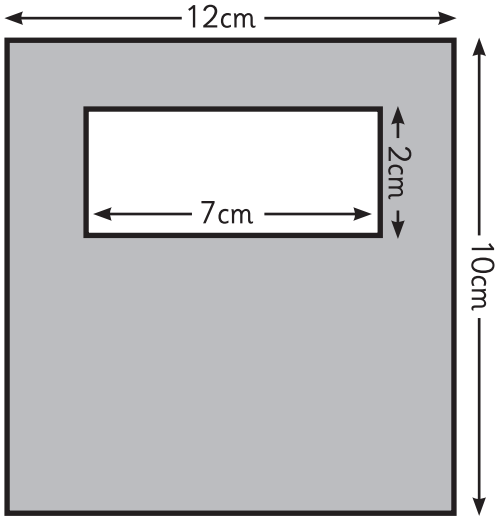


Area = ☐

1 mark

Total for this page

b)



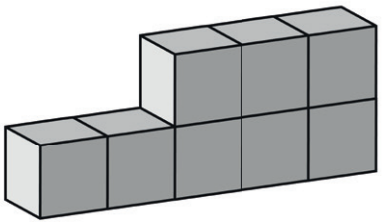
Area = ☐

1 mark

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

If each cube measures 1 cm³ what is the volume of these shapes:

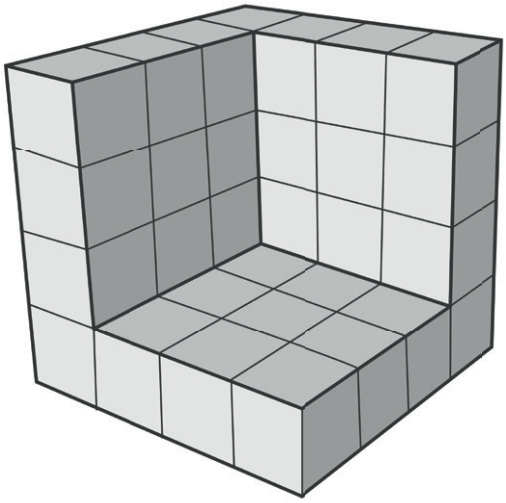
a)



Volume = ☐

1 mark

b)

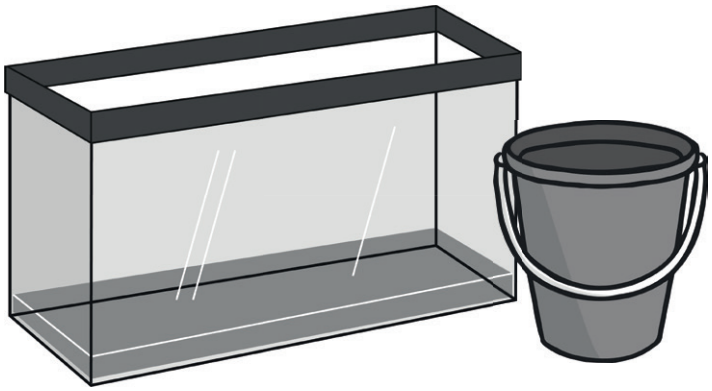


Volume = ☐

1 mark

Total for this page

c) The bucket holds 10 litres. The fish tank has been filled with 1 bucketful of water. Estimate how many litres you think it will take to fill the tank.



l

1 mark

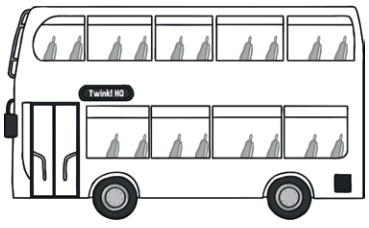
6. Solve problems involving converting between units of time.

a) Lara went to visit her cousin. She left home at 10.30 am. It took her 20 minutes to walk to to her cousin's house. She stopped there for 2 and ½ hours. Her uncle drove her home and the journey took 10 minutes. What time did she get home? Show your working out.

2 marks

Here is the bus timetable for the Number 18 bus from Jarton Town Centre to Wheelby Bus Station:

Jarton Town Centre	10:08
Jarton Country Park	10:11
Zeetly	10:28
Canley	10:39
Wheelby Train Station	10:55
Wheelby Bus Station	11:02



b) How long does it take for the journey from Jarton town centre to Wheelby Bus Station?

1 mark

Total for this page

c) How long does it take from Jarton Country Park to Wheelby Train Station?

1 mark

d) Jagdeep arrives at the bus stop at Canley at 10:27. How long does he have to wait until the bus arrives?

1 mark

e) Today is March 24th, how many days have passed since December 31st? This year is not a leap year.

1 mark

f) Today is 2nd April, Mark's birthday is on June 5th. How many days is it until his birthday?

1 mark

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

Here are the results for the Women's long jump in the Commonwealth Games:

1	Ese Brume	Nigeria	6.56m
2	Jazmin Sawyers	England	6.54m
3	Christabel Nettey	Canada	6.49m
4	Chantel Malone	British Virgin Isles	6.41m
5	Lorraine Ugen	England	6.39m

a) How much further did the winning athlete jump than the 5th place athlete?

1 mark

b) How much further would the winner need to jump to equal the World Record of 7.52m?

1 mark

Total for this page

DVDs cost £10.99 each.

c) How much change would you have from £30 if you bought 2 DVDs? Show your working out.

2 marks

d) How many DVDs could you buy with £60 ?

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	There are **1200** metres in 1.2 kilometres. There are 12 000 millimetres in **12** metres. There are **120** millimetres in 12 centimetres.	3	
b	There are **150** grams in 0.15 kilogram. There are 15 000 grams in **15** kilograms. There are **1500** grams in 1 ½ kilograms	3	
2. Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints.			
	1 inch = 12.5 cm or **2.5 cm** 1 mile = **1.6 km** or 11.6 km 1 pound = **453.59g** or 45.35g 1 pint = **0.57l** or 5.7l	4	
3. Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres.			
a	64cm	1	
b	66cm	1	
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	40.5 m^2 **or** 40.5 sq m	1	Do not accept without a correct unit of measurement.
b	106 cm^2 **or** 106 sq cm	1	
5. Estimate volume [for example, using 1 cm3 blocks to build cuboids (including cubes)] and capacity [for example, using water].			
a	8 cm^3 or 8 cubic centimetres	1	Do not accept without a correct unit of measurement.
b	37 cm^3 or 37 cubic centimetres	1	
c	Accept an answer between 60 litres and 90 litres inclusive	1	
6. Solve problems involving converting between units of time.			
a	1:30pm or 13:30 or half past one in the afternoon	2	Award 1 mark for 1:30 or half past one, but not pm. Award 1 mark for an incorrect answer but demonstration of a correct method.

question	answer	marks	notes
b	54 minutes	1	
c	44 minutes	1	
d	12 minutes	1	
e	83 days	1	
f	64 days	1	
7. Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling.			
a	17cm or 0.17m	1	Must write the unit of measurement.
b	0.96m or 96cm	1	Must write the unit of measurement.
c	£8.02	2	Award one mark for an incorrect answer but demonstration of a correct method.
d	5	2	Award one mark for an incorrect answer but demonstration of a correct method.
		Total 30	