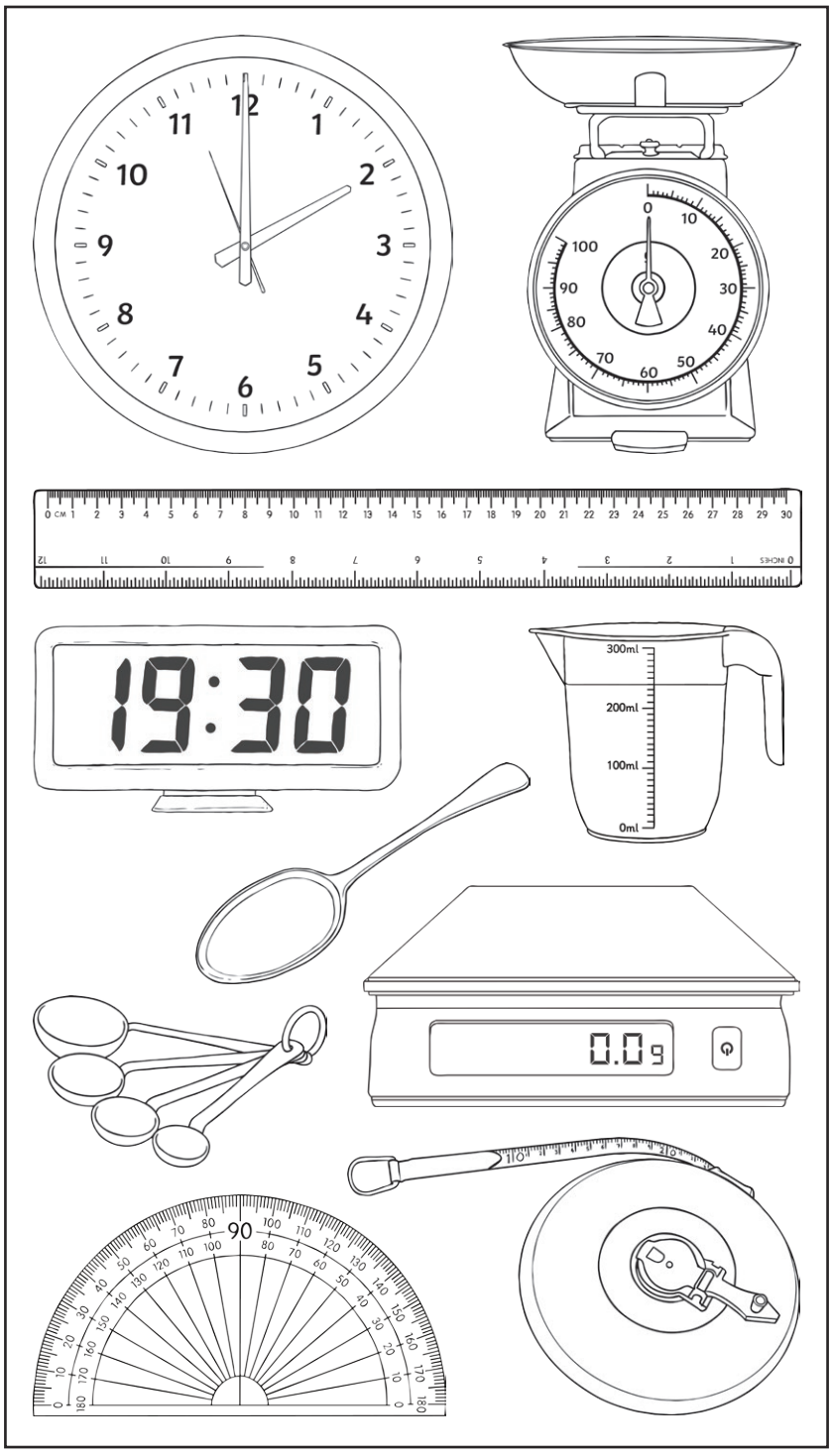
Year 5 Maths Home Learning Workbook

Measures



Year 5 Programme of Study: Measures

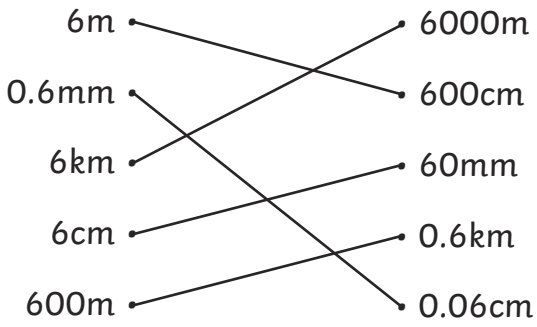
Statutory Requirements	Activity	Page	Notes
Convert between different units of metric measurement.	Converting Between Different Units of Measurement	2	
Understand and use approximate equivalences between metric units and common imperial units, such as pounds, inches and pints.	Metric vs. Imperial	3	
Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres.	Perimeter	4	
Calculate and compare the area of rectangles (including squares), including using standard units, square centimetres and square metres, and estimate the area of irregular shapes.	Area	6	
Estimate volume and capacity.	Volume and Capacity	7	
Solve problems involving converting between units of time.	Converting Between Units of Time	8	
Use all four operations to solve problems involving measure using decimal notation, including scaling.	Problem Solving	9	

Converting Between Different Units of Measurement

1. Fill in the empty boxes in the table below. The first row has been done for you.

Millilitres (ml)	Centilitres (cl)	Litres (l)
1500	150	1.5
3000	300	**3**
2000	**200**	**2**
4300	**430**	4.3
700	**70**	0.7
400	**40**	**0.4**
60	**6**	**0.06**

2. Draw lines to match the equivalent measurements.



3. Fill in the missing measurements.

400g = **0.4**kg

7000g = 7kg

3500g = **3.5**kg

80g = 0.08kg

5500g = 5.5kg

90g = **0.09**kg

12 300g = 12.3kg

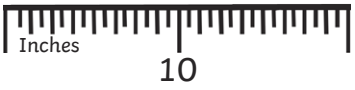
4. Order these weights from lightest to heaviest.

2.3kg 2000g 0.4kg 4kg 3400g 4003g

0.4kg **2000g** **2.3kg** **3400g** **4kg** **4003g**

Metric vs. Imperial

5. Write the measurements on the rulers in centimetres.
   2.5 centimetre = 1 inch



25cm

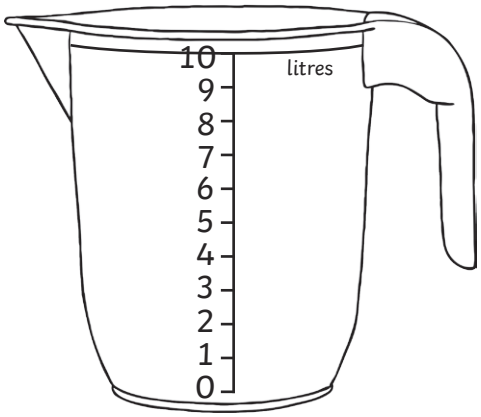
50cm

7.5cm

6. Convert the measurements of each jug of liquid.
   1 litre = 1.75 pints

2 litres

7 pints

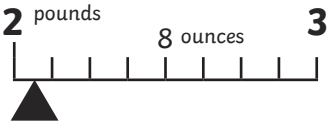


17.5 pints

7. Convert the weights on each of the scales.
   0.45 kilogram = 1 pound (lb)
   28 grams = 1ounce (oz)

3kg

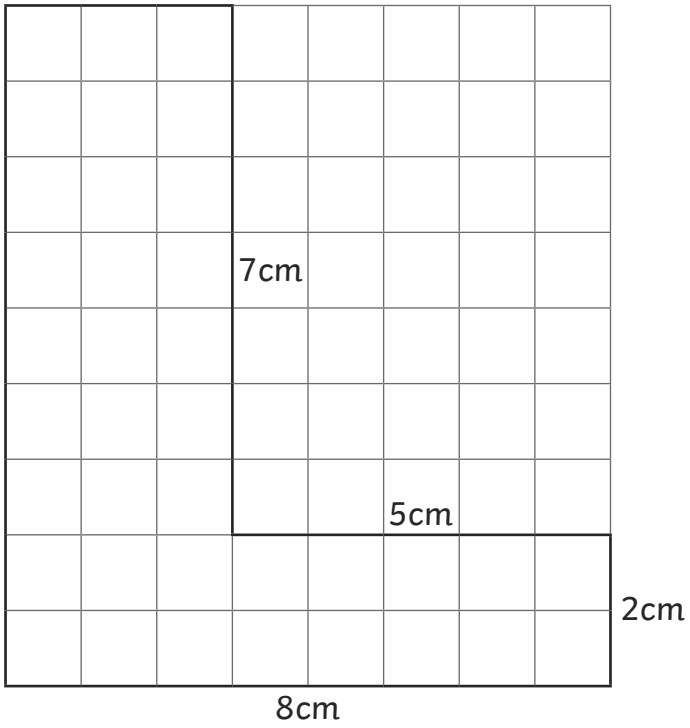
3lb (pounds)



928g

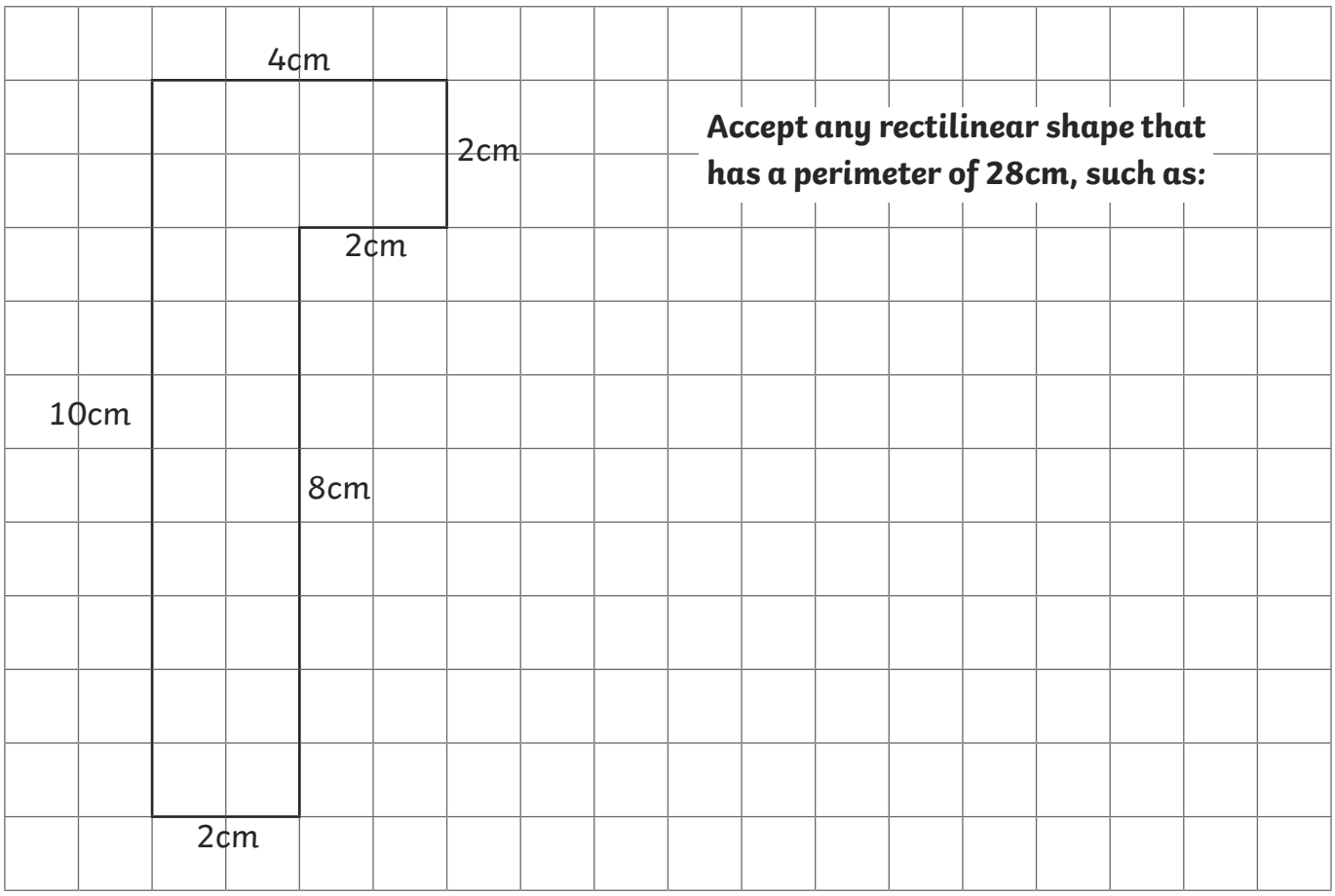
Perimeter

8. Calculate the perimeter of this rectilinear shape.



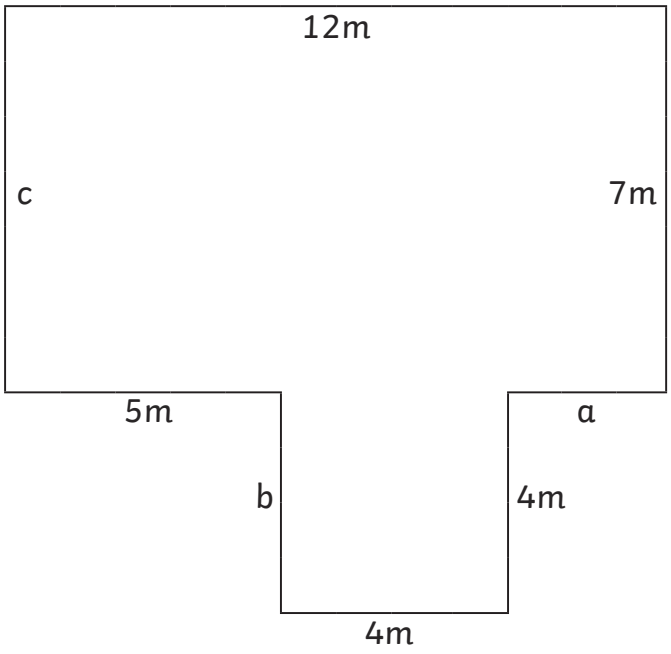
Perimeter = **34cm**

9. Draw a composite, rectilinear shape which has a perimeter of 28cm.



Accept any rectilinear shape that has a perimeter of 28cm, such as:

10. The perimeter of this composite rectilinear shape is 46m. Calculate the value of sides a,b and c.



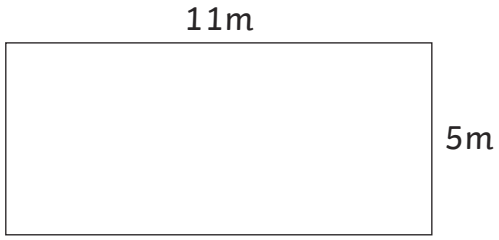
a = **3m**

b = **4m**

c = **7m**

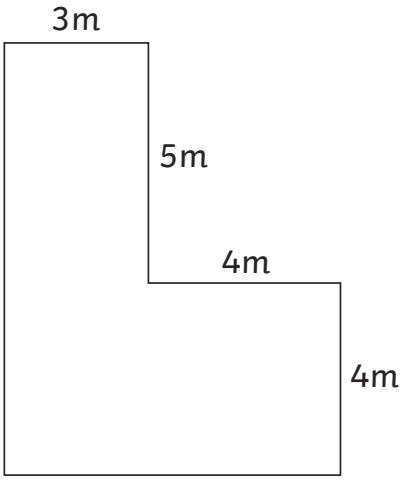
Area

11. Calculate the area of this shape.



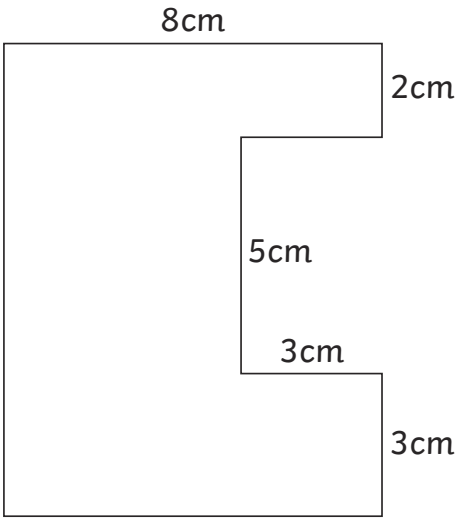
Area = **55m²**

12. Calculate the area of this shape.



Area = **43m²**

13. Calculate the area of this shape.



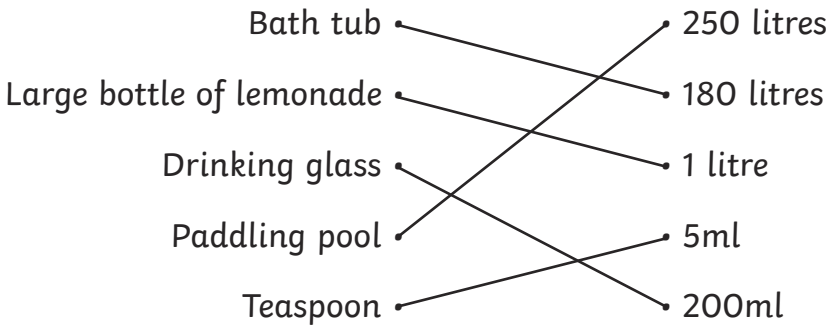
Area = **65cm²**

14. A square has an area of 36cm². What is the length of one side?

6cm

Volume and Capacity

15. Draw lines to the most appropriate capacity for each of the following containers.



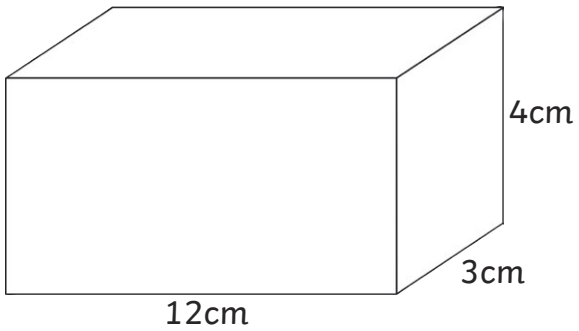
16. A jug holds 2 litres of squash. A cup holds 125ml of liquid. If Thomas fills 4 cups with squash, how much will be left in the jug?

    1.5 litres

17. A bath has a capacity of 80 litres. If $\frac{1}{4}$ of the bath is filled, how many millilitres of water will be in the bath?

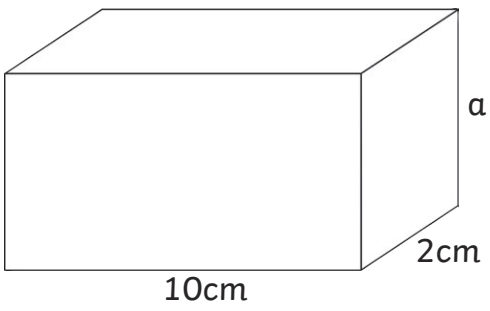
    20 000 millilitres

18. Calculate the volume of this cuboid.



Volume = **144**cm^3

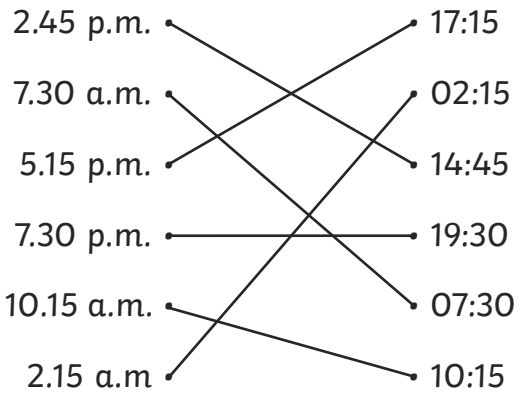
19. The volume of this cuboid is 80cm^3. What is the value of the missing side?



a = **4cm**

Converting Between Units of Time

20. Draw lines to match the 12-hour and 24-hour clock times.



21. Fill in the missing times. The first row has been done for you.

Time in Words	24-Hour Clock	12-Hour Clock	Analogue
half past 5 in the evening	17:30	5.30 p.m.	
nine o'clock in the morning	**09:00**	**9.00 a.m.**	
quarter past three in the afternoon	**15:15**	3.15 p.m.	
half past eight in the evening	20:30	**8.30 p.m.**	
quarter to eight in the morning	**07:45**	**7.45 a.m.**	
twenty past five in the morning	**05:20**	5.20 a.m.	
twenty to eleven in the morning	10:40	**10.40 a.m.**	
midnight	**00:00**	**12.00 a.m.**	

Problem Solving

22. Order the amounts from the least to most expensive.

80p	£1.20	£0.70	£1.50	250p
£0.70	**80p**	**£1.20**	**£1.50**	**250p**

23. This recipe makes enough brownies for 6 people.

100g butter

200g dark chocolate

250g sugar

50g flour

60g cocoa

How much of each ingredient would you need to make enough brownies for 9 people?

150g butter

300g dark chocolate

375g sugar

75g flour

90g cocoa