

WA6MMGTW2

Two-dimensional space and structures

Core + Challenge

Converting Units of Mass and Capacity

I can read scales and jugs, and convert between g, kg and t, and between mL and L.

Name: _____ Date: _____ Score: _____ / 56

Key idea

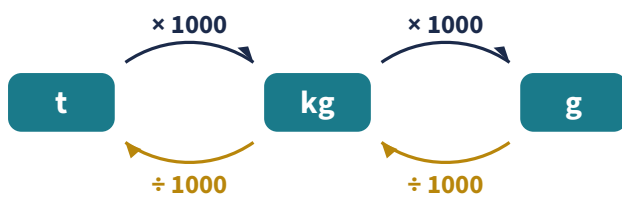
Mass: **1000 g = 1 kg** and **1000 kg = 1 t** (tonne). Capacity: **1000 mL = 1 L**.

To change to a **smaller** unit, **multiply** by 1000. To change to a **larger** unit, **divide** by 1000.

To read a scale, first work out **what each small step is worth**: the gap between two labels $\div$ the number of steps.

Example: the jug below has **5 steps** from 0 to 0.5 L, so each step is $0.5 \div 5 = 0.1$ L. It shows 0.7 L = **700 mL**.

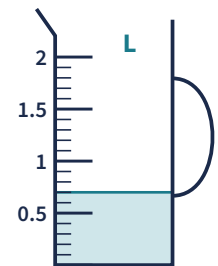
Mass



Capacity



Example

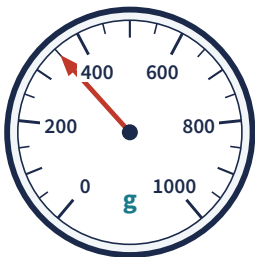


A Warm up *read scales, draw and convert*

/ 16 marks

Read each scale. Write the mass shown by the pointer, with its unit. 1 mark each.

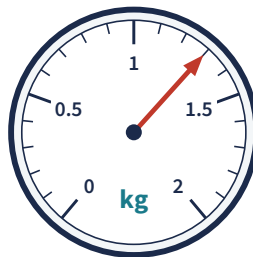
1



2



3



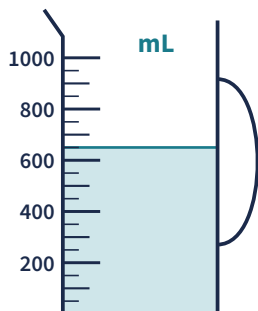
4



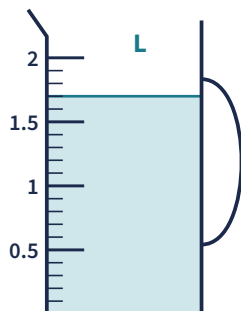
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Read each jug. Write how much liquid is in it, with its unit. 1 mark each.

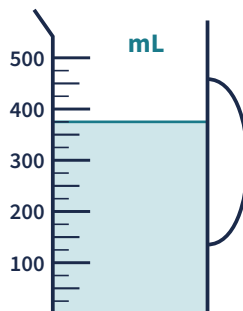
5



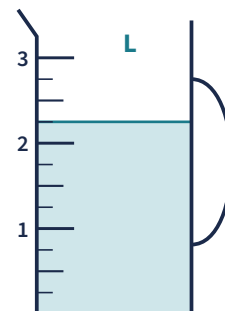
6



7

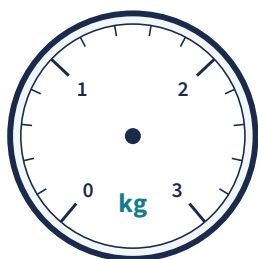


8

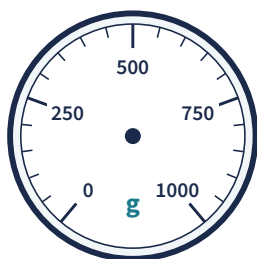


Draw the pointer on each scale, or shade each jug, to show the amount. 1 mark each.

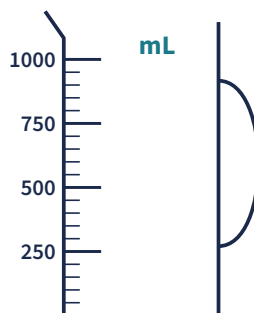
9 Draw **1.6 kg**



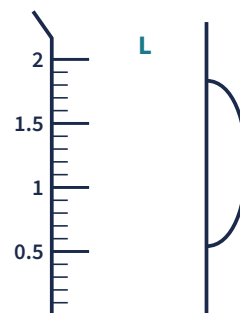
10 Draw **850 g**



11 Shade **700 mL**



12 Shade **1.4 L**



Convert each amount. 1 mark each.

13 2.5 kg = _____ g

14 4250 mL = _____ L

15 3.2 t = _____ kg

16 75 g = _____ kg

B

Practise use the skill

/ 21 marks

1 This pancake recipe serves **4** people. Complete the table to make pancakes for **12** people. In the last column, write each amount in the other unit. [3 marks]

Ingredient	For 4 people	For 12 people	For 12 people (other unit)
Flour	250 g		
Milk	0.5 L		
Butter	30 g		

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- 2 At Woolies, a **2 kg** bag of rice costs **\$5.40** and a **500 g** bag costs **\$1.50**. Jake needs 2 kg of rice. Which is cheaper: one 2 kg bag or four 500 g bags? By how much? [2 marks]

Answer: _____

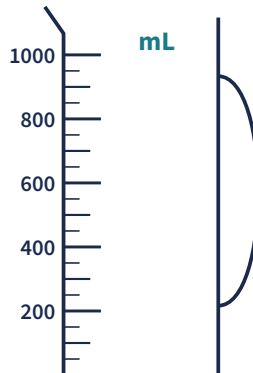
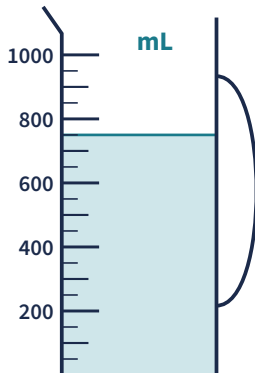
- 3 Mum puts a bag of apples on the kitchen scale. **a)** What is the mass of the apples? **b)** She takes out apples weighing **400 g**. What is the mass now, in grams **and** in kilograms? [2 marks]



a) _____

b) _____

- 4 **a)** How much water is in the first jug? **b)** Jess pours out **two** cups of **150 mL**. **c)** How many 150 mL cups could the water in the first jug fill? Shade the second jug to show how much is left. [3 marks]



a) _____

b) _____

c) _____

- 5 An empty truck has a mass of **3.8 t**. It carries **24** bags of cement. Each bag has a mass of **50 kg**. What is the total mass of the truck and the bags, in **tonnes**? [2 marks]

Answer: _____

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- 6 Mark the mass of each bag of fruit on the number line with its first letter. Then write the fruit from **lightest** to **heaviest**. **Mangoes** 1.2 kg, **Grapes** 850 g, **Pineapple** 1050 g, **Bananas** 0.9 kg, **Apples** 1.25 kg [2 marks]



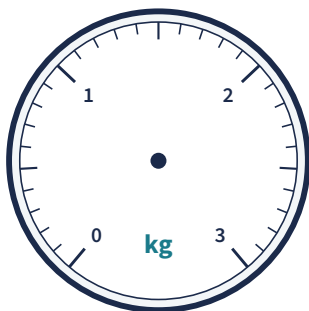
- 7 For the athletics carnival, each of **24** students needs **600 mL** of water. Water comes in **2 L** bottles. How many bottles are needed? Explain. [2 marks]

Answer: _____

- 8 Draw a line to join each pair of **equal** amounts. [2 marks]

0.5 kg	•	•	0.25 L
250 mL	•	•	0.075 kg
1.5 t	•	•	500 g
2.05 L	•	•	2050 mL
75 g	•	•	1500 kg

- 9 Lucy posts **3** books. Each book has a mass of **0.6 kg**. Draw the pointer to show the mass of the parcel. Then use the price list to find the cost of posting it. [3 marks]



Parcel prices	
Mass of parcel	Price
Up to 500 g	\$9.70
Over 500 g, up to 1 kg	\$12.15
Over 1 kg, up to 3 kg	\$15.20
Over 3 kg, up to 5 kg	\$18.90

Answer: _____

C

Think it through *explain your thinking*

/ 10 marks

- 1 Omar says the scale shows **2.3 kg**. Do you agree with Omar? Explain his mistake. [2 marks]



- 2 **True or false?** “1.5 L + 75 mL = 2.25 L.” Prove your answer. [2 marks]

- 3 **Always, sometimes or never true?** “A mass in **tonnes** is heavier than a mass in **kilograms**.” Circle one and give examples to prove it. [2 marks]

Always / Sometimes / Never

- 4 Which is the **odd one out**? 0.25 L, 250 mL, 2.5 L, $\frac{1}{4}$ L Explain. [2 marks]

- 5 Sort these amounts into the table: 850 g, 1.2 L, 0.04 t, 750 mL, 1500 g, 0.95 L, 0.6 kg, 1005 mL. Explain how you decided where **0.04 t** goes. [2 marks]

	Mass	Capacity
Under 1 kg / under 1 L		
At least 1 kg / 1 L		

D**Challenge** *stretch yourself*

/ 9 marks

- 1 You have a **5 L** bucket and a **3 L** bucket, and a tap. Neither bucket has any markings. How can you get **exactly 4 L** of water? List your steps. [3 marks]

Answer: _____

- 2 Ella has **four** masses: **50 g**, **200 g**, **500 g** and **1 kg**. She puts one or more of them together on a **kitchen scale**, using each mass once or not at all. How many **different** totals can she make? What is the **heaviest**, in kg? Show a system so none are missed. [3 marks]

Answer: _____

- 3 A box with **12** tins of beans has a mass of **5.1 kg**. When **5** tins are taken out, the box and the other tins have a mass of **3.1 kg**. All the tins have the same mass. Find the mass of **one tin** and of the **empty box**, in grams. [3 marks]

Answer: _____

How did I go?Warm up ____ / 16 Practise ____ / 21 Think it through ____ / 10 Challenge ____ / 9 **Total ____ / 56**Want help with Year 6 maths? Our tutors make it click. **Book a free trial class at [edulift.com.au](https://www.edulift.com.au)**