

WA6MMGTW2

Two-dimensional space and structures

Core + Challenge

Converting Units of Length

I can measure lengths and convert between mm, cm, m and km, including decimals.

Name: _____ Date: _____ Score: _____ / 56

Key idea

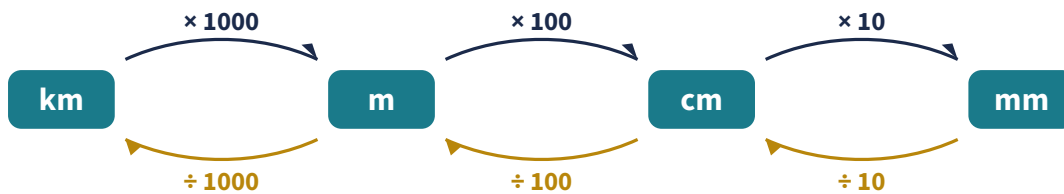
10 mm = 1 cm, 100 cm = 1 m, 1000 mm = 1 m and 1000 m = 1 km.

To change to a **smaller** unit, **multiply** (there will be more of them). To change to a **larger** unit, **divide**.

Our metric units follow place value: $\times 10$, $\times 100$ or $\times 1000$ moves every digit 1, 2 or 3 places to the left.

Example: $4.2 \text{ m} = 4.2 \times 100 = \mathbf{420 \text{ cm}}$. $62 \text{ mm} = 62 \div 10 = \mathbf{6.2 \text{ cm}}$ (6 cm and 2 mm).

Multiply to go to a smaller unit, divide to go to a larger unit



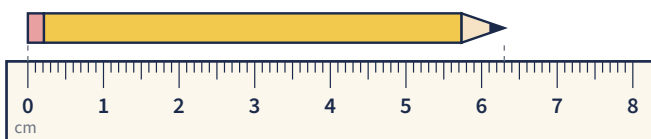
A

Warm up *measure, mark and convert*

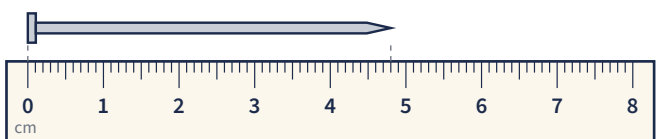
/ 16 marks

Measure each object on the ruler. Write its length in **mm** and in **cm**. 1 mark each. (Print at 100%, not fit-to-page, so the rulers are true to size.)

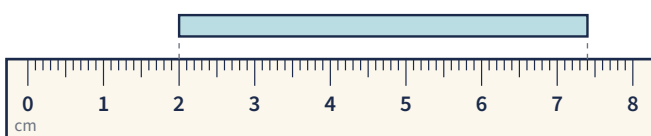
1 How long is the **pencil**?



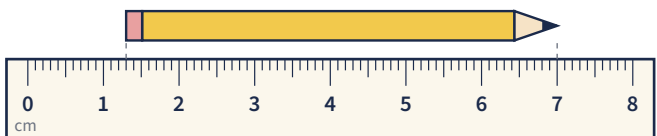
2 How long is the **nail**?



3 How long is the **ribbon**?



4 How long is the **pencil**?



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Draw an arrow on the ruler to mark each length. Write its letter above the arrow. 1 mark each.



- 5 A at 2.7 cm 6 B at 64 mm 7 C at 0.115 m 8 D at 13 cm 8 mm

Convert each length. 1 mark each.

- 9 3.6 m = _____ cm 10 450 cm = _____ m
11 2.35 km = _____ m 12 80 mm = _____ cm
13 0.7 cm = _____ mm 14 1250 m = _____ km
15 0.4 m = _____ mm 16 6 m 5 cm = _____ m

B Practise *use the skill*

/ 21 marks

- 1 Use your ruler. Draw a line from each dot. **a)** 4.5 cm long **b)** 72 mm long **c)** 0.06 m long [3 marks]

a) •

b) •

c) •

- 2 A carpenter writes lengths in different units. Complete the table so that each row shows the **same** length. [3 marks]

millimetres (mm)	centimetres (cm)	metres (m)
	25	
1800		
		3.05

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- 3 Five Year 6 students measured their heights: **Ava** 1.42 m, **Ben** 138 cm, **Chloe** 1410 mm, **Dev** 1.5 m, **Eli** 146 cm. Mark each height on the number line with the student's first letter. Then list the students from **shortest** to **tallest**. [3 marks]



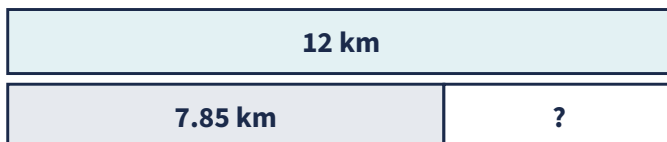
- 4 Mia travels from home to the WA Museum. How far does she travel altogether? Give your answer in **km**. How many **metres** does she walk? [2 marks]



Total distance (km): _____

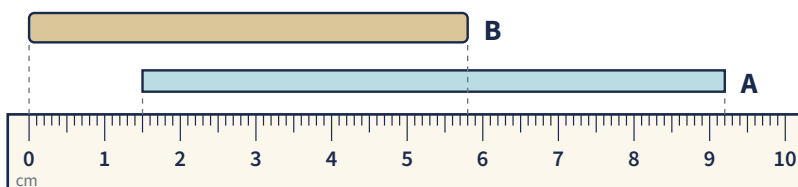
Distance walked (m): _____

- 5 The Perth City to Surf fun run is **12 km** long. Aisha has run **7.85 km**. How far does she still have to run? Give your answer in km **and** in m. [2 marks]



Answer: _____

- 6 Measure the two ribbons. How much **longer** is ribbon A than ribbon B? Give your answer in mm and in cm. [2 marks]



Answer: _____

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- 7 Draw a line to join each pair of **equal** lengths.

[2 marks]

0.5 km •	• 500 m
50 cm •	• 0.5 cm
5 mm •	• 5000 mm
0.05 km •	• 500 mm
5 m •	• 50 m

- 8 A garden bed is a rectangle **2.4 m** long and **85 cm** wide. How many metres of edging are needed to go all the way around it?

[2 marks]



Answer: _____

- 9 A roll of ribbon is **5 m** long. Kate cuts it into pieces that are each **12.5 cm** long. How many pieces does she get? (Hint: how many pieces fit in 1 m?)

[2 marks]

Answer: _____

C Think it through *explain your thinking*

/ 10 marks

- 1 Noah says that **3.5 m** is the same as **35 cm**, because “to change metres to centimetres you multiply by 10”. Do you agree with Noah? Explain.

[2 marks]

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- 2 **True or false?** “0.08 km is longer than 750 cm.” Show how you know. [2 marks]

- 3 **Always, sometimes or never true?** “A length written with **more digits** is longer.” Circle one and give examples to prove it. [2 marks]

Always / Sometimes / Never

- 4 Which length is the **odd one out**? 2.5 m, 250 cm, 2500 mm, 0.25 km Explain. [2 marks]

- 5 Sort these lengths into the table: 0.45 m, 1250 mm, 8.5 cm, 1.075 m, 99 cm, 2005 mm, 0.3 km, 675 mm. Explain how you decided where **2005 mm** goes. [2 marks]

	A whole number of cm	Not a whole number of cm
Less than 1 m		
1 m or more		

D**Challenge** *stretch yourself*

/ 9 marks

- 1 A plank is **3 m** long. Tom cuts it into pieces that are **45 cm** or **30 cm** long, with **nothing left over**. He does not have to use both sizes. Find **all** the ways he could do it. How do you know you have found them all? [3 marks]

Answer: _____

- 2 Kai had a long piece of string. He cut off **1.35 m**. Then he gave away **half** of what was left. Then he used **80 cm**. He had **1.2 m** left. How long was the string at the start? Show your working backwards. [3 marks]

Answer: _____

- 3 One sheet of paper is **0.1 mm** thick. **a)** How thick is a pack of **500** sheets, in **cm**? **b)** How many packs would make a stack **1 m** tall? **c)** How many sheets is that? [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**