

Length – metres and centimetres; choosing the unit

MODULE 4 · MEASURES – LENGTH, WEIGHT AND CAPACITY MEASURES

HOW TO ANSWER TODAY

- **Estimate gap.** Subtract the smaller from the bigger to find how far off the estimate was.
Estimated 15 cm, real 12.5 cm → 2.5 cm off
- **Convert units.** To a SMALLER unit → multiply. To a BIGGER unit → divide. Common factors:
cm ↔ mm ×10, m ↔ cm ×100, km ↔ m ×1,000, kg ↔ g ×1,000, l ↔ ml ×1,000.
250 cm → m: $\div 100 = 2.5$ m · 3.5 kg → g: $\times 1,000 = 3,500$ g

WARM-UP

- For an Engineers Week woodwork project, Tadhg estimates the length of a timber strip as **24 cm**. When he measures it with a ruler, the strip is actually **19 cm**. By how much is his estimate off?
A pupil estimates a length as 24 cm, then measures it as 19 cm. By how much is the estimate off?
- On the school nature walk through the local park, Oisín measures the length of a fallen branch as **8 m**. How long is the branch in centimetres?
Convert 8 m to cm.

PRACTICE

- Mr Ó Briain fills the art-room paint barrel with **14 l** of poster paint for the 3rd and 4th class mural project. He needs to share it into small bottles measured in millilitres. How many ml of paint are in the barrel?
Convert 14 l to ml.
- Cara estimates that the class library shelf is **106 cm** long, then measures it with a metre stick and finds it is actually **87 cm** long. By how many centimetres is her estimate off?
A pupil estimates a length as 106 cm, then measures it as 87 cm. By how much is the estimate off?

CHALLENGE

- The after-school crafts club is making a long kite tail from ribbon. The ribbon they need measures **27 m** in total. How many millimetres of ribbon is that?
Convert 27 m to mm.
- Cian estimates that the school noticeboard is **171 cm** wide. He then measures it with a metre stick and finds it is actually **178 cm** wide. By how much is his estimate off?
A pupil estimates a length as 171 cm, then measures it as 178 cm. By how much is the estimate off?