

Measures word problems (length, weight, capacity)

MODULE 4 · MEASURES — LENGTH, WEIGHT AND CAPACITY MEASURES

HOW TO ANSWER TODAY

- **Read a ruler.** Each big mark = 1 cm = 10 mm. Each little mark = 1 mm.
 $3\text{ cm} + 7\text{ mm} = 37\text{ mm} = 3.7\text{ cm}$
- **Convert units.** To a SMALLER unit → multiply. To a BIGGER unit → divide. Common factors:
 $\text{cm} \leftrightarrow \text{mm} \times 10$, $\text{m} \leftrightarrow \text{cm} \times 100$, $\text{km} \leftrightarrow \text{m} \times 1,000$, $\text{kg} \leftrightarrow \text{g} \times 1,000$, $\text{l} \leftrightarrow \text{ml} \times 1,000$.
 $250\text{ cm} \rightarrow \text{m}: \div 100 = 2.5\text{ m}$ · $3.5\text{ kg} \rightarrow \text{g}: \times 1,000 = 3,500\text{ g}$
- **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

★ STRETCH PROBLEMS

- 1 Daithí measures a strip of ribbon for the class picnic bunting. On his ruler, the ribbon reaches **19 cm** and **4 mm** from the start. What is the length of the ribbon in cm?
- 2 For STEM week, 4th class map out a real **25 km** stretch of the Wicklow Way to scale for their model bridge project. To work out their scale, they first need the distance in centimetres. Convert **25 km** to cm.
- 3 Tadhg designs a class crest for the Gaelic football jersey and guesses the width of the banner strip will be **87 cm**. When he measures it with the metre stick, it is really **67 cm**. By how much is his estimate off?
- 4 Aoife measures out **87 m** of ribbon to make bunting for the school summer fair. She needs to write the length in centimetres for her order form. How many centimetres is **87 m**?
- 5 Aoife is making a tessellation pattern for the corridor display. She estimates the strip of paper is **97 cm** long, then measures it as **91 cm** with a metre stick. By how much is her estimate off?