

Measures investigation: estimate then measure around the room and yard

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

★ STRETCH PROBLEMS

- 1 Before going out to the yard, Tadhg guesses that the classroom door is **73 cm** wide. He then measures it and finds it is really **93 cm** wide. By how much was his estimate off?
- 2 Cara estimates that the wall-ball line on the yard is **151 cm** above the ground. She then measures it with a metre stick and finds it is really **152 cm** high. By how much is her estimate off?
- 3 On a family cycle around Lough Derg, Oisín rides a total of **46 km** along the path. How many metres is that altogether?
- 4 The caretaker paints a long line for the new yard game and it measures **85 m** from end to end. He wants to record the length in millimetres on the plan. How many millimetres is **85 m**?
- 5 The map for the school cycle to Glendalough shows the route is **71 km** long. Cian wants to write the distance in metres for his fundraising poster. How many metres is **71 km**?