Renaming length units (m ↔ cm, cm ↔ mm)

MODULE 4 · MEASURES — LENGTH, WEIGHT AND CAPACITY MEASURES

HOW TO ANSWER TODAY

- **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: ÷ 100 = 2.5 m · 3.5 kg → g: × 1,000 = 3,500 g
- **Read a ruler.** Each big mark = 1 cm = 10 mm. Each little mark = 1 mm.
  3 cm + 7 mm = 37 mm = 3.7 cm

STRETCH PROBLEMS

1. For the school play, 4th class buy a roll of ribbon that is **29 m** long to decorate their papier-mâché masks. How many millimetres of ribbon is that in total?
2. For the school robotics project, 4th class programme a small robot to record how far it travels. The map on the screen shows a journey of **74 km**. To scale the route onto their tiny track, they need this distance in centimetres. How many centimetres is **74 km**?
3. For Seachtain na Gaeilge, 4th class have **94 m** of green, white and orange bunting to hang along the school corridor. How many centimetres of bunting is that?
4. Oisín marks out the long-jump run-up for the yard athletics track. His measuring stick is **25 cm** long. How many millimetres is that?
5. Cian measures a leaf he found at granny's farm using his ruler. The tip of the leaf sits at **10 cm** and **5 mm** from the start of the ruler. What is the reading in cm?

INVESTIGATE

Measure the classroom

Estimate, then measure, the length and width of your classroom. Record each length in **metres and centimetres**, and also renamed in centimetres only. Work out the perimeter. Would the whole class fit shoulder-to-shoulder along one wall? Show how you decided.