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: ÷ 100 = 2.5 m · 3.5 kg → g: × 1,000 = 3,500 g

STRETCH PROBLEMS

1. Cian estimates the length of a long-jump take-off strip in the yard as **87 cm**. He then measures it with a metre stick and finds it is actually **67 cm**. By how much is his estimate off?

2. Cara's class is tracking how far a swallow flies between visits to the bird-feeder. Over the spring, the swallow's flight path adds up to **88 km**. How many centimetres is that?
   > Convert 88 km to cm.

3. Cian's family drove **60 km** from Cork to visit his cousins in Waterford. He wants to write the distance in centimetres for his maths copy. How many cm is **60 km**?
   > Convert 60 km to cm.

4. Before going out to the yard, Oisín estimates that his schoolbag is **82 cm** long. When he measures it with a metre stick back in the classroom, it is actually **67 cm** long. By how many centimetres is his estimate off?
   > A pupil estimates a length as 82 cm, then measures it as 67 cm. By how much is the estimate off?

5. The 4th class team cycle a total of **26 km** to and from the Cumann na mBunscol blitz at the county grounds. The coach asks them to write the distance in metres for the school noticeboard. How many metres did they cycle?
   > Convert 26 km to m.