

Weight – estimate and weigh in kilograms and grams

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

WARM-UP

- On the school tour to Glendalough, Oisín finds a smooth stone by the lake and estimates it is **45 cm** long. He then measures it with his ruler and finds it is actually **47 cm** long. By how many centimetres is his estimate off?
A pupil estimates a length as 45 cm, then measures it as 47 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

- Before going out to the yard, Cian helps the caretaker weigh a sack of sand for the long-jump pit. The sack weighs **48 kg**, but the order form needs the weight written in grams. How many grams is **48 kg**?
Convert 48 kg to g.
- In PE class, Oisín estimates the length of the long-jump mat as **187 cm**. He then measures it with a tape and finds it is actually **198 cm**. By how many centimetres is his estimate off?

CHALLENGE

- 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?
- 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.