

Length – centimetres and millimetres

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:
 $\text{cm} \leftrightarrow \text{mm} \times 10$, $\text{m} \leftrightarrow \text{cm} \times 100$, $\text{km} \leftrightarrow \text{m} \times 1,000$, $\text{kg} \leftrightarrow \text{g} \times 1,000$, $\text{l} \leftrightarrow \text{ml} \times 1,000$.
 $250\text{ cm} \rightarrow \text{m}: \div 100 = 2.5\text{ m}$ · $3.5\text{ kg} \rightarrow \text{g}: \times 1,000 = 3,500\text{ g}$

WARM-UP

- 1 Cian is making a scale drawing of the school yard during art class. He measures a path on his drawing and the ruler reading sits **3 cm** and **6 mm** from the start of the ruler. What is the reading in mm?
 | A ruler reading sits 3 cm and 6 mm from the start of the ruler. What is the reading in mm?
- 2 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

- 1 Mr Ó Briain fills the art-room paint barrel with **14 l** of poster paint for the 3rd and 4th class mural project. He needs to share it into small bottles measured in millilitres. How many ml of paint are in the barrel?
 | Convert 14 l to ml.
- 2 Sean measures a small twig that the robin dropped at the classroom bird-feeder. On his ruler, the twig stretches from the start to **7 cm** and **8 mm**. What is the length in cm?
 | A ruler reading sits 7 cm and 8 mm from the start of the ruler. What is the reading in cm?

CHALLENGE

- 1 The after-school crafts club is making a long kite tail from ribbon. The ribbon they need measures **27 m** in total. How many millimetres of ribbon is that?
 | Convert 27 m to mm.
- 2 Cian measures the side of a hopscotch square painted on the yard with his ruler. The chalked edge reaches **28 cm** and **4 mm** along the ruler. What is the reading in cm?
 | A ruler reading sits 28 cm and 4 mm from the start of the ruler. What is the reading in cm?