

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

WHAT THIS LESSON TEACHES

The same length can be named in a different unit without getting any longer or shorter. To go to a smaller unit multiply: 1 m = 100 cm, and 1 cm = 10 mm. To go to a bigger unit divide the same way.

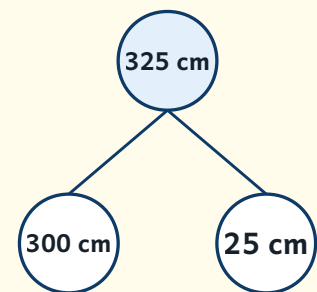
$$\rightarrow 3 \text{ cm} = 3 \times 10 = 30 \text{ mm}$$

$$\rightarrow 2 \text{ m} = 2 \times 100 = 200 \text{ cm}$$

MODEL THIS ON THE BOARD

RENAME CM TO M AND CM

- 1 There are **100** cm in every metre, so split into hundreds.
- 2 $325 \text{ cm} = 300 \text{ cm} + 25 \text{ cm}$.
- 3 $300 \text{ cm} = 3 \text{ m}$, with **25** cm left over.



DISCUSSION STARTER

REFLECT When you rename a unit, do you multiply or divide — and how do you remember which way?

ANSWER KEY

a) 50 mm

b) 7 cm

c) 300 cm

Q1: 50 mm

Q2: 400 cm

Q3: 80 mm

a) Always — There are exactly 100 cm in every metre.

b) Always — You multiply by 10 because millimetres are smaller parts, so more of them fit.

c) Never — Going to a smaller unit always makes the number larger, never smaller.

d) Never — Only the unit and the number change; the true distance stays the same.

EXTENSION SHEET · STRETCH ANSWERS

S1: 19.3 cm

S2: 16.6 cm

S3: 29.9 cm

S4: 250 mm

S5: 85000 mm

Investigation: Measure the classroom — open-ended; scan pupils' working for valid solution paths rather than a single answer.