

Multiplying and dividing decimals by 10, 100, 1000

MODULE 1 · PLACE VALUE, DECIMALS AND THE NUMBER SYSTEM NUMBER

Multiplying by 10, 100, 1000 makes a number **bigger** — the digits move **left** 1, 2 or 3 places.
Dividing makes it **smaller** — digits move **right**.

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- $2.5 \times 100 = 250$.
→ $47 \div 1000 = 0.047$.

WORK OUT 4.7×100 AND $38 \div 1000$

- 1 $\times 100 \rightarrow$ digits move **2 places left**: $4.7 \rightarrow 470$.
2 $\div 1000 \rightarrow$ digits move **3 places right**: $38 \rightarrow 0.038$.

WARM-UP

Fill in each product.

	$\times 10$	$\times 100$	$\times 1000$
a. 2.5			
b. 0.7			
c. 1.04			

PRACTICE

- 1 The class library charges **€24.28** to replace a lost hardback book. The librarian works out the cost of replacing **100** hardbacks if the whole set were lost. What is the total replacement cost?
- 2 Ms Murphy's 5th class is making bunting for World Book Day. Each flag needs **74.76 cm** of ribbon, and the class is making **10** flags in total. How many centimetres of ribbon do they need altogether?

CHALLENGE

- 1 The school canteen records that one tray of lunches costs **€76.173** to prepare on the spreadsheet before rounding. The canteen manager needs to work out the cost of preparing **10** trays at that same rate. What is **76.173** $\times$ **10** ?
- 2 Cian's 5th class are running a sponsored leaf-collection for an art lesson. Each pupil collects a small bag of autumn leaves weighing **19.094 g** on average, and **100** pupils across the school take part. What is the total mass of leaves collected in grams?