

# Multiplying decimals by a 1-digit number using the formal written method

- Multiply a decimal by a 1-digit number using the formal written method of short multiplication
- Estimate and check the answer to a calculation

## Challenge

1 Work out these calculations.

**a**  $6 \times 3$

$0.6 \times 3$

$0.06 \times 3$

**b**  $7 \times 8$

$0.7 \times 8$

$0.07 \times 8$

**c**  $9 \times 6$

$0.9 \times 6$

$0.09 \times 6$

**d**  $4 \times 7$

$4 \times 0.7$

$4 \times 0.07$

**e**  $8 \times 9$

$0.8 \times 9$

$0.08 \times 9$

**f**  $3 \times 4$

$3 \times 0.4$

$3 \times 0.04$

**g**  $9 \times 7$

$9 \times 0.7$

$9 \times 0.07$

**h**  $8 \times 6$

$0.8 \times 6$

$0.08 \times 6$

2 Write the answer to each multiplication chain.

**a**  $0.2 \rightarrow \times 4 \rightarrow \times 6 \rightarrow$

**b**  $0.05 \rightarrow \times 8 \rightarrow \times 9 \rightarrow$

**c**  $0.9 \rightarrow \times 4 \rightarrow \times 2 \rightarrow$

**d**  $0.2 \rightarrow \times 5 \rightarrow \times 40 \rightarrow$

**e**  $0.06 \rightarrow \times 3 \rightarrow \times 4 \rightarrow$

**f**  $0.7 \rightarrow \times 9 \rightarrow \times 7 \rightarrow$

Find the answer to these calculations using the formal written method of short multiplication.

Estimate the answer first. Convert the decimals to whole numbers, carry out the calculation, then convert the answer back to a decimal.

- a  $33.3 \times 8$       b  $6.73 \times 3$       c  $27.3 \times 9$
- d  $2.78 \times 7$       e  $76.54 \times 6$       f  $8.94 \times 6$
- g  $67.25 \times 4$       h  $38.29 \times 5$       i  $9.86 \times 7$

### Example

$$71.4 \times 7 \rightarrow 70 \times 7 = 490$$

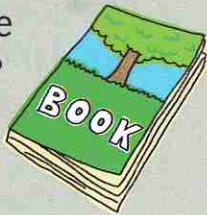
	Th	H	T	O
		7	1	4
×			2	7
	4	9	9	8

$71.4 \times 7$  is equivalent to  $714 \times 7 \div 10$ .  
This equals  $4998 \div 10$ , which is  $499.8$ .

$$71.4 \times 7 = 499.8$$

Find the answers to these problems.

- a Keira buys 5 paperback books each costing £6.85. She pays with a £50 note. How much change does she receive?



- b Mahdi bought 5 hardback books each costing £18.50. How much more did Mahdi spend than Keira on books?



- c Rosie has £50 to spend. She prefers magazines to books. On holiday she buys 1 magazine each day for a week. Each magazine costs £3.80. How much money does she have left?



- d Selena buys 7 maps costing £27.39 each. Alma spends 3 times more than Selena. How much does Alma spend? What is the difference between how much Alma and Selena spend?

- e The cost for travelling in Tina's taxi is 9 pence per 100m. Sonya travels 15.62 km. How much does she pay?

