

Multiplication with Decimals

Multiplying with decimals is just like regular multiplication — the only extra thing you've got to do is keep track of where the decimal point should go in your answer.

Examples

Work out 0.9×4

$$9 \times 4 = 36$$

$$\text{So } 0.9 \times 4 = 3.6$$

0.9 is 10 times smaller than 9 so the answer is 10 times smaller too.

What is 2.84×16 ?

$$\begin{array}{r} 284 \\ \times 16 \\ \hline 1704 \\ 2840 \\ \hline 4544 \\ 1 \end{array}$$

2.84 is 100 times smaller than 284 so the answer is 100 times smaller too.

$$\text{So } 2.84 \times 16 = 45.44$$

Set A

Work out:

- 1 0.4×2
- 2 0.2×9
- 3 0.3×5
- 4 0.9×8
- 5 0.7×6
- 6 0.5×11
- 7 0.6×12

Find the missing values:

- 8 $67 \times 4 = \square$
So $6.7 \times 4 = \square$
- 9 $134 \times 6 = \square$
So $13.4 \times 6 = \square$
- 10 $8 \times 7 = \square$
So $0.08 \times 7 = \square$
- 11 $73 \times 9 = \square$
So $0.73 \times 9 = \square$

A carton of juice holds 0.7 litres.

How many litres of juice do:

- 12 3 cartons hold?
- 13 12 cartons hold?

A pack of biscuits costs £1.60 and a bar of chocolate costs £0.68.

What is the price of:

- 14 8 packs of biscuits?
- 15 7 bars of chocolate?

Set B

Work out:

- 1 0.8×7
- 2 1.2×4
- 3 8.1×9
- 4 0.04×3
- 5 0.09×9
- 6 0.21×8
- 7 2.12×4

Use written multiplication to help you work out:

- 8 8.4×3
- 9 7.09×5
- 10 5.34×8
- 11 26.57×6
- 12 8.88×19
- 13 34.16×37

- 14 A train ticket costs £8.32. How much do 3 tickets cost?

- 15 A lap of the park is 1.69 miles. How many miles would 7 laps be?

- 16 A large bag of dog food weighs 4.57 kg. How much do 12 large bags of dog food weigh?

Set C

Work out:

- 1 7.3×9
- 2 0.42×3
- 3 0.81×5
- 4 3.22×8
- 5 8.15×7
- 6 14.27×4
- 7 90.08×9

Use long multiplication to help you work out:

- 8 5.6×12
- 9 1.81×14
- 10 2.44×15
- 11 26.34×18
- 12 18.01×34
- 13 37.93×45

- 14 A tub can hold 34.35 litres of water. How much water can 7 tubs hold?

- 15 A textbook costs £16.79. Mrs Ford buys 16 textbooks. What is the total cost?

- 16 Kai needs 90 m of fence. He buys 23 sections of 3.92 m long fence. Will he have enough? Explain your answer.

I can multiply decimals by whole numbers.

