Multiply by 0.1 and 0.01

H

1 Complete the calculations.

a) $87 \times 0.1 = 87 \times \frac{1}{10} = 87 \div \square = \square$

b) $8.07 \times 0.1 = 8.07 \times \frac{1}{10} = 8.07 \div \square = \square$

c) $870 \times 0.1 = 870 \times \frac{1}{10} = 870 \div \square = \square$

d) $0.807 \times 0.1 = 0.807 \times \frac{1}{10} = 0.807 \div \square = \square$

2 Explain why multiplying by 0.1 is the same as multiplying by $\frac{1}{10}$

3 Complete the calculations.

a) $53 \times 0.01 = 53 \times \frac{1}{100} = 53 \div \square = \square$

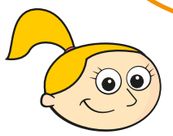
b) $530 \times 0.01 = 530 \times \frac{\square}{\square} = 530 \div \square = \square$

c) $503 \times 0.01 = 503 \times \frac{\square}{\square} = 503 \div \square = \square$

d) $0.53 \times 0.01 = 0.53 \times \frac{\square}{\square} = 0.53 \div \square = \square$

4 Explain why multiplying by 0.01 is the same as dividing by 100

5



Multiplying by 0.1 and then multiplying by 0.1 again is the same as multiplying by 0.01

Do you agree with Eva? _____

Use examples to support your answer.

Compare answers with a partner.

6 Match the equivalent calculations.

× 1	÷ 100
× 0.1	÷ 10
× 0.01	÷ 1,000
× 0.001	÷ 1

7 Work out the calculations.

a) 827 × 0.1 = ☐

b) 32 × 0.01 = ☐

c) 30.1 × 0.01 = ☐

d) 5,060 × 0.01 = ☐

e) 0.7 × 0.01 = ☐

f) 2.08 × 0.1 = ☐

g) 0.1 × 48.9 = ☐

h) 0.01 × 0.47 = ☐

i) 0.1 × 0.1 = ☐

j) 0.01 × 0.01 = ☐

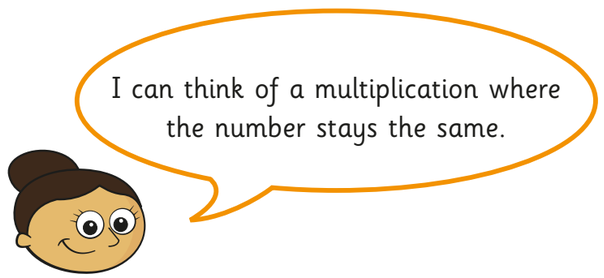
8 Here are some multiplications.

0.308 × 10	3,080 × 0.01	38 × 0.1	3,800 × 0.01

Write the products in descending order.

_____

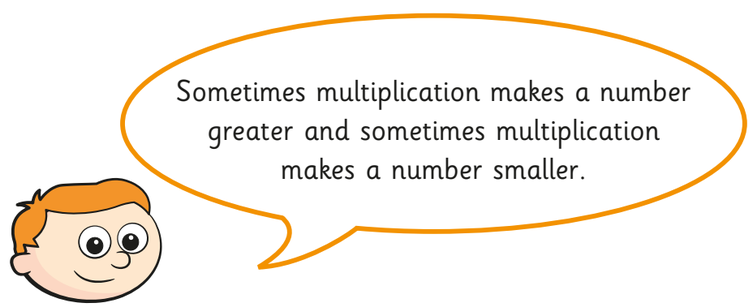
9 **a)**



What multiplication might Dora be thinking of?

_____

b)



Do you agree with Ron? _____

Use examples to explain your answer.

_____

_____

_____

Discuss your answers to parts a) and b) with a partner.

10 Fill in the missing numbers.

a) 14.3 × 10 × ☐ = 14.3

b) 48.3 × ☐ × 100 = 48.3

c) 0.01 × 712 × ☐ = 0.712

d) 91 × 10 × ☐ = 9.1

e) 0.02 × ☐ × 1,000 = 2

f) ☐ × 0.1 × 100 = 0.06