# Multiplying decimals by 10, 100 and 1,000

**1** Complete the multiplications.

**a)**

| H | T | O | Tths | Hths |
|---|---|---|---|---|
| | | 3 | 7 | |

3.7 × 10 = 37

**b)**

| H | T | O | Tths | Hths |
|---|---|---|---|---|
| | 1 | 4 | 5 | |

14.5 × 10 = 145

**c)**

| H | T | O | Tths | Hths |
|---|---|---|---|---|
| | | 1 | 5 | 8 |

1.58 × 10 = 15·8

**d)**

| H | T | O | Tths | Hths |
|---|---|---|---|---|
| | 1 | 3 | 0 | 6 |

13.06 × 10 = 130·6

What do you notice when you multiply a number by 10?

**2** Complete the multiplications.

**a)** 1.7 × 10 = 17

**b)** 1.75 × 10 = 17·5

**c)** 1.73 × 10 = 17·3

**d)** 13.4 × 10 = 134

**e)** 10 × 13.04 = 130·4

**f)** 130.4 × 10 = 1,304

**3** Complete the multiplications.

**a)**

| H | T | O | Tths | Hths |
|---|---|---|---|---|
| | | 4 | 1 | |

4.1 × 100 = 410

**b)**

| H | T | O | Tths | Hths |
|---|---|---|---|---|
| | | 4 | 1 | 5 |

4.15 × 100 = 415

**c)**

| H | T | O | Tths | Hths |
|---|---|---|---|---|
| | 1 | 4 | 5 | |

14.5 × 100 = 1,450

**d)**

| H | T | O | Tths | Hths |
|---|---|---|---|---|
| | | 4 | 0 | 5 |

4.05 × 100 = 405

What do you notice when you multiply a number by 100?

**4** Complete the calculations.

**a)** 7.2 × 100 = 720

**b)** 3.4 × 100 = 340

**c)** 19.5 × 100 = 1,950

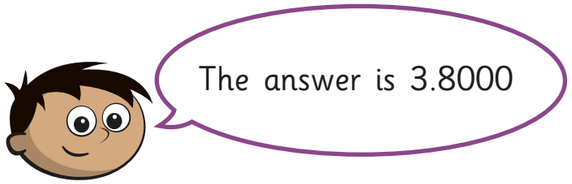
**d)** 1.89 × 100 = 189

**e)** 73.57 × 100 = 7,357

**f)** 1.317 × 100 = 131·7

© White Rose Maths 2020

**5** Amir has multiplied 3.8 by 1,000




**a)** What mistake has Amir made?

He has just added zeros.

**b)** Work out the correct answer. 3.8 × 1,000 = 3,800

**6** Complete the multiplications.

**a)** 4.7 × 10 = 47

4.7 × 100 = 470

4.7 × 1,000 = 4,700

**b)** 19.3 × 10 = 193

19.3 × 100 = 1,930

1,000 × 19.3 = 19,300

**c)** 5.84 × 10 = 58.4

5.84 × 100 = 584

5.84 × 1,000 = 5,840

**d)** 18.06 × 10 = 180.6

100 × 18.06 = 1,806

18.06 × 1,000 = 18,060

How did you work out the answers? Talk to a partner.

**7** Complete the calculations.

**a)** 7.7 × 100 = 770

**b)** 195 × 10 = 1,950

**c)** 11.5 × 10 = 115

**d)** 1,000 × 11.5 = 11,500

**e)** 8.032 × 10 = 80.32

**f)** 100 × 18.3 = 1,830

**g)** 195.32 × 10 = 1,953.2

**h)** 7.2 × 1,000 = 7,200

**8** Tommy is 1.4 m tall.

A tree is 10 times as tall as Tommy.

A building is 100 times as tall as Tommy.

**a)** How tall is the tree? 14 m

**b)** How much taller is the building than the tree? 126 m

**9** Match the multiplications to the descriptions.

| | |
|---|---|
| × 10 × 10 | multiply by 10 |
| × 10 × 10 × 10 | multiply by 100 |
| × 100 × 10 | multiply by 1,000 |
| × 10 × 100 | |
| × 10 × 1 | |

© White Rose Maths 2020