Multiplying decimals by 10, 100 and 1,000

1 Complete the multiplications.

a)

H	T	O	Tths	Hths
		3	7	

$3.7 \times 10 =$ ☐

b)

H	T	O	Tths	Hths
	1	4	5	

$14.5 \times 10 =$ ☐

c)

H	T	O	Tths	Hths
		1	5	8

$1.58 \times 10 =$ ☐

d)

H	T	O	Tths	Hths
	1	3	0	6

$13.06 \times 10 =$ ☐

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

2 Complete the multiplications.

a) $1.7 \times 10 =$ ☐

b) $1.75 \times 10 =$ ☐

c) $1.73 \times 10 =$ ☐

d) $13.4 \times 10 =$ ☐

e) $10 \times 13.04 =$ ☐

f) $130.4 \times 10 =$ ☐

3 Complete the multiplications.

a)

H	T	O	Tths	Hths
		4	1	

$4.1 \times 100 =$ ☐

b)

H	T	O	Tths	Hths
		4	1	5

$4.15 \times 100 =$ ☐

c)

H	T	O	Tths	Hths
	1	4	5	

$14.5 \times 100 =$ ☐

d)

H	T	O	Tths	Hths
		4	0	5

$4.05 \times 100 =$ ☐

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

4 Complete the calculations.

a) $7.2 \times 100 =$ ☐

b) $3.4 \times 100 =$ ☐

c) $19.5 \times 100 =$ ☐

d) $1.89 \times 100 =$ ☐

e) $73.57 \times 100 =$ ☐

f) $1.317 \times 100 =$ ☐

5 Amir has multiplied 3.8 by 1,000

The answer is 3.8000

a) What mistake has Amir made?

_____

_____

b) Work out the correct answer.   3.8 × 1,000 = [____]

6 Complete the multiplications.

a) 4.7 × 10 = [____]   **c)** 5.84 × 10 = [____]

4.7 × 100 = [____]   5.84 × 100 = [____]

4.7 × 1,000 = [____]   5.84 × 1,000 = [____]

b) 19.3 × 10 = [____]   **d)** 18.06 × 10 = [____]

19.3 × 100 = [____]   100 × 18.06 = [____]

1,000 × 19.3 = [____]   18.06 × 1,000 = [____]

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

7 Complete the calculations.

a) 7.7 × [____] = 770   **e)** 8.032 × [____] = 80.32

b) [____] × 10 = 1,950   **f)** [____] × 18.3 = 1,830

c) 11.5 × [____] = 115   **g)** 195.32 × [____] = 1,953.2

d) [____] × 11.5 = 11,500   **h)** [____] × 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?   [____] m

b) How much taller is the building than the tree?

[____] m

9 Match the multiplications to the descriptions.

| × 10 × 10 | | multiply by 10 |

| × 10 × 10 × 10 |

| × 100 × 10 | | multiply by 100 |

| × 10 × 100 |

| × 10 × 1 | | multiply by 1,000 |