Multiplying decimals by 10, 100 and 1,000
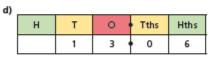
1 Complete the multiplications.

a)

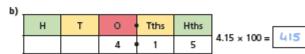| H	T	O	Tths	Hths
		3	7	

$3.7 \times 10 = $ 37

b)

H	T	O	Tths	Hths
	1	4	5	

$14.5 \times 10 = $ 145

c)

H	T	O	Tths	Hths
		1	5	8

$1.58 \times 10 = $ 15·8

d)

H	T	O	Tths	Hths
	1	3	0	6

$13.06 \times 10 = $ 130·6

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

2 Complete the multiplications.

a) $1.7 \times 10 = $ 17

b) $1.75 \times 10 = $ 17·5

c) $1.73 \times 10 = $ 17·3

d) $13.4 \times 10 = $ 134

e) $10 \times 13.04 = $ 130·4

f) $130.4 \times 10 = $ 1,304

3 Complete the multiplications.

a)

H	T	O	Tths	Hths
		4	1	

$4.1 \times 100 = $ 410

b)

H	T	O	Tths	Hths
		4	1	5

$4.15 \times 100 = $ 415

c)

H	T	O	Tths	Hths
	1	4	5	

$14.5 \times 100 = $ 1,450

d)

H	T	O	Tths	Hths
		4	0	5

$4.05 \times 100 = $ 405

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

4 Complete the calculations.

a) $7.2 \times 100 = $ 720

b) $3.4 \times 100 = $ 340

c) $19.5 \times 100 = $ 1,950

d) $1.89 \times 100 = $ 189

e) $73.57 \times 100 = $ 7,357

f) $1.317 \times 100 = $ 131·7

5 Amir has multiplied 3.8 by 1,000

The answer is 3.8000

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	