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

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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	

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