Dividing decimals by 10, 100 and 1,000

1 Complete the divisions.

a)

H	T	O	Tths	Hths
		5		

5 ÷ 10 = 0·5

b)

H	T	O	Tths	Hths
	1	5		

15 ÷ 10 = 1·5

c)

H	T	O	Tths	Hths
		3	8	

3.8 ÷ 10 = 0·38

d)

H	T	O	Tths	Hths
	1	3	8	

13.8 ÷ 10 = 1·38

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

2 Complete the calculations.

a) 7 ÷ 10 = 0·7

b) 7.8 ÷ 10 = 0·78

c) 7.86 ÷ 10 = 0·786

d) 16 ÷ 10 = 1·6

e) 16.4 ÷ 10 = 1·64

f) 16.48 ÷ 10 = 1·648

3 Complete the divisions.

a)

H	T	O	Tths	Hths	Thths
	1	7			

17 ÷ 100 = 0·17

b)

H	T	O	Tths	Hths	Thths
		9	4		

9.4 ÷ 100 = 0·094

c)

H	T	O	Tths	Hths	Thths
2	7	6			

276 ÷ 100 = 2·76

d)

H	T	O	Tths	Hths	Thths
	3	2	5		

32.5 ÷ 100 = 0·325

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

4 Complete the divisions.

a) 7 ÷ 100 = 0·07

7.2 ÷ 100 = 0·072

7.25 ÷ 100 = 0·0725

b) 109 ÷ 100 = 1·09

10.9 ÷ 100 = 0·109

10.95 ÷ 100 = 0·1095

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5 Use a place value chart to work out 136 ÷ 1,000

H	T	O	Tths	Hths	Thths
1	3	6			

Complete the calculation.

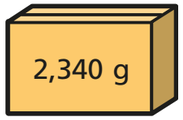
136 ÷ 1,000 = 0·136

Talk to a partner about your method.

6 Use your knowledge of measure to work out the answers.

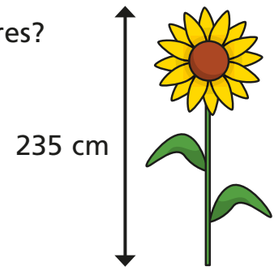
a) What is the mass of the box in kilograms?

2,340 ÷ 1,000 = 2·34



b) What is the height of the sunflower in metres?

235 ÷ 100 = 2·35



c) What is the amount of juice in litres?

380 ÷ 1,000 = 0·38

7 Complete the calculations.

a) 147 ÷ 10 = 14·7

147 ÷ 100 = 1·47

147 ÷ 1,000 = 0·147

b) 21 ÷ 10 = 2·1

21 ÷ 100 = 0·21

21 ÷ 1,000 = 0·021

c) 3,200 ÷ 10 = 320

3,200 ÷ 100 = 32

3,200 ÷ 1,000 = 3·2

d) 5,006 ÷ 10 = 500·6

5,006 ÷ 100 = 50·06

5,006 ÷ 1,000 = 5·006

8 Complete the divisions.

a) 83 ÷ 100 = 0.83

b) 9·5 ÷ 10 = 0.95

c) 39 ÷ 10 = 3.9

d) 68 ÷ 1,000 = 0.068

e) 1,799 ÷ 100 = 17.99

f) 1,180 ÷ 100 = 11.8

g) 178 ÷ 10 = 17.8

h) 3.18 ÷ 10 = 0.318

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