Dividing decimals by 10, 100 and 1,000

1 Complete the divisions.

a)

H	T	O	•	Tths	Hths
		5	•		

$5 \div 10 =$ **0·5**

b)

H	T	O	•	Tths	Hths
	1	5	•		

$15 \div 10 =$ **1·5**

c)

H	T	O	•	Tths	Hths
		3	•	8	

$3.8 \div 10 =$ **0·38**

d)

H	T	O	•	Tths	Hths
	1	3	•	8	

$13.8 \div 10 =$ **1·38**

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

2 Complete the calculations.

a) $7 \div 10 =$ **0·7**

b) $7.8 \div 10 =$ **0·78**

c) $7.86 \div 10 =$ **0·786**

d) $16 \div 10 =$ **1·6**

e) $16.4 \div 10 =$ **1·64**

f) $16.48 \div 10 =$ **1·648**

3 Complete the divisions.

a)

H	T	O	•	Tths	Hths	Thths
	1	7	•			

$17 \div 100 =$ **0·17**

b)

H	T	O	•	Tths	Hths	Thths
		9	•	4		

$9.4 \div 100 =$ **0·094**

c)

H	T	O	•	Tths	Hths	Thths
2	7	6	•			

$276 \div 100 =$ **2·76**

d)

H	T	O	•	Tths	Hths	Thths
	3	2	•	5		

$32.5 \div 100 =$ **0·325**

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

4 Complete the divisions.

a) $7 \div 100 =$ **0·07**

$7.2 \div 100 =$ **0·072**

$7.25 \div 100 =$ **0·0725**

b) $109 \div 100 =$ **1·09**

$10.9 \div 100 =$ **0·109**

$10.95 \div 100 =$ **0·1095**

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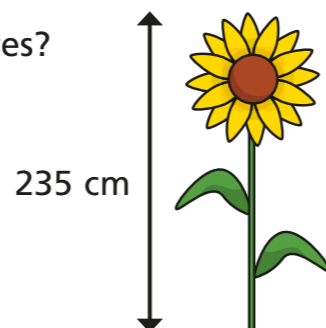
a) What is the mass of the box in kilograms?

2,340 ÷ 1,000 = 2·34

2,340 g

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

235 ÷ 100 = 2·35

235 cm

c) What is the amount of juice in litres?

380 ÷ 1,000 = 0·38

380 ml

7 Complete the calculations.

a) 147 ÷ 10 = 14·7

147 ÷ 100 = 1·47

147 ÷ 1,000 = 0·147

c) 3,200 ÷ 10 = 320

3,200 ÷ 100 = 32

3,200 ÷ 1,000 = 3·2

b) 21 ÷ 10 = 2·1

21 ÷ 100 = 0·21

21 ÷ 1,000 = 0·021

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

e) 1,799 ÷ 100 = 17.99

b) 9·5 ÷ 10 = 0.95

f) 1,180 ÷ 100 = 11.8

c) 39 ÷ 10 = 3.9

g) 178 ÷ 10 = 17.8

d) 68 ÷ 1,000 = 0.068

h) 3.18 ÷ 10 = 0.318