Divide decimals by integers

1 Use place value counters to work out the divisions.

a) 8.4 ÷ 4 = 2·1

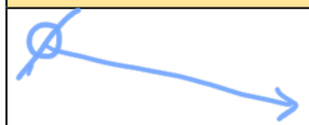
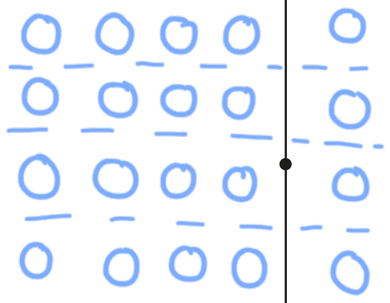
Ones	Tenths
1 1 1 1 1 1 1 1	0.1 0.1 0.1 0.1

b) 12.3 ÷ 3 = 4·1

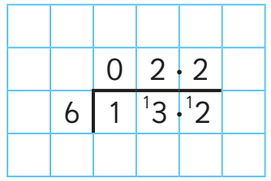
Tens	Ones	Tenths
10	1 1	0.1 0.1 0.1

2 Work out the division. Draw your answer.

16.4 ÷ 4 = 4·1

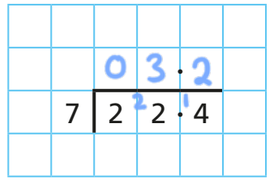
Tens	Ones	Tenths
		

3 Brett uses short division to work out 13.2 ÷ 6

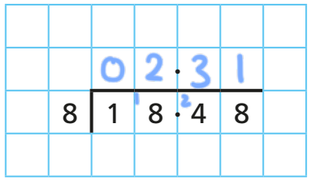


Use short division to work out the calculations.

a)



b)



4 Work out the divisions.

a) 25.6 ÷ 8 = 3·2

b) 14.8 ÷ 4 = 3·7

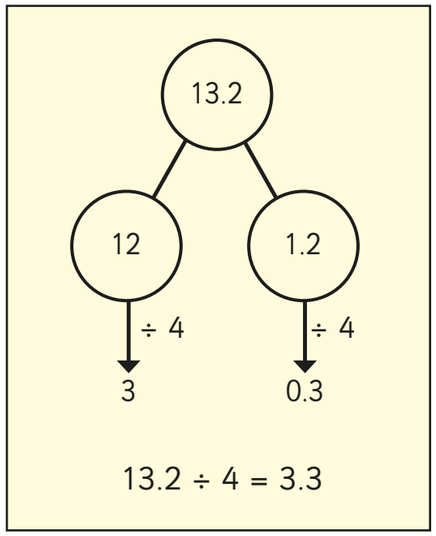
c) 18.48 ÷ 6 = 3·08

d) 3·89 = 19.45 ÷ 5

e) 202.35 ÷ 3 = 67·45

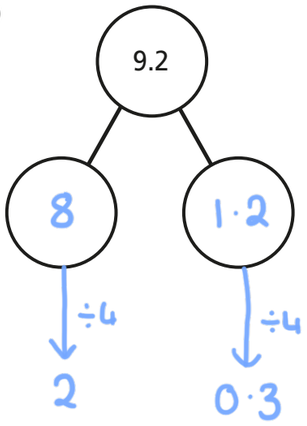
f) 105.12 ÷ 9 = 11·68

5 Esther solves 13.2 ÷ 4 by partitioning 13.2 into two numbers that are easier to divide.



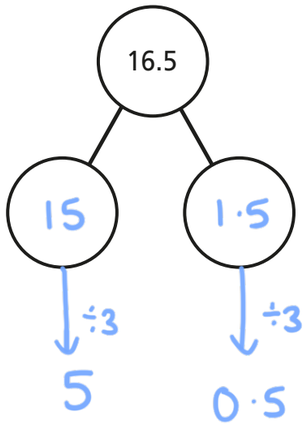
Use Esther's method to complete the part-whole model and calculation.

a)



9.2 ÷ 4 = 2·3

b)



16.5 ÷ 3 = 5·5

Compare answers with a partner. Did you partition your numbers in the same way?

6 Work out the divisions.

a) 9.64 ÷ 4 = 2·41

96.4 ÷ 4 = 24·1

0.964 ÷ 4 = 0·241

9.64 ÷ 8 = 1·205

b) 19.44 ÷ 9 = 2·16

19.53 ÷ 9 = 2·17

19.62 ÷ 9 = 2·18

7 Fill in the missing numbers.

3.6 ÷ 4 = 36 ÷ 40

3.6 ÷ 4 = 7·2 ÷ 8

8 Complete the calculation.

e.g. 8.4 ÷ 2 = 4.2 ÷ 1

How many different solutions can you find?

What patterns do you notice? Talk about it with a partner.