Dividing 2 digits by 10

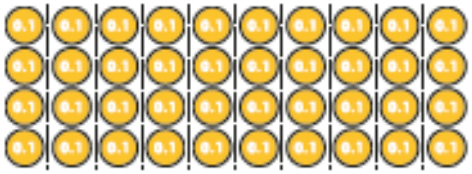
Day 1

1 a) The array shows 20 shared between 10

Complete the calculation.

20 ÷ 10 = ☐

b) The array shows 4 shared between 10



Complete the calculation.

4 ÷ 10 = ☐

c) Complete the calculation.

24 ÷ 10 = ☐

Compare answers with a partner.

2 a) Draw counters to represent 30 on the place value chart.

Tens	Ones	Tenths

Complete the division.

30 ÷ 10 = ☐

Draw counters to show your answer on the place value chart.

Tens	Ones	Tenths

b) Draw counters to show 35 on the place value chart.

Tens	Ones	Tenths

Complete the division.

35 ÷ 10 = ☐

Draw counters to show your answer on the place value chart.

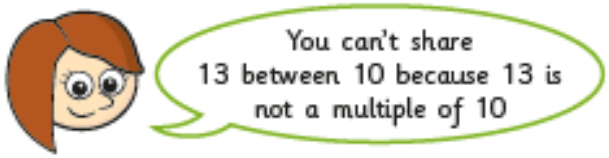
Tens	Ones	Tenths

c) What do you notice about your answers in parts a) and b)?

d) Complete the sentence.

When dividing by 10, you move the counters ☐ place to the _____.

3

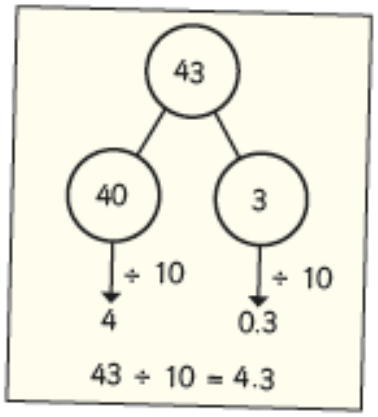


Do you agree with Rosie? _____

Explain your answer.

4 Dexter is calculating 43 ÷ 10

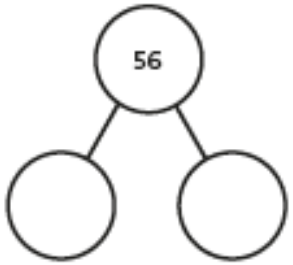
Here are Dexter's workings.



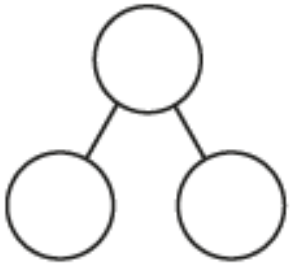
a) Talk to a partner about why Dexter's method works.

b) Use Dexter's method to complete the divisions.

56 ÷ 10 = ☐



71 ÷ 10 = ☐



5 Complete the divisions.

a) 37 ÷ 10 = ☐

b) 11 ÷ 10 = ☐

c) 48 ÷ 10 = ☐

d) 99 ÷ 10 = ☐

e) 80 ÷ 10 = ☐

f) ☐ = 29 ÷ 10

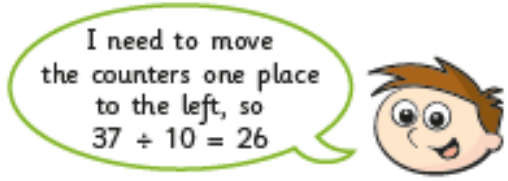
g) ☐ ÷ 10 = 6.3

h) 3.9 = ☐ ÷ 10

6 This Gattegno chart shows the number 37

100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9
0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09

a)



Do you agree with Teddy? _____

Explain your answer.

_____

_____

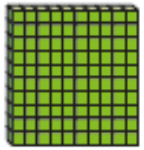
b) How can you use a Gattegno chart to divide by 10?

Hundredths

Day 2

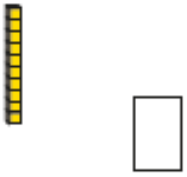
1

I'm going to use this piece to represent 1



What is the value of each of these pieces?
Give your answer as a fraction.

a)



b)

2 Write <, > or = to compare the fractions.

a) $\frac{1}{10}$ ◯ $\frac{9}{100}$

c) $\frac{1}{10}$ ◯ $\frac{20}{100}$

b) $\frac{1}{10}$ ◯ $\frac{12}{100}$

d) $\frac{2}{10}$ ◯ $\frac{20}{100}$

3

Eva

You can only partition 25 hundredths into 2 tenths and 5 hundredths.

I can partition it another way.

Jack

Who do you agree with? _____

Explain why.

_____

_____

Compare answers with a partner.

4 Fill in the missing numerators to make the statements correct.

a) $\frac{3}{10} = \frac{\square}{100}$

b) $\frac{7}{10} = \frac{\square}{100}$

c) $\frac{80}{100} = \frac{\square}{10}$

d) $\frac{20}{100} = \frac{\square}{10}$

e) $\frac{27}{100} = \frac{\square}{10} + \frac{\square}{100}$

f) $\frac{67}{100} = \frac{\square}{10} + \frac{\square}{100}$

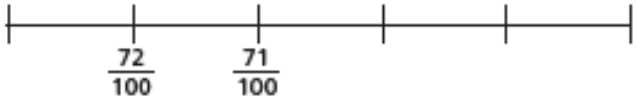
5 Complete the number lines using fractions.

a)

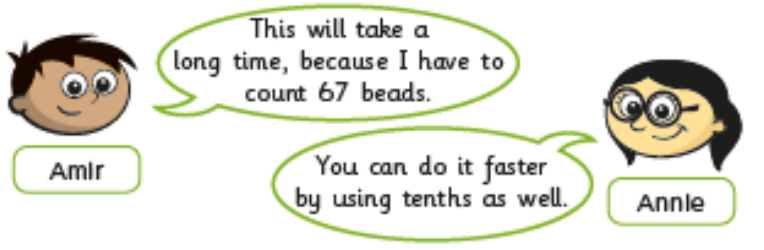
b)

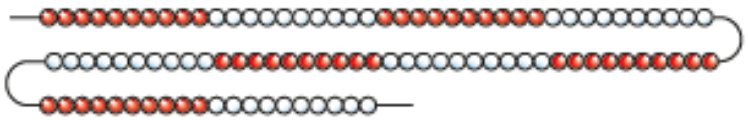
c)

d)



6 Amir is counting 67 hundredths on a bead string.



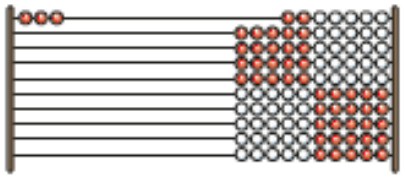
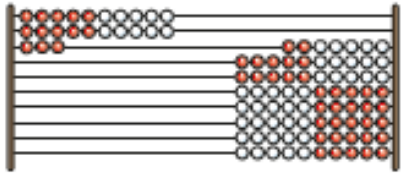
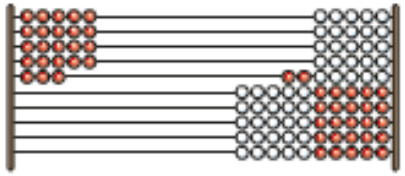
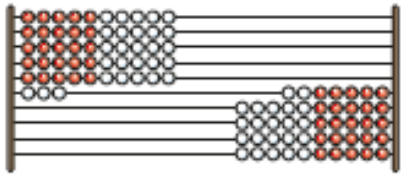


Explain to a partner how to use Annie's method.

7 These are Rekenreks made from 100 beads.

Each Rekenrek represents one whole.

Write the fraction represented on the left and on the right.

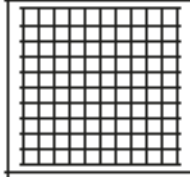
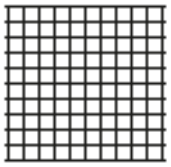
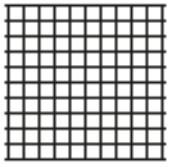
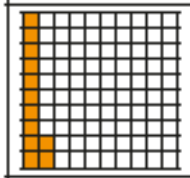
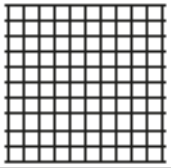
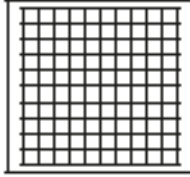
		left	right
a)			
b)			
c)			
d)			

Did you use the same method as your partner?

Hundredths as decimals

Day 3

1 Complete the table.

Hundred square	Words	Fraction	Decimal
	thirty-six hundredths		
		$\frac{82}{100}$	
			0.27
			
	seven tenths		
			0.3

2 Draw decimal place value counters to represent the numbers.

a) 0.03

c) 0.63

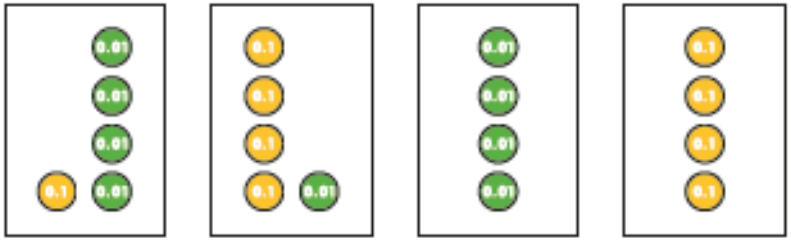
b) 0.6

d) 0.36

3 The counters represent tenths and hundredths.

a) Match the decimals to the groups of counters.

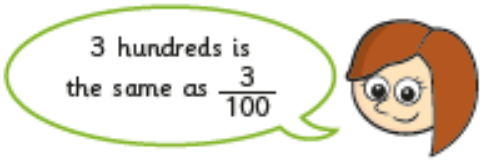
0.04 | 0.4 | 0.14 | 0.41



b) Write each decimal as a fraction.

0.04 = ☐ 0.4 = ☐ 0.14 = ☐ 0.41 = ☐

4



Is Rosie correct? _____

Explain your answer.

_____

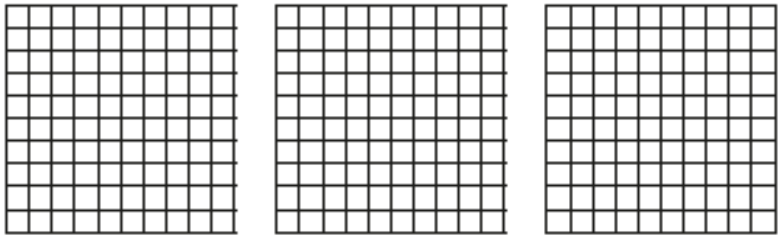
_____

5 Match the decimals to the descriptions.

Some of the numbers can be described in two ways.

1.3	one tenth and three hundredths
	thirty hundredths
0.03	one and three tenths
	thirteen tenths
0.3	thirteen hundredths
	three tenths
0.13	three hundredths

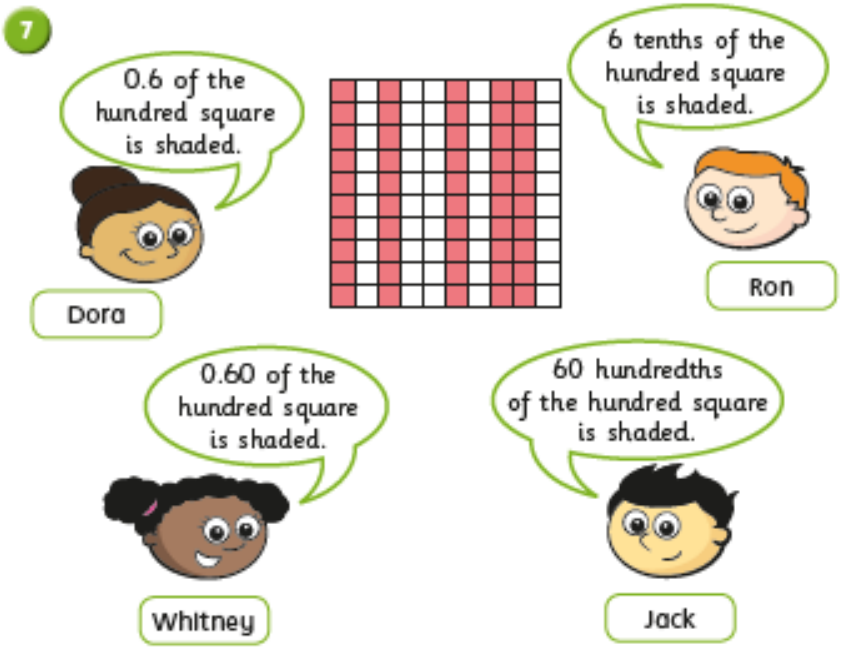
6 Shade the hundred squares to represent 12 hundredths in three different ways.



Compare answers with a partner.

What is the same? What is different?

7



Who do you agree with? _____

Explain why.

Hundredths on a place value grid

Day 4

1 Write the decimal that is represented in each place value chart.

a)

Ones	Tenths	Hundredths
		●●●●

b)

Ones	Tenths	Hundredths
	●●●	●●●● ●

c)

Ones	Tenths	Hundredths
●●●● ●●	●●	●●● ●●●

d)

Ones	Tenths	Hundredths
●●		●●●● ●

e)

Ones	Tenths	Hundredths
●●●	●●●● ●	

2 Use place value counters to make each number.

Draw your answers on the place value charts.

a) 0.06

Ones	Tenths	Hundredths

b) 0.24

Ones	Tenths	Hundredths

c) 1.72

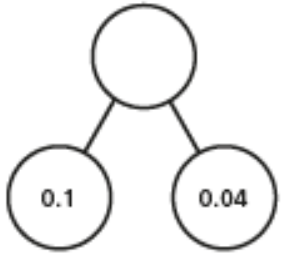
Ones	Tenths	Hundredths

d) 3.08

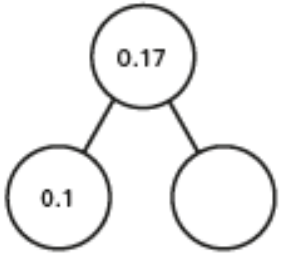
Ones	Tenths	Hundredths

3 Complete the part-whole models.

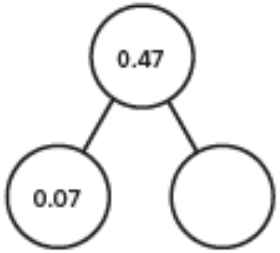
a)



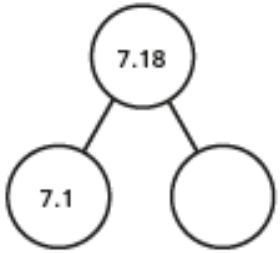
b)



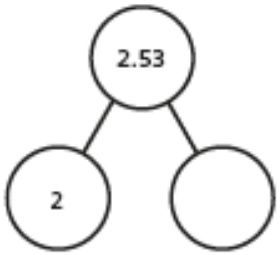
c)



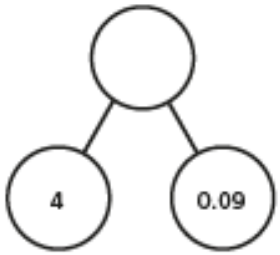
e)



d)



f)



4 Complete the sentences.

a) 2 tenths can be exchanged for ☐ hundredths.

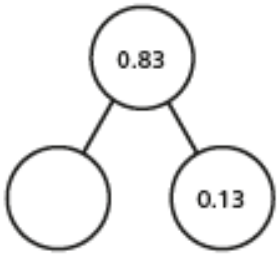
b) 7 tenths can be exchanged for ☐ hundredths.

c) 7 tenths and 4 hundredths is equivalent to ☐ hundredths.

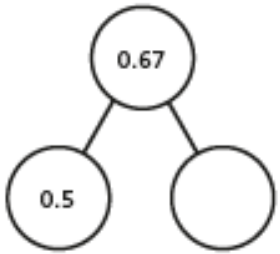
d) ☐ tenths and ☐ hundredths is equivalent to 26 hundredths.

5 Complete the part-whole models.

a)

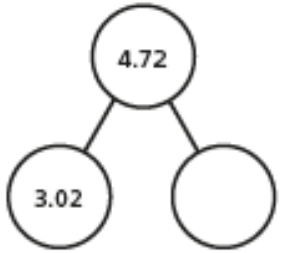


b)



c)

d)



6 Whitney, Tommy, Esther and Dexter each have the same three digit cards and a place value chart.

Ones	Tenths	Hundredths

0 3 6

When they put the cards in the chart with one in each space, they each make a different number.

Use the clues to work out each person's number and write it on their place value chart.

- Dexter makes the greatest number possible.
- Tommy makes the number closest to four.
- Esther and Whitney choose the two numbers closest together (Esther makes the slightly greater number).

Dexter

Ones	Tenths	Hundredths

Tommy

Ones	Tenths	Hundredths

Whitney

Ones	Tenths	Hundredths

Esther

Ones	Tenths	Hundredths

Dividing 1 and 2 digits by a hundred

Day 5

1 a) Draw counters to show 8 on the place value chart.

Ones	Tenths	Hundredths

b) Complete the division.

8 ÷ 100 = ☐

c) Draw counters to show your answer on the place value chart.

Ones	Tenths	Hundredths

What do you notice?

2 a) Draw counters to show 80 on the place value chart.

Tens	Ones	Tenths	Hundredths

b) Complete the division.

80 ÷ 100 = ☐

c) Draw counters to show your answer on the place value chart.

Tens	Ones	Tenths	Hundredths

What do you notice?

3 Complete the sentence.

To divide by 100 you move the counters ☐ places to the _____

4 Complete the calculations.

a) 3 ÷ 100 = ☐

b) 90 ÷ 100 = ☐

c) ☐ = 5 ÷ 100

d) ☐ = 60 ÷ 100

e) ☐ ÷ 100 = 0.5

f) 0.02 = ☐ ÷ 100

5 Dora is working out 48 ÷ 100 using a place value chart.

Tens	Ones	Tenths	Hundredths
●●●●	●●●● ●●●●		

To divide by 100 you move two places to the right, so 48 ÷ 100 is 40.08

Tens	Ones	Tenths	Hundredths
●●●●			●●●● ●●●●

a) Explain the mistake that Dora has made.

_____

_____

b) Complete the division.

48 ÷ 100 = ☐

6 This Gattegno chart shows the number 37

10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9
0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09

a) Explain how you would work out 37 ÷ 100 using this chart.

Compare answers with a partner.

b) Use the Gattegno chart to complete the division.

92 ÷ 100 = ☐

c) Use the Gattegno chart to complete the division.

19 ÷ 100 = ☐

7 Complete the calculations.

a) 31 ÷ 100 = ☐

b) 60 ÷ 100 = ☐

c) ☐ = 85 ÷ 100

d) 0.01 = ☐ ÷ 100

e) ☐ = 29 ÷ 100

f) ☐ ÷ 100 = 0.58

g) 0.5 = ☐ ÷ 100

h) 0.3 = 30 ÷ ☐

8 Complete the calculations.

a) 36 ÷ 10 = ☐

36 ÷ 100 = ☐

36 ÷ 10 ÷ 10 = ☐

b) 91 ÷ 10 = ☐

91 ÷ 100 = ☐

91 ÷ 10 ÷ 10 = ☐

What do you notice?

9

Do you agree with Amir? _____

Explain your answer.

10 Roll two dice to make two 2-digit numbers.

Divide your numbers by 100. Record your answer. Roll again.

Here is an example.

36 ÷ 100 and 63 ÷ 100

☐ ÷ 100 = ☐ and ☐ ÷ 100 = ☐

☐ ÷ 100 = ☐ and ☐ ÷ 100 = ☐

What is the greatest possible answer you can get? ☐

What is the smallest possible answer? ☐

Compare answers with a partner.