

Tenths as decimals



1 Shade the bar models to represent the amounts.

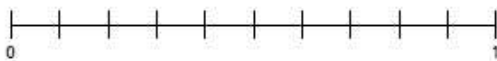
- a) 7 tenths
- b) $\frac{4}{10}$
- c) 0.3

2 Complete the table to show the fractions and decimals the bar models represent.

Bar model	Fraction	Decimal

3 Write each fraction and decimal in the correct place on the number line.

- $\frac{2}{10}$ 0.6 $\frac{9}{10}$ 0.1



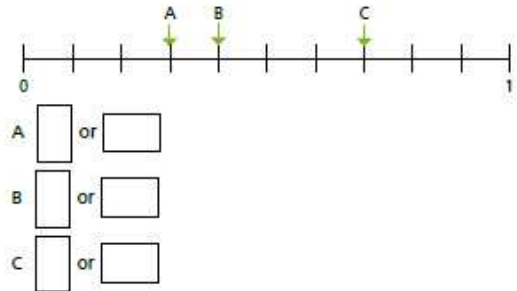
4 What is the total value represented by each ten frame?

- a)
- b)
- c)

7 Nine tenths can be written 0.9, so ten tenths must be 0.10

Do you agree with Ron? _____
 Explain your answer.

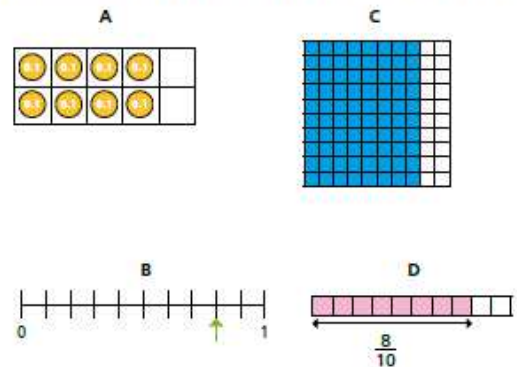
4 Work out the values of A, B and C.
 Give your answers as fractions and decimals.



5 Match the equivalent fractions, decimals and words.

$\frac{3}{10}$	0.7	four tenths
$\frac{9}{10}$	0.3	one tenth
$\frac{7}{10}$	0.4	three tenths
$\frac{4}{10}$	0.1	nine tenths
$\frac{1}{10}$	0.9	seven tenths

8 Eight tenths can be represented in all of the ways shown.



Which do you think is the best representation? _____
 Discuss your answer with a partner.
 Represent six tenths in each different way.



Dividing 2 digits by 10



1 a) The array shows 20 shared between 10



Complete the calculation.

$20 \div 10 = \square$

b) The array shows 4 shared between 10



Complete the calculation.

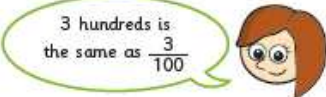
$4 \div 10 = \square$

c) Complete the calculation.

$24 \div 10 = \square$

Compare answers with a partner.

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

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

Tens	Ones	Tenths
	•	

Complete the division.

$30 \div 10 = \square$

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.

$35 \div 10 = \square$

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

Tens	Ones	Tenths
	•	

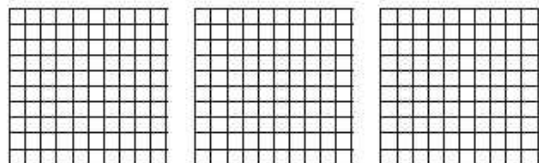
c) What do you notice about your answers in parts a) and b)?

d) Complete the sentence.

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

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 as decimals



1 Complete the table.

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

4 3 hundreds is the same as $\frac{3}{100}$

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

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 =

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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 0.6 of the hundred square is shaded.

6 tenths of the hundred square is shaded.

0.60 of the hundred square is shaded.

60 hundredths of the hundred square is shaded.

Who do you agree with? _____
 Explain why.

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Dividing 1 and 2 digits by a hundred



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

Ones	Tenths	Hundredths

b) Complete the division.
 $8 \div 100 = \square$

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.
 $80 \div 100 = \square$

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

Tens	Ones	Tenths	Hundredths

What do you notice?

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 $37 \div 100$ using this chart.

Compare answers with a partner.

b) Use the Gattegno chart to complete the division.
 $92 \div 100 = \square$

c) Use the Gattegno chart to complete the division.
 $19 \div 100 = \square$

- 7 Complete the calculations.
- a) $31 \div 100 = \square$ e) $\square = 29 \div 100$
 b) $60 \div 100 = \square$ f) $\square \div 100 = 0.58$
 c) $\square = 85 \div 100$ g) $0.5 = \square \div 100$
 d) $0.01 = \square \div 100$ h) $0.3 = 30 \div \square$

3 Complete the sentence.
 To divide by 100 you move the counters \square places to the _____

- 4 Complete the calculations.
- a) $3 \div 100 = \square$ d) $\square = 60 \div 100$
 b) $90 \div 100 = \square$ e) $\square \div 100 = 0.5$
 c) $\square = 5 \div 100$ f) $0.02 = \square \div 100$

5 Dora is working out $48 \div 100$ using a place value chart.

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

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

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

a) Explain the mistake that Dora has made.

b) Complete the division.
 $48 \div 100 = \square$

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- 8 Complete the calculations.
- a) $36 \div 10 = \square$ b) $91 \div 10 = \square$
 $36 \div 100 = \square$ $91 \div 100 = \square$
 $36 \div 10 \div 10 = \square$ $91 \div 10 \div 10 = \square$

What do you notice?

9 Dividing by 100 is always the same as dividing by 10 twice.

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.



$36 \div 100$ and $63 \div 100$

$\square \div 100 = \square$ and $\square \div 100 = \square$
 $\square \div 100 = \square$ and $\square \div 100 = \square$

What is the greatest possible answer you can get? \square

What is the smallest possible answer? \square

Compare answers with a partner.

TTRS- complete minimum of 5 games. Where will you end up on the leaderboard this week?

These are activities to keep our maths learning 'sticky'. Select at least 2 of the activities below to complete your maths lesson today.

- Numbots
- BBC Bitesize game- [Guardians Defenders of Mathematica](#)
- Maths 2Dos on Purple Mash

Challenge 1

Jane is standing in a queue.

There are 5 people in front of her.

There are 2 people behind her.

How many people are in the queue?



Challenge 2



Rosie

I have 80 pence.

I have 12 pence.



Mo

Rosie gives Mo 25 pence.

How much more money does Rosie have than Mo now?

Challenge 3

If

$$70 + \text{yellow circle} = 100$$

$$50 + \text{green triangle} = 100$$

$$\text{yellow circle} + \text{green triangle} + \text{blue square} = 100$$

What is the value of the blue square?