

Mrs Jones' Maths Group

Before the school closed we started to learn about decimals and in particular all about tenths, how they are calculated, their relationship to a whole and putting them onto a number line.

Watch the video below to remind yourself what we did.

<https://whiterosemaths.com/homelearning/year-4/>

Select week 1, lesson 2.

21.04.20

LO: To know how to represent hundredths on a number line

Success Criteria

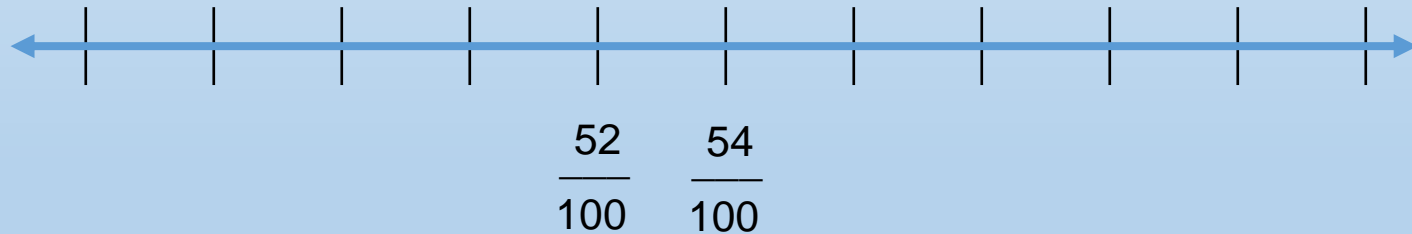
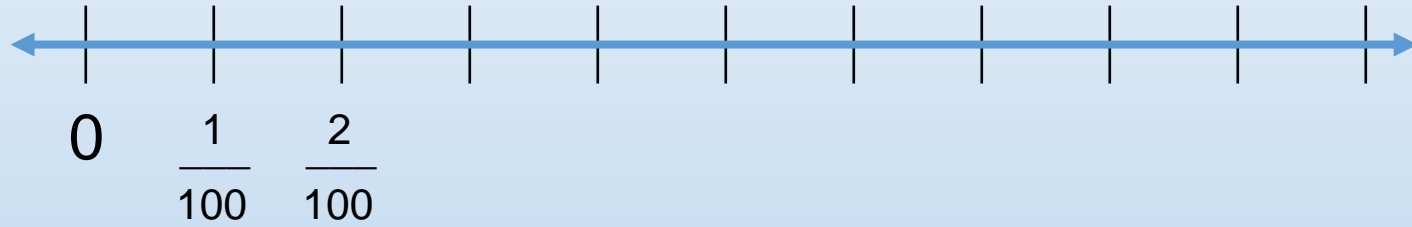
- I can place the missing hundredths accurately on a number line
- I can work out the pattern to accurately complete the number line
- I can solve questions using both tenths and hundredths mixed together (Challenge questions)

Apply what you know about tenths and what we talked about before to solve the questions about hundredths, please do you work in your home learning book.

Activity 1

Hundredths

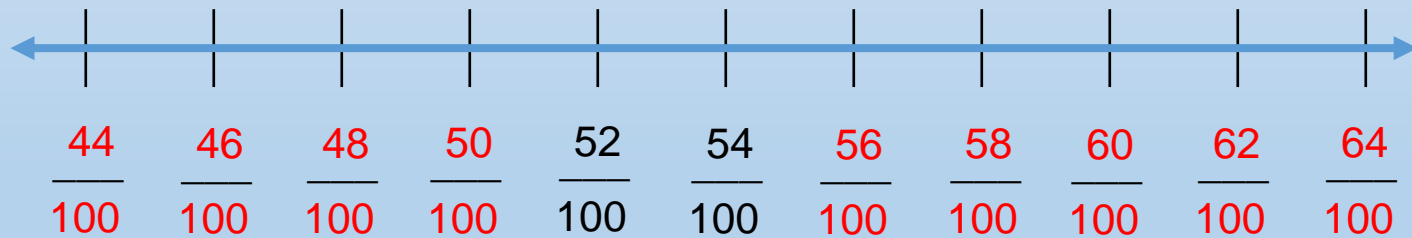
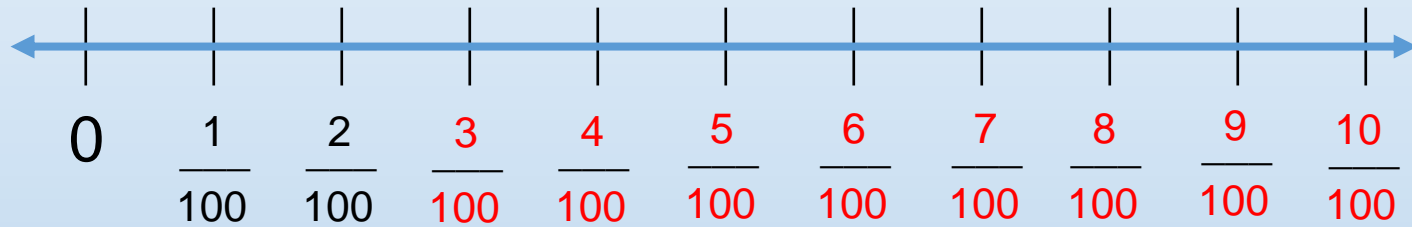
Copy the number lines and complete them.



Activity 1

Hundredths

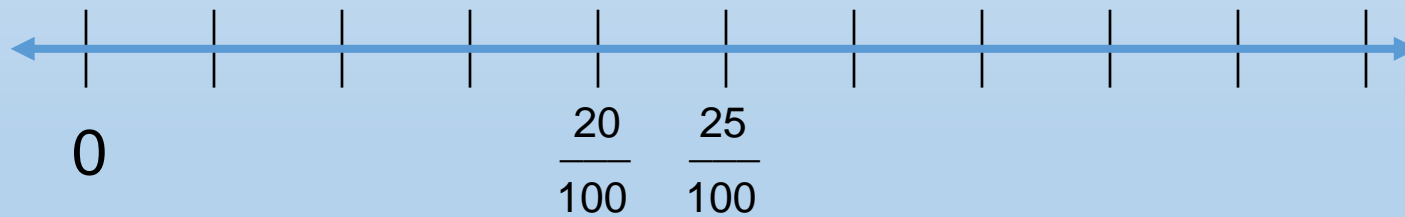
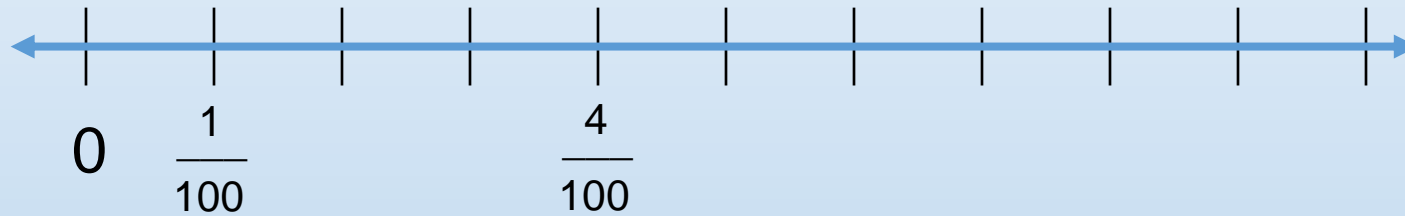
Check your answers.



Activity 1

Hundredths

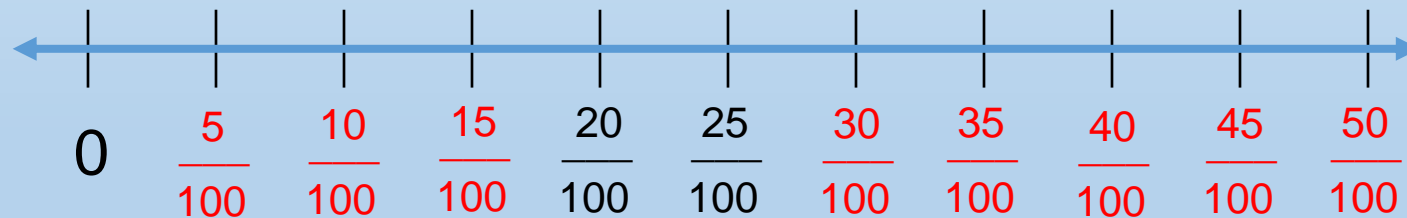
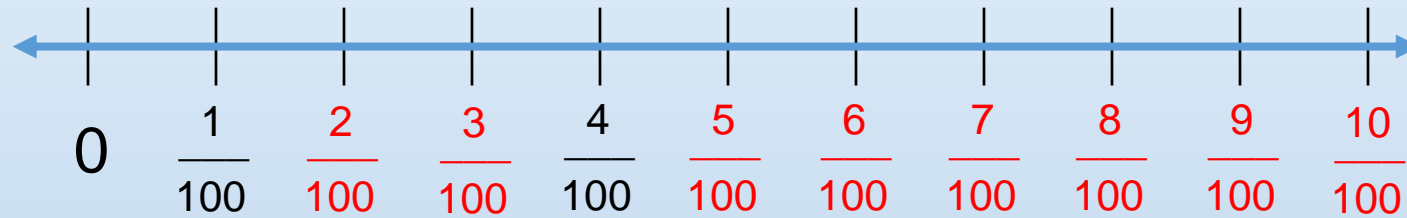
Copy the number lines and complete them.



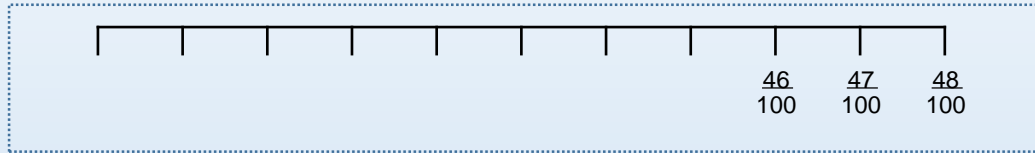
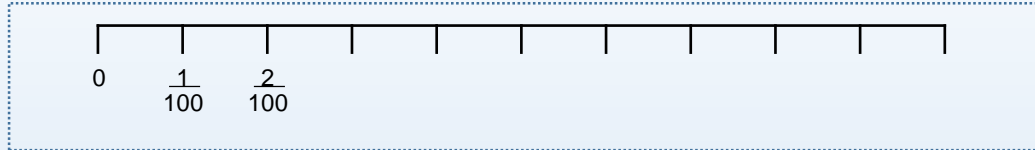
Activity 1

Hundredths

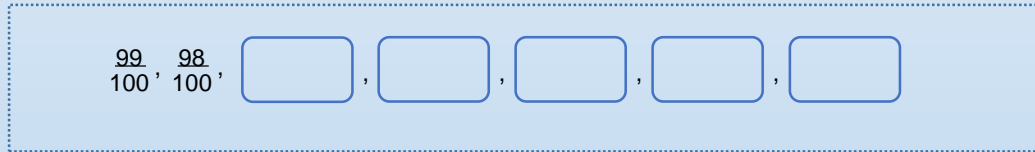
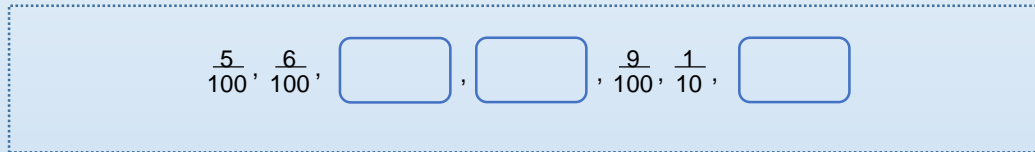
Check your answers.



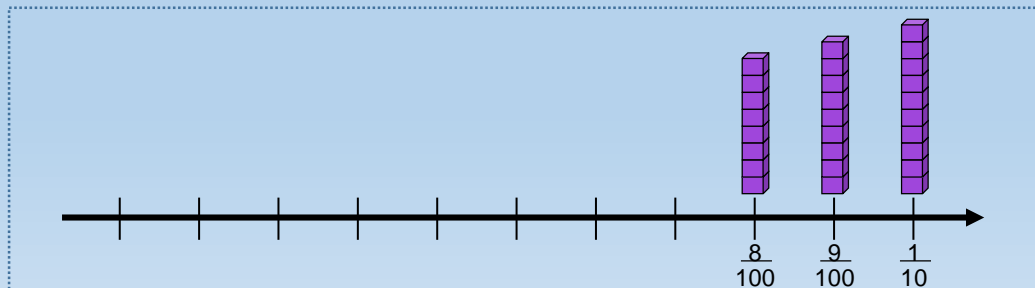
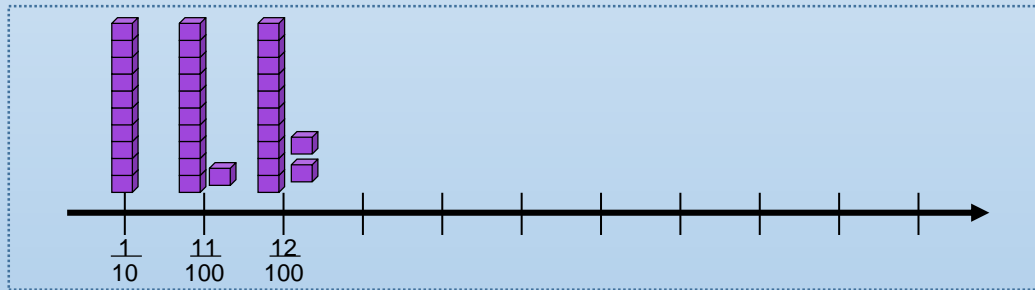
Complete the number lines.



Complete the sequences.

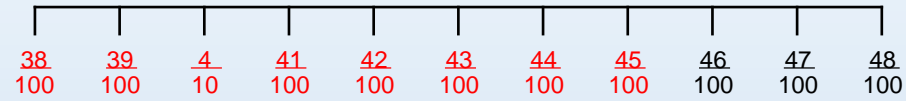
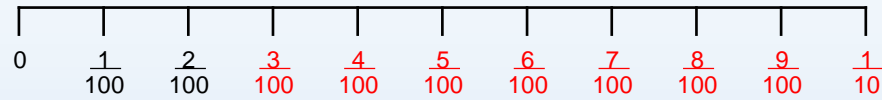


Use fractions to complete the number lines.

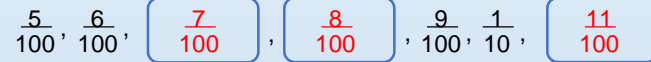


Remember $\frac{1}{10}$ is the same
as $\frac{10}{100}$

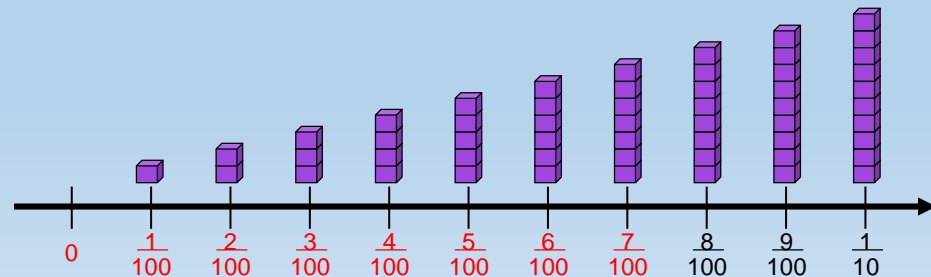
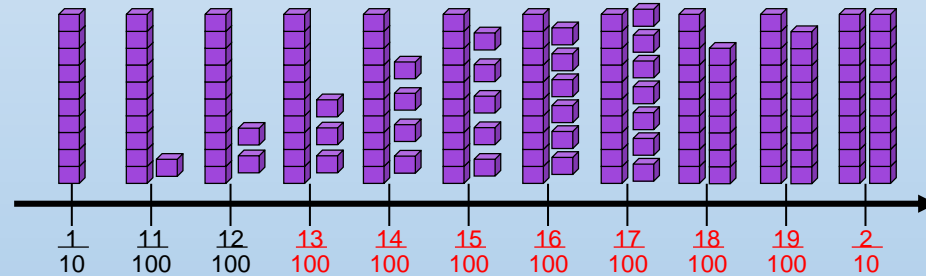
Complete the number lines.



Complete the sequences.

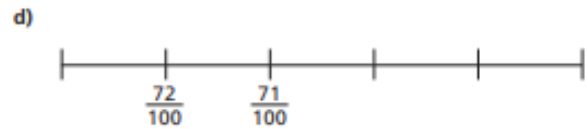
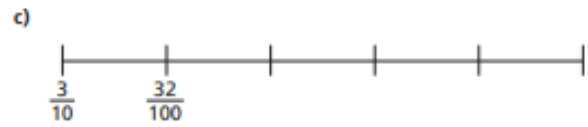
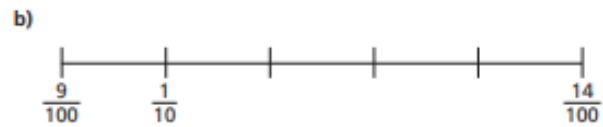
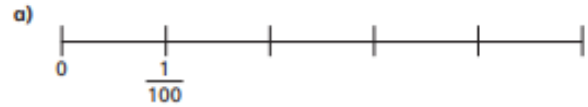


Use fractions to complete the number lines.



Challenge questions

5 Complete the number lines using fractions.



6 Amir is counting 67 hundredths on a bead string.



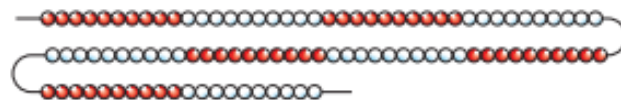
Amir

This will take a long time, because I have to count 67 beads.



Annie

You can do it faster by using tenths as well.

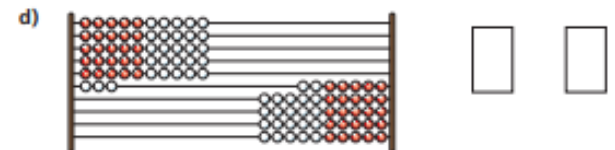
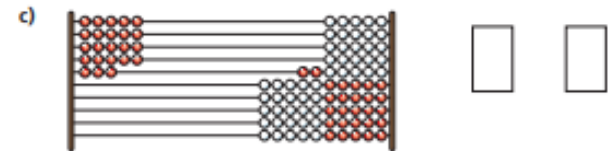
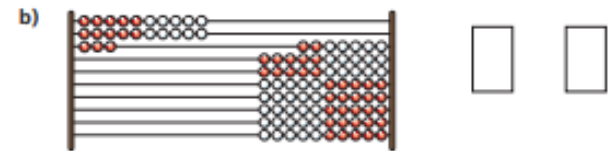
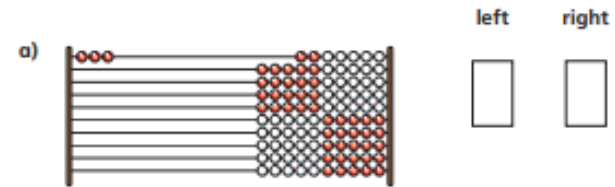


Explain to a partner how to use Annie's method.

7 These are Rekenreks made from 100 beads.

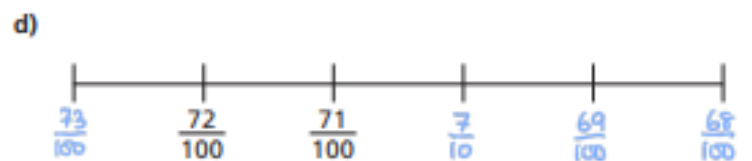
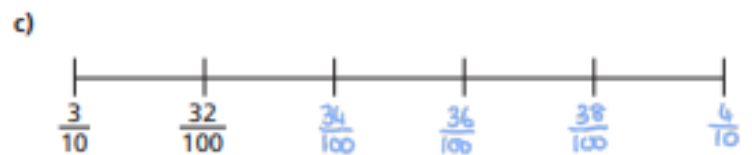
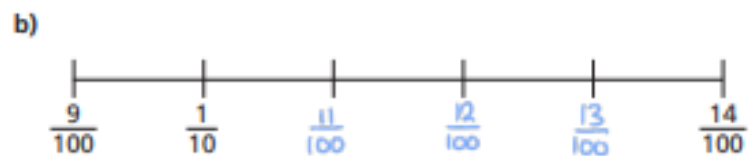
Each Rekenrek represents one whole.

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



Did you use the same method as your partner?

5 Complete the number lines using fractions.



6 Amir is counting 67 hundredths on a bead string.



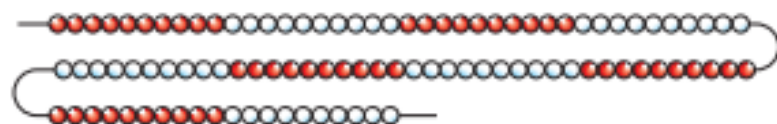
Amir

This will take a long time, because I have to count 67 beads.



Annie

You can do it faster by using tenths as well.

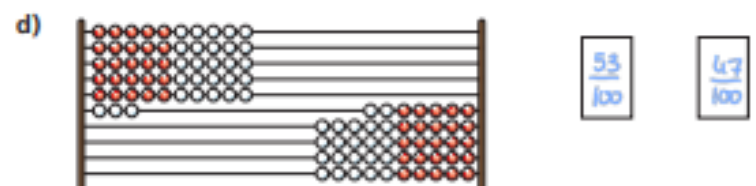
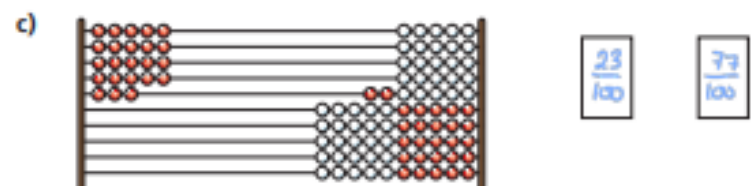
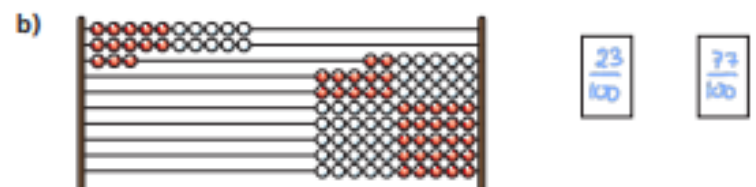
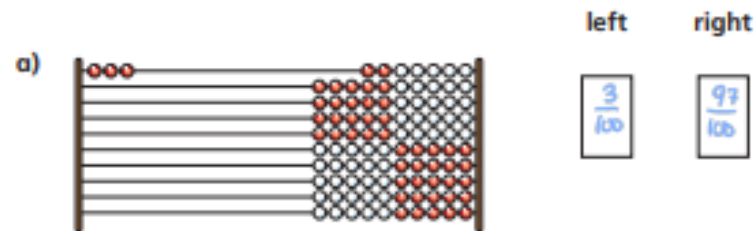


Explain to a partner how to use Annie's method.

7 These are Rekenreks made from 100 beads.

Each Rekenrek represents one whole.

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



Did you use the same method as your partner?



22.04.20

LO: To understand how to write hundredths as decimals.

Success Criteria

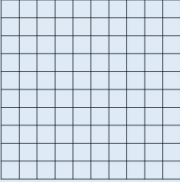
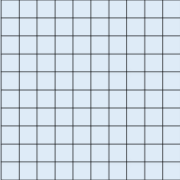
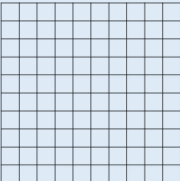
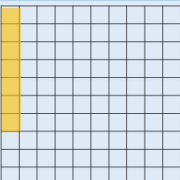
- I can change a fraction into a decimal
- I can match a decimal to a picture showing the same thing
- I can match decimals to their description
- I can use my knowledge to solve problems (challenge question)

Activity 1

Hundredths as Decimals

Complete the table.

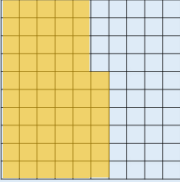
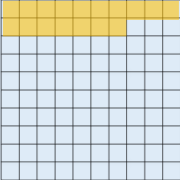
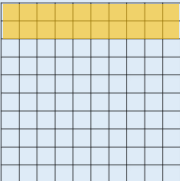
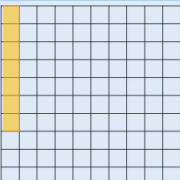
Look at what is shown on the next few pages, talk about what it tells you. You needn't complete these if you don't wish to.

Image	Words	Fraction	Decimals
	56 hundredths		
		$\frac{17}{100}$	
			0.2
			

Activity 1

Hundredths as Decimals

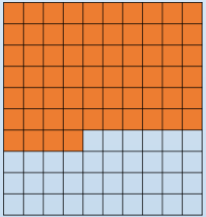
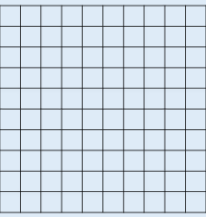
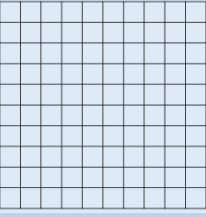
Complete the table.

Image	Words	Fraction	Decimals
	56 hundredths	$\frac{56}{100}$	0.56
	17 hundredths	$\frac{17}{100}$	0.17
	20 hundredths	$\frac{20}{100}$	0.2
	7 hundredths	$\frac{7}{100}$	0.07

Activity 1

Hundredths as Decimals

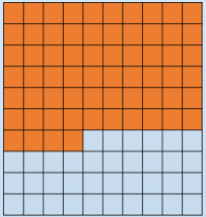
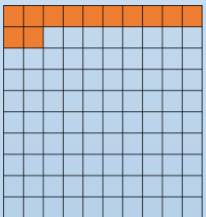
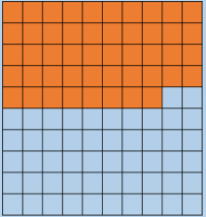
Complete the table.

Image	Words	Fraction	Decimal
	64 hundredths	$\frac{64}{100}$	0.64
		$\frac{12}{100}$	
			0.48

Activity 1

Hundredths as Decimals

Complete the table.

Image	Words	Fraction	Decimal
	64 hundredths	$\frac{64}{100}$	0.64
	12 hundredths	$\frac{12}{100}$	0.12
	48 hundredths	$\frac{48}{100}$	0.48

Activity 2

Hundredths as Decimals

Write the number as a fraction and as a decimal.



?

How else could you represent this number?

Activity 2

Hundredths as Decimals

Write the number as a fraction and as a decimal.



This is four hundredths.

In decimal form:

$$0.01 + 0.01 + 0.01 + 0.01 = 0.04$$

In fraction form:

$$\frac{4}{100}$$

Activity 2

Hundredths as Decimals

Write the number as a fraction and as a decimal.



Activity 2

Hundredths as Decimals

Write the number as a fraction and as a decimal.

0.01

0.01

0.01

This is three hundredths.

In decimal form:

$$0.01 + 0.01 + 0.01 = 0.03$$

In fraction form:

$$\frac{3}{100}$$

Hundredths as decimals

1 Complete the table.

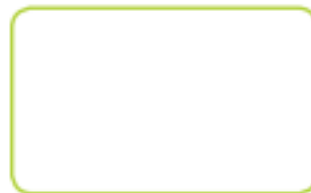
Hundred square	Words	Fraction	Decimal
	thirty-six hundredths		
		$\frac{82}{100}$	
			0.27
	seven tenths		
			0.3



Please complete these in your book.

2 Draw decimal place value counters to represent the numbers.

a) 0.03



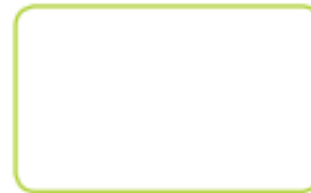
c) 0.63



b) 0.6



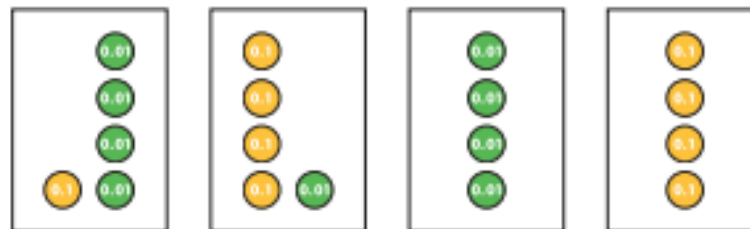
d) 0.36



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

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

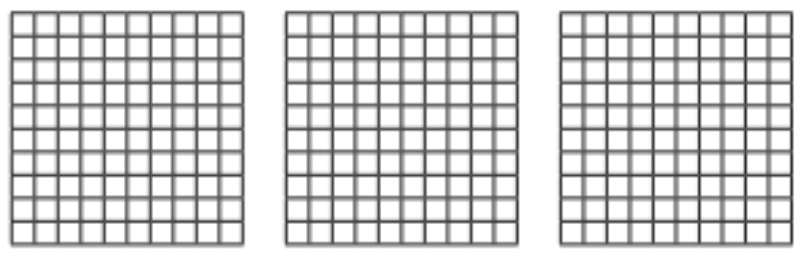
three tenths

0.13

three hundredths

6

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



Compare answers with a partner.

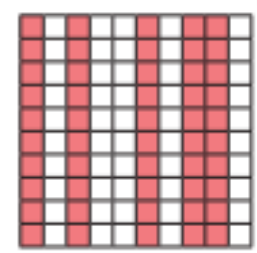
What is the same? What is different?

7

0.6 of the
hundred square
is shaded.



Dora



6 tenths of the
hundred square
is shaded.



Ron

0.60 of the
hundred square
is shaded.



Whitney

60 hundredths
of the hundred square
is shaded.



Jack

Who do you agree with? _____

Explain why.

Hundredths as decimals

1 Complete the table.

Hundred square	Words	Fraction	Decimal
	thirty-six hundredths	$\frac{36}{100}$	0.36
	eighty-two hundredths	$\frac{82}{100}$	0.82
	twenty-seven hundredths	$\frac{27}{100}$	0.27
	twelve hundredths	$\frac{12}{100}$	0.12
	seven tenths	$\frac{7}{10}$	0.7
	three tenths	$\frac{3}{10}$	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.



b) Write each decimal as a fraction.

$0.04 = \frac{4}{100}$
 $0.4 = \frac{4}{10}$
 $0.14 = \frac{14}{100}$
 $0.41 = \frac{41}{100}$

4

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



Is Rosie correct? No

Explain your answer.

3 hundreds = 300 3 hundredths = $\frac{3}{100}$

5

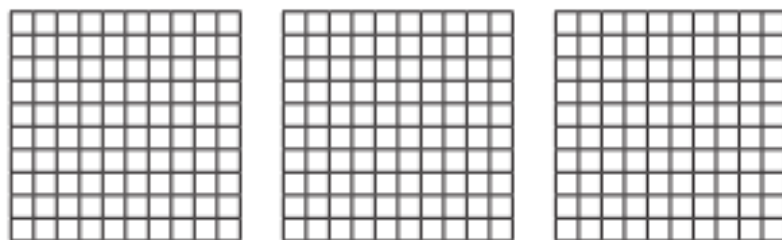
Match the decimals to the descriptions.

Some of the numbers can be described in two ways.

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

6

Shade the hundred squares to represent 12 hundredths in three different ways. *Various answers*



Compare answers with a partner.

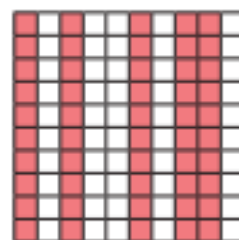
What is the same? What is different?

7

0.6 of the
hundred square
is shaded.



Dora



6 tenths of the
hundred square
is shaded.



Ron

0.60 of the
hundred square
is shaded.



Whitney

60 hundredths
of the hundred square
is shaded.



Jack

Who do you agree with? All

Explain why.



Challenge questions

Tia says,



15 hundredths is the same as 1,500.

Is she correct? Explain your answer.

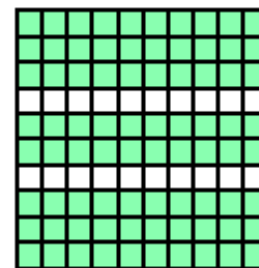
Rosie says,



16 hundredths is the same as 0.16.

Is she correct? Explain your answer.

Tia and Rosie have been asked to write the decimal shaded on the 100 grid.



Tia says the grid shows 0.80.

Rosie says the grid shows 0.8.

Who do you agree with?

Explain your answer.

Tia says,



15 hundredths is the same as 1,500.

Is she correct? Explain your answer.

Tia is wrong as she has mistaken hundredths for hundreds.

Rosie says,

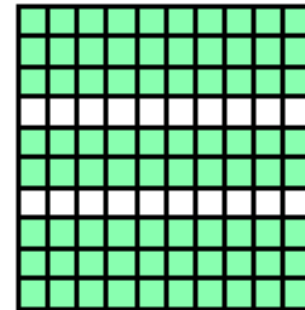


16 hundredths is the same as 0.16.

Is she correct? Explain your answer.

Rosie is correct as she has written 16 hundredths as decimal 0.16.

Tia and Rosie have been asked to write the decimal shaded on the 100 grid.



Tia says the grid shows 0.80.

Rosie says the grid shows 0.8.

Who do you agree with?

Explain your answer.

They are both correct. The grid shows 80 hundredths or 8 tenths and this is what Tia and Rosie have given as their answers. In Tia's answer the 0 in the hundredths column isn't needed as it is not a place holder and doesn't change the value of the number.

23.04.20

LO: To able to read and show hundredths on a place value grid

Success Criteria

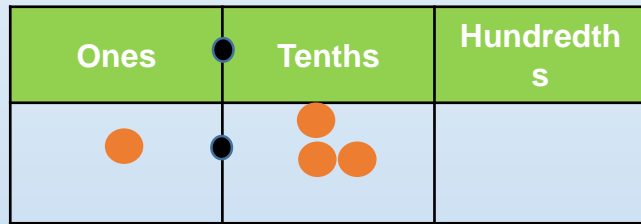
- I can mark decimals onto a place value grid
- I can read a place value grid accurately
- I can partition numbers accurately

Activity 1

Hundredths on a Place Value Grid

Look at what is shown on the next few pages, talk about what it tells you. You needn't complete these if you don't wish to.

Write the decimal represented in each place value grid.

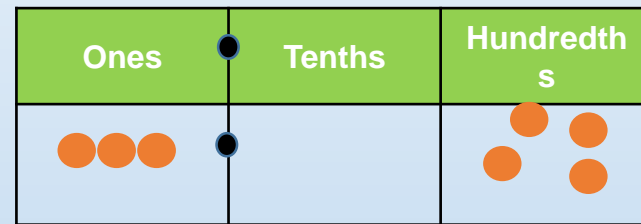


There is _____ one.

There are _____ tenths.

There are _____ hundredths.

The decimal represented is _____.



There are _____ ones.

There are _____ tenths.

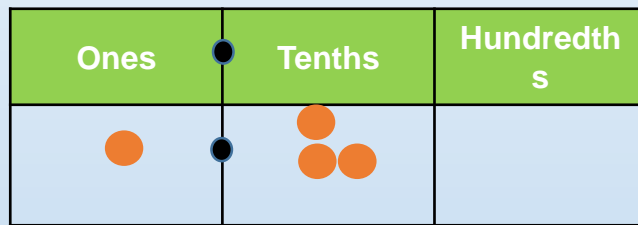
There are _____ hundredths.

The decimal represented is _____.

Activity 1

Hundredths on a Place Value Grid

Write the decimal represented in each place value grid.

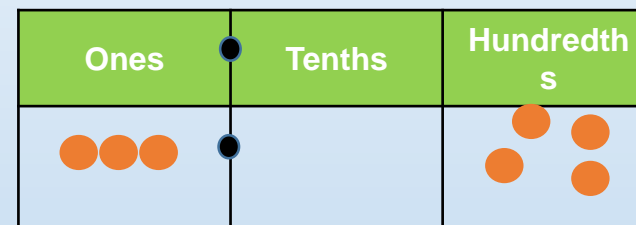


There is 1 one.

There are 3 tenths.

There are 0 hundredths.

The decimal represented is 1.3.



There are 3 ones.

There are 0 tenths.

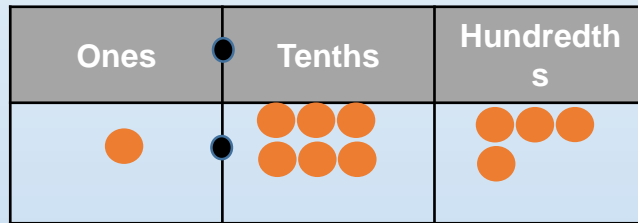
There are 4 hundredths.

The decimal represented is 3.04.

Activity 1

Hundredths on a Place Value Grid

Write the decimal represented in each place value grid.

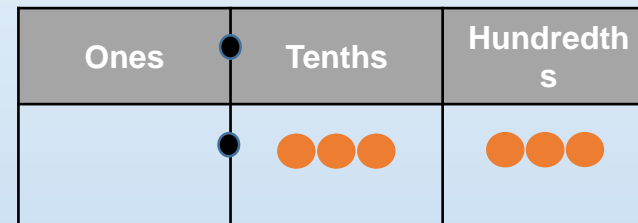


There is _____ one.

There are _____ tenths.

There are _____ hundredths.

The decimal represented is _____.



There are _____ ones.

There are _____ tenths.

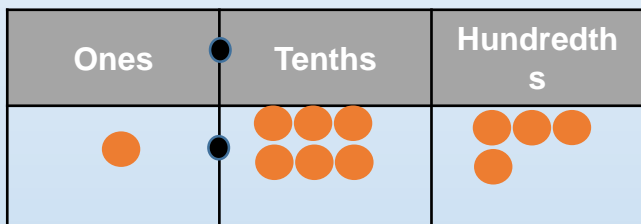
There are _____ hundredths.

The decimal represented is _____.

Activity 1

Hundredths on a Place Value Grid

Write the decimal represented in each place value grid.

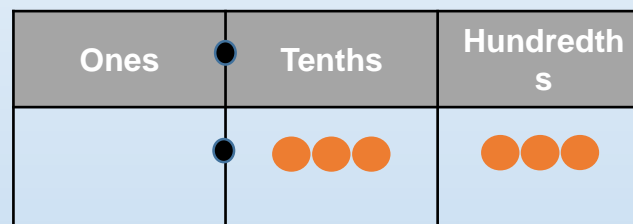


There is 1 one.

There are 6 tenths.

There are 4 hundredths.

The decimal represented is 1.64.



There are 0 ones.

There are 3 tenths.

There are 3 hundredths.

The decimal represented is 0.33.

Activity 2

Hundredths on a Place Value Grid

Make the decimals on a place value grid.

0.34

2.15

0.03

1.01

Use the sentence stems to describe each number.

There are ____ ones.

There are ____ tenths.

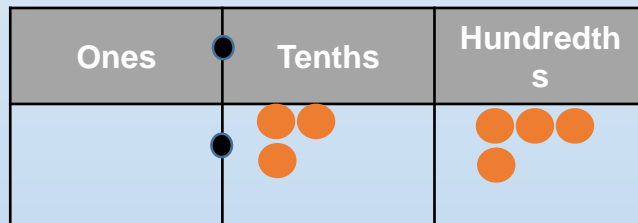
There are ____ hundredths.

Activity 2

Hundredths on a Place Value Grid

Make the decimals on a place value grid.

0.34

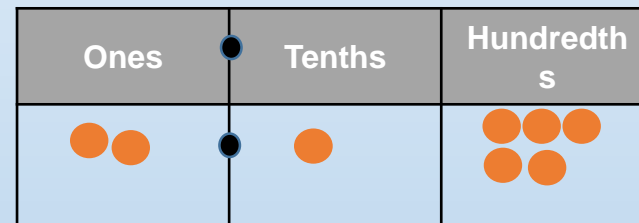


There are 0 ones.

There are 3 tenths.

There are 4 hundredths.

2.15



There are 2 ones.

There are 1 tenths.

There are 5 hundredths.

Activity 2

Hundredths on a Place Value Grid

Make the decimals on a place value grid.

0.03

Ones	Tenths	Hundredths
		●●●

There are 0 ones.

There are 0 tenths.

There are 3 hundredths.

1.01

Ones	Tenths	Hundredths
●		●

There are 1 ones.

There are 0 tenths.

There are 1 hundredths.

Activity 2

Hundredths on a Place Value Grid

Make the decimals on a place value grid.

0.44

1.25

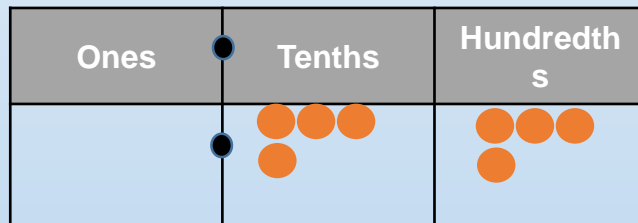
Use the sentence stems to describe each number.

Activity 2

Hundredths on a Place Value Grid

Make the decimals on a place value grid.

0.44

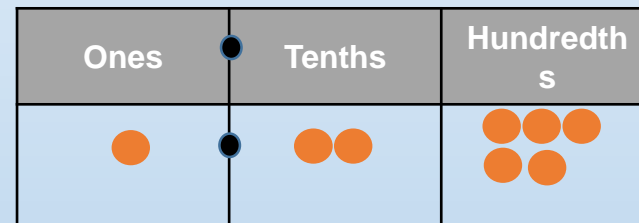


There are 0 ones.

There are 4 tenths.

There are 4 hundredths.

1.25



There are 1 ones.

There are 2 tenths.

There are 5 hundredths.

Activity 3

Hundredths on a Place Value Grid

Represent the decimals on a place value grid and in a part-whole model.

0.27

0.72

0.62

?

How many ways can you partition each number?

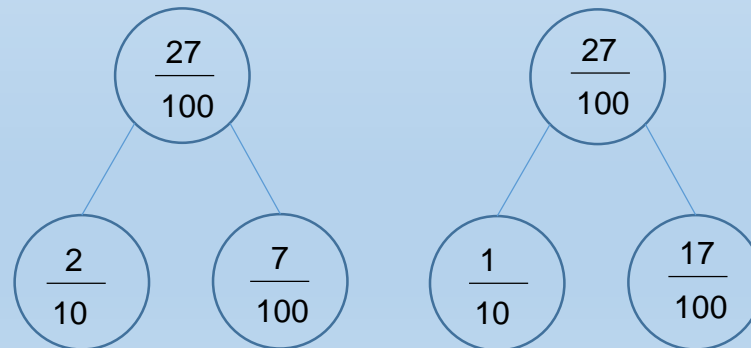
Activity 3

Hundredths on a Place Value Grid

Represent the decimals on a place value grid and in a part-whole model.

0.27

Ones	Tenths	Hundredths
	●●	●●●● ●●●●

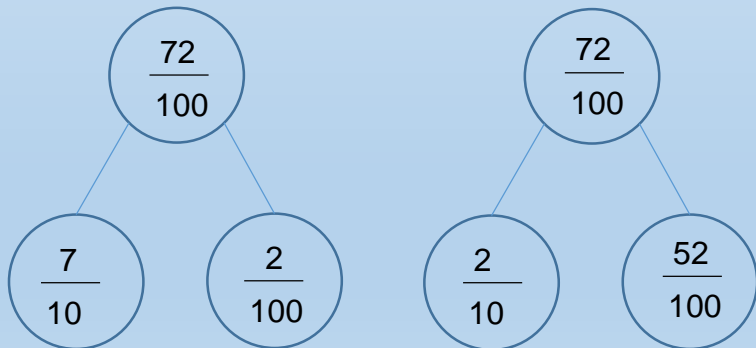
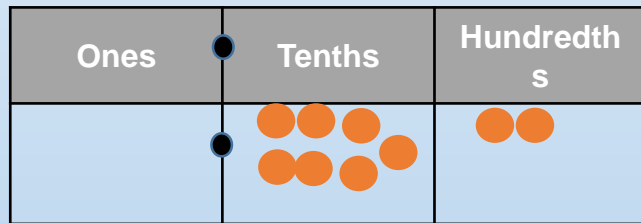


Activity 3

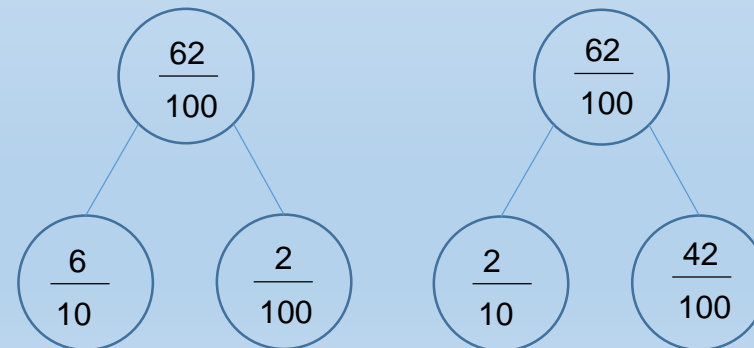
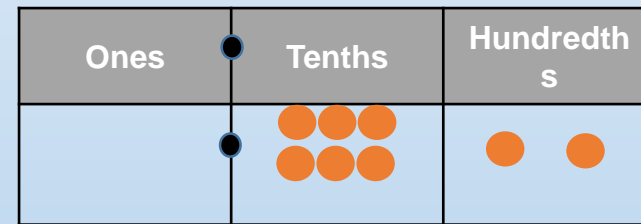
Hundredths on a Place Value Grid

Represent the decimals on a place value grid and in a part-whole model.

0.72



0.62



Activity 3

Hundredths on a Place Value Grid

Represent the decimals on a place value grid and in a part-whole model.

0.24

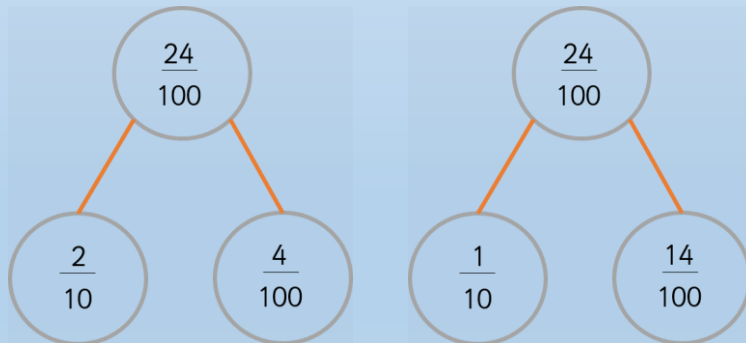
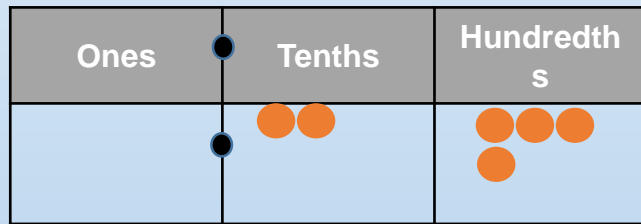
0.75

Activity 3

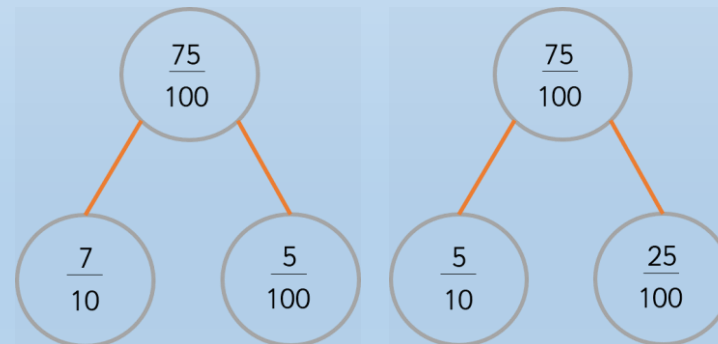
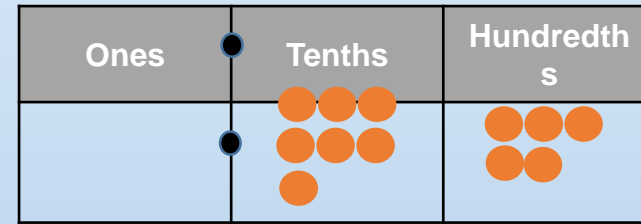
Hundredths on a Place Value Grid

Represent the decimals on a place value grid and in a part-whole model.

0.24



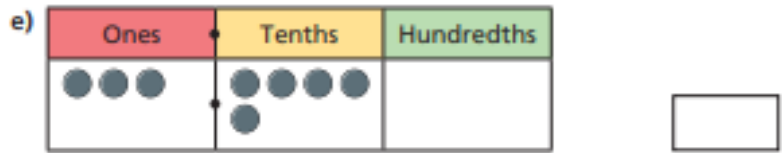
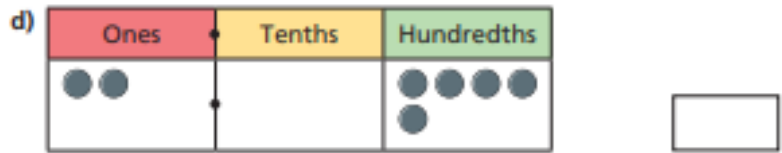
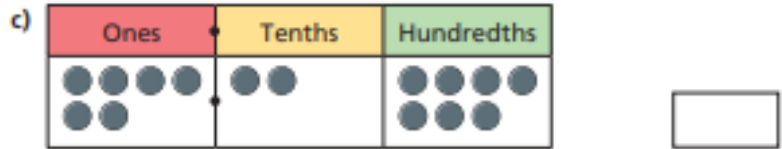
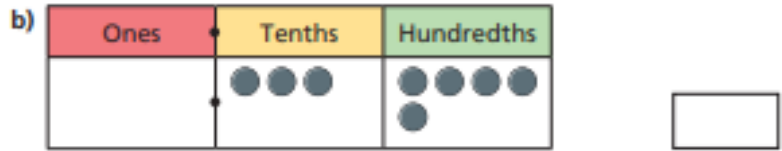
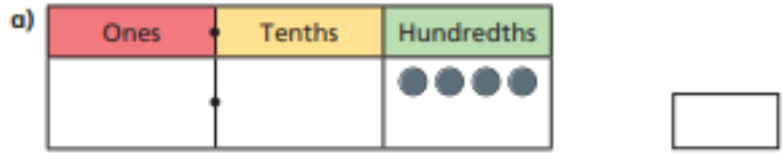
0.75



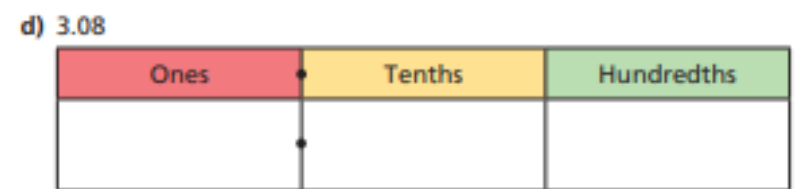
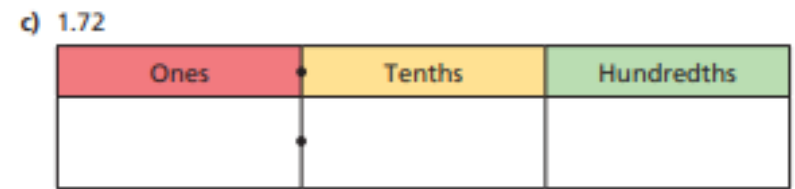
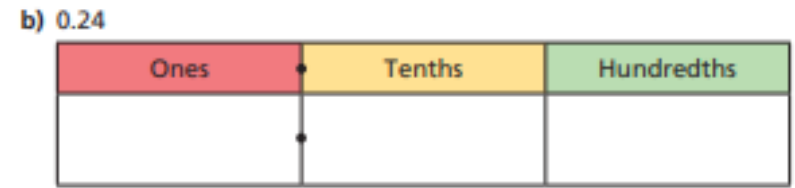
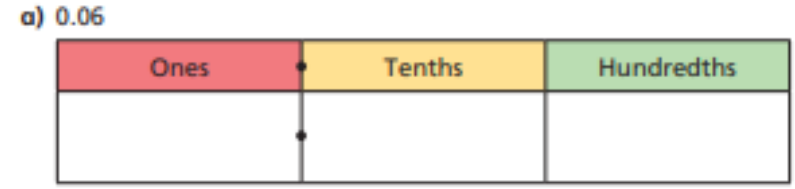
Hundredths on a place value grid

Please complete these in your book.

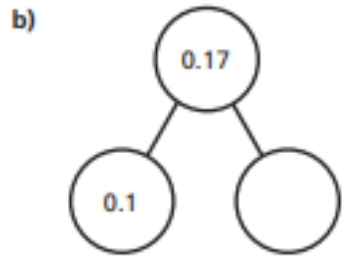
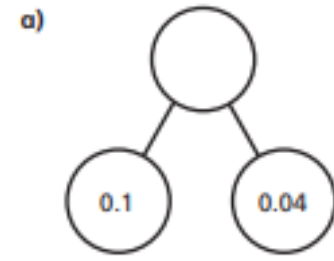
1 Write the decimal that is represented in each place value chart.

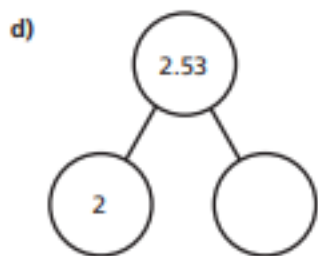


2 Use place value counters to make each number.
Draw your answers on the place value charts.



3 Complete the part-whole models.

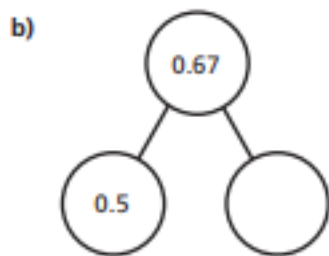
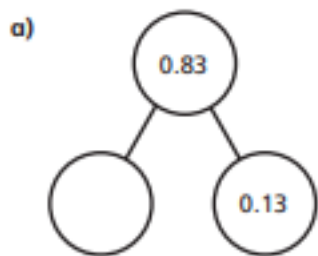




4 Complete the sentences.

- 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.



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.

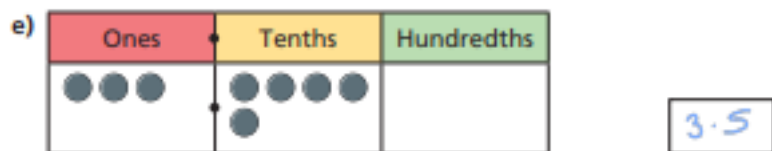
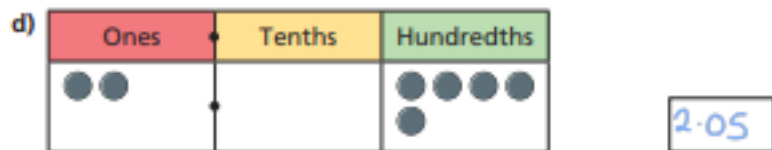
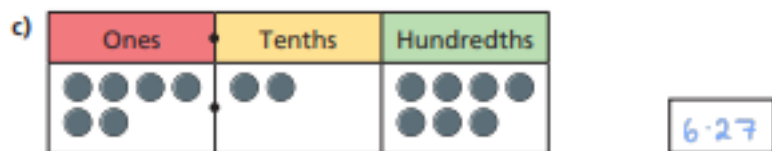
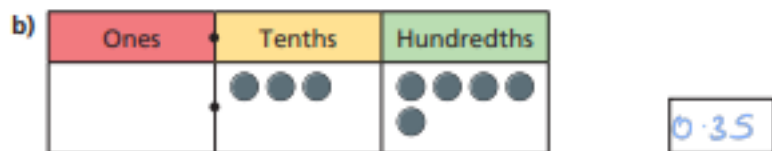
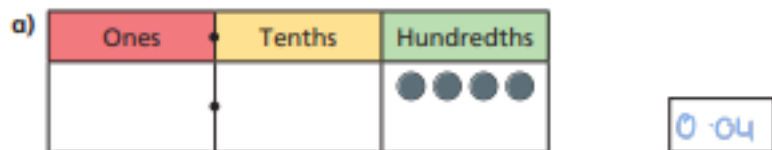
- Dexter makes the greatest number possible.
- Tommy makes the number closest to four.
- Esther and Whitney choose the two numbers closest together (Esther makes the slightly greater number).

Dexter			Tommy		
Ones	Tenths	Hundredths	Ones	Tenths	Hundredths

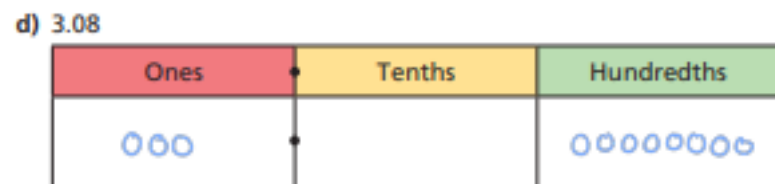
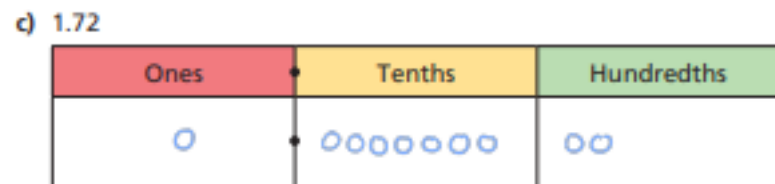
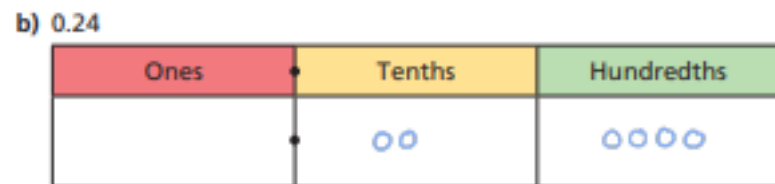
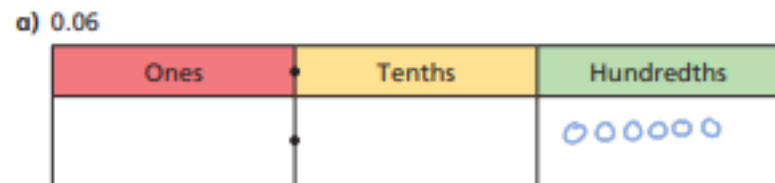
Whitney			Esther		
Ones	Tenths	Hundredths	Ones	Tenths	Hundredths

Hundredths on a place value grid

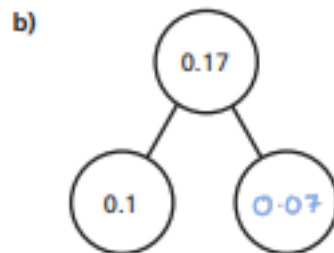
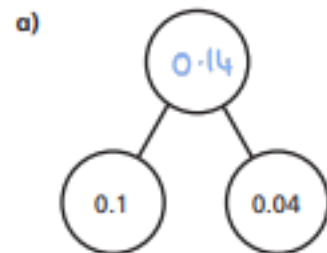
1 Write the decimal that is represented in each place value chart.

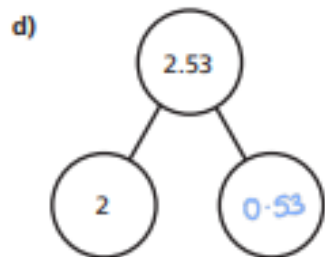
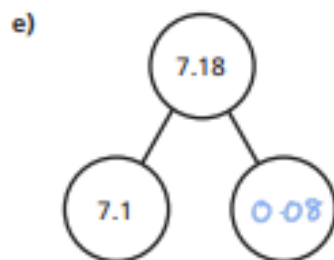


2 Use place value counters to make each number. Draw your answers on the place value charts.



3 Complete the part-whole models.

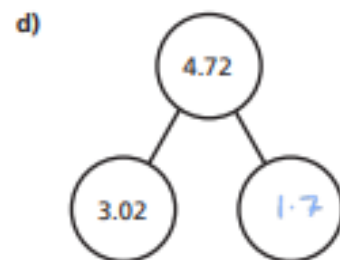
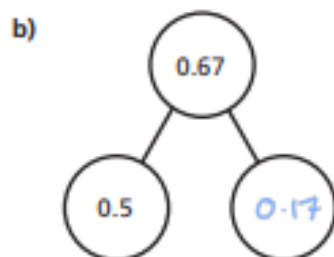




4 Complete the sentences.

- 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.



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			Tommy		
Ones	Tenths	Hundredths	Ones	Tenths	Hundredths
6	3	0	3	6	0

Whitney			Esther		
Ones	Tenths	Hundredths	Ones	Tenths	Hundredths
0	3	6	0	6	3



Challenge question

Esin thinks,



I can partition 0.32 in more than one way.



Use Esin's method to partition 0.27 in more than one way.

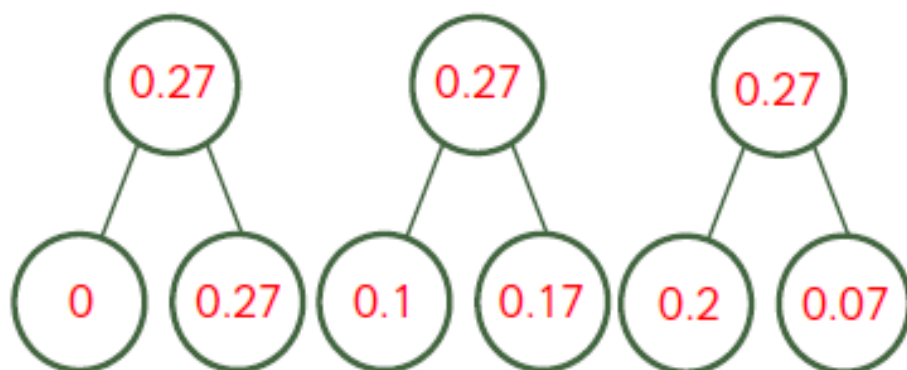
TRUE or FALSE?



Esin thinks,

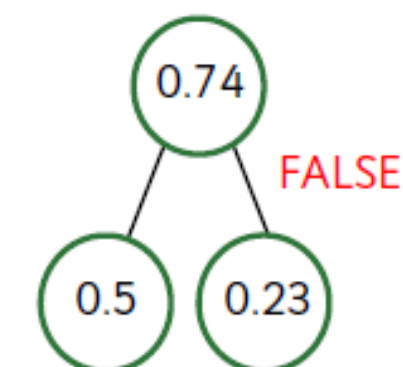
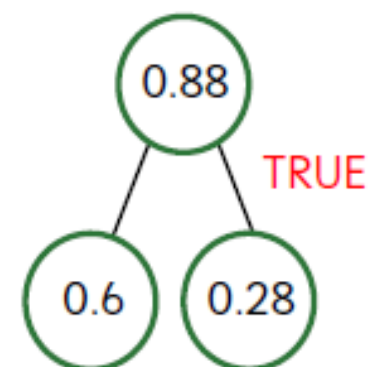
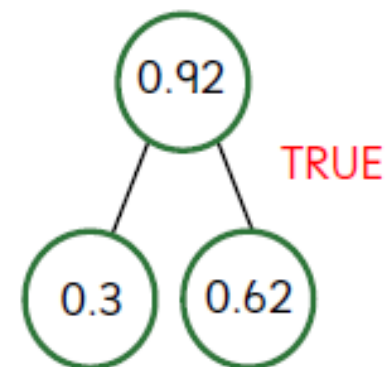
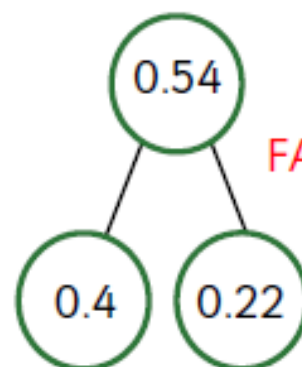


I can partition
0.32 in more than
one way.



Use Esin's method to partition 0.27
in more than one way.

TRUE or FALSE?



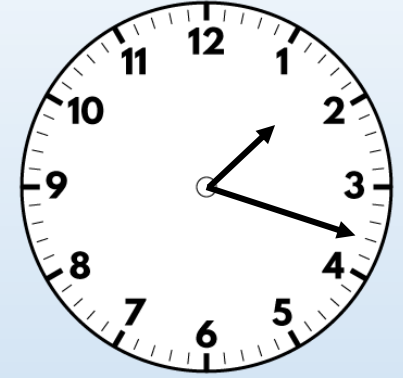
24.04.20

LO: To be able to divide 1 or 2 digit numbers by 100

Success Criteria

- I know that I must move the number 2 places to the right
- I can use 0 as a place marker eg. 0.04 for 4 hundredths

1) Write the number represented by counters.



2) What is $\frac{1}{10}$ of 32? 3.2

3) Calculate $\frac{2}{7} + \frac{3}{7} + \frac{4}{7}$ $\frac{9}{7}$

4) Find the product of 2, 3 and 4 24

Activity 1

Divide 1- or 2-digit numbers by 100

Leanna uses counters to make a 1-digit number.

Tens	Ones	Tenths	Hundredths
	● ●	●	

To divide the number by 100, we move the counters two columns to the right.

Use this method to solve:

$$4 \div 100 = \underline{\quad\quad} \qquad 5 \div 100 = \underline{\quad\quad}$$



What is the value of the counters now?

Activity 1

Divide 1- or 2-digit numbers by 100

Leanna uses counters to make a 1-digit number.

Tens	Ones	Tenths	Hundredths
	● ●	●	

The value of the counters is now 0.02

Tens	Ones	Tenths	Hundredths
		●	● ●

Activity 1

Divide 1- or 2-digit numbers by 100

$$4 \div 100 = \square$$

Tens	Ones	Tenths	Hundredths
	●●●●		

$$4 \div 100 = 0.04$$

Tens	Ones	Tenths	Hundredths
			●●●●

$$5 \div 100 = \square$$

Tens	Ones	Tenths	Hundredths
	●●●●●		

$$5 \div 100 = 0.05$$

Tens	Ones	Tenths	Hundredths
			●●●●●

Activity 1

Divide 1- or 2-digit numbers by 100

Esin uses counters to make a 1-digit number.

Tens	Ones	Tenths	Hundredths
	● ● ●	●	

To divide the number by 100, we move the counters two columns to the right.


Use this method to solve:

$$5 \div 100 = \underline{\quad} \qquad 7 \div 100 = \underline{\quad}$$

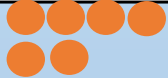
Activity 1

Divide 1- or 2-digit numbers by 100


$$6 \div 100 = \square$$

Tens	Ones	Tenths	Hundredths
			

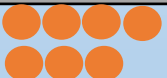
$$6 \div 100 = 0.06$$

Tens	Ones	Tenths	Hundredths
			

$$7 \div 100 = \square$$

Tens	Ones	Tenths	Hundredths
			

$$7 \div 100 = 0.07$$

Tens	Ones	Tenths	Hundredths
			

Activity 2

Divide 1- or 2-digit numbers by 100

Here is a two-digit number on a place value chart.

Tens	Ones	Tenths	Hundredths
7	2		

When dividing by 100, we move the digits two places to the right.

$$72 \div 100 = 0.72$$



To divide the number by 100, we move the counters two columns to the right.
What is the value of the counters now?

tens	ones	tenths	hundredths
10	1	0.1	0.01
5	7		

 $\square \div 100 = \square$

tens	ones	tenths	hundredths
10	1	0.1	0.01
3	9		

 $\square \div 100 = \square$

tens	ones	tenths	hundredths
10	1	0.1	0.01
7	3		

 $\square \div 100 = \square$

tens	ones	tenths	hundredths
10	1	0.1	0.01
2	7		

 $\square \div 100 = \square$

tens	ones	tenths	hundredths
10	1	0.1	0.01
5	4		

 $\square \div 100 = \square$

When dividing by 100, we move the digits one place to the _____

Use this method to solve:





$67 \div 100 = \square$	$\square \div 100 = 0.5$	$\square \div 100 = 0.21$	$78 \div 100 = \square$
-------------------------	--------------------------	---------------------------	-------------------------

$49 \div 100 = \square$	$\square \div 100 = 0.76$	$\square \div 100 = 0.34$	$70 \div 100 = \square$
-------------------------	---------------------------	---------------------------	-------------------------

Please all complete this sheet.




To divide the number by 100, we move the counters two columns to the right.
What is the value of the counters now?

tens	ones	tenths	hundredths
			
5	7		



$$57 \div 100 = 0.57$$

tens	ones	tenths	hundredths
			
3	9		


$$39 \div 100 = 0.39$$

tens	ones	tenths	hundredths
			
7	3		

$$73 \div 100 = 0.73$$

tens	ones	tenths	hundredths
			
2	7		

$$27 \div 100 = 0.27$$

tens	ones	tenths	hundredths
			
5	4		

$$54 \div 100 = 0.54$$

When dividing by 100, we move the digits one place to the right.

Use this method to solve:

$$67 \div 100 = 0.67$$

$$50 \div 100 = 0.5$$

$$21 \div 100 = 0.21$$

$$78 \div 100 = 0.78$$

$$49 \div 100 = 0.49$$

$$76 \div 100 = 0.76$$

$$34 \div 100 = 0.34$$

$$70 \div 100 = 0.7$$



Identify the number and then fill the place value chart and complete the sentence.

tens	ones	tenths	hundredths
10	1	0.1	0.01
	46		

$\div 100 =$

tens	ones	tenths	hundredths
10	1	0.1	0.01
	2		

9 $\div 100 =$

tens	ones	tenths	hundredths
10	1	0.1	0.01
3	37		

$\div 100 =$

tens	ones	tenths	hundredths
10	1	0.1	0.01
3	<input type="text"/>		

$\div 100 = 0.5$

Identify the number and then fill the place value chart and complete the sentence.

tens	ones	tenths	hundredths
10	1	0.1	0.01

$\div 100 =$ seven tenths four hundredths

tens	ones	tenths	hundredths
10	1	0.1	0.01

$\div 100 =$ nine tenths six hundredths

tens	ones	tenths	hundredths
10	1	0.1	0.01

$\div 100 =$ eight tenths

tens	ones	tenths	hundredths
10	1	0.1	0.01

$\div 100 =$ five tenths two hundredths

If you normally do Gold you should also complete all this sheet, Silver please do the first 4 on this sheet, Bronze if you wish to complete this too then please do.



Identify the number and then fill the place value chart and complete the sentence.

tens	ones	tenths	hundredths
10	1	0.1	0.01
	46		

$$46 \div 100 = 0.46$$

tens	ones	tenths	hundredths
10	1	0.1	0.01
9	2		

$$92 \div 100 = 0.92$$

tens	ones	tenths	hundredths
10	1	0.1	0.01
3	37		

$$67 \div 100 = 0.67$$

tens	ones	tenths	hundredths
10	1	0.1	0.01
3	24		

$$54 \div 100 = 0.54$$

Identify the number and then fill the place value chart and complete the sentence.

tens	ones	tenths	hundredths
10	1	0.1	0.01
7	4		

$$74 \div 100 = \text{seven tenths four hundredths}$$

tens	ones	tenths	hundredths
10	1	0.1	0.01
9	6		

$$96 \div 100 = \text{nine tenths six hundredths}$$

tens	ones	tenths	hundredths
10	1	0.1	0.01
8	0		

$$80 \div 100 = \text{eight tenths}$$

tens	ones	tenths	hundredths
10	1	0.1	0.01
5	2		

$$52 \div 100 = \text{five tenths two hundredths}$$

Challenge question

Describe the pattern.

$$38,000 \div 100 = 380$$

$$3,800 \div 100 = 38$$

$$380 \div 100 = 3.8$$

$$38 \div 100 = 0.38$$

Can you complete the pattern starting with 82,000 divided by 100?

Leanna thinks,



54 divided by 100 is 0.54
so I know 0.54 is 100 times
smaller than 54

Tia thinks,

54 divided by 100
is 0.54 so I know 54 is
100 times bigger than 0.54



Who is correct? Explain your answer.

Describe the pattern.

$$\begin{aligned} 38,000 \div 100 &= 380 \\ 3,800 \div 100 &= 38 \\ 380 \div 100 &= 3.8 \\ 38 \div 100 &= 0.38 \end{aligned}$$

Children will describe the pattern they see e.g. 38,000 is 10 times bigger than 3,800, therefore the answer has to be 10 times bigger as the divisor has remained the same.

Can you complete the pattern starting with 82,000 divided by 100?

For 82,000:

$$\begin{aligned} 82,000 \div 100 &= 820 \\ 8,200 \div 100 &= 82 \\ 820 \div 100 &= 8.2 \\ 82 \div 100 &= 0.82 \end{aligned}$$

Leanna thinks,



54 divided by 100 is 0.54 so I know 0.54 is 100 times smaller than 54

Tia thinks,

54 divided by 100 is 0.54 so I know 54 is 100 times bigger than 0.54



Who is correct? Explain your answer.

They are both correct.

Children may use a place value chart to help them explain their answer.