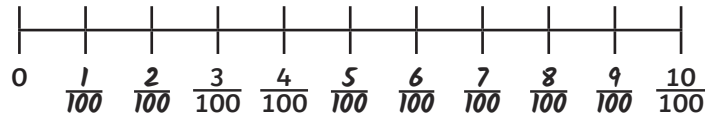
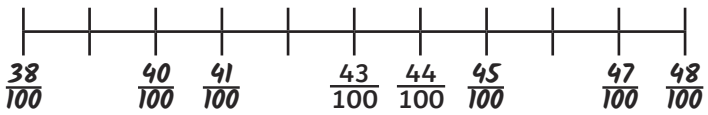
1) a)



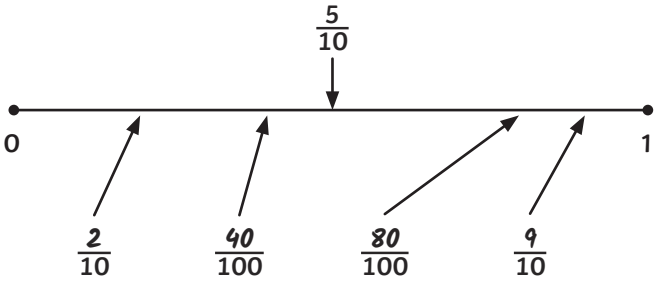
b)



2) a) $\frac{1}{10} = \frac{10}{100}$ b) $\frac{2}{10} = \frac{20}{100}$ c) $\frac{5}{10} = \frac{50}{100}$ d) $\frac{6}{10} = \frac{60}{100}$ e) $\frac{8}{10} = \frac{80}{100}$ f) $\frac{9}{10} = \frac{90}{100}$

3) $\frac{48}{100}$ $\frac{49}{100}$ $\frac{5}{10}$ $\frac{51}{100}$ $\frac{52}{100}$ $\frac{53}{100}$ $\frac{54}{100}$ $\frac{55}{100}$

4)



Accept hundredths fractions that are close to $\frac{40}{100}$ or $\frac{80}{100}$.

1) Mohamed is wrong. The denominator shows how many equal parts you divide the whole into. This means that hundredths will be smaller than tenths as they have been divided into more parts. $\frac{5}{10}$ is greater than $\frac{5}{100}$.

2) This is sometimes true. Accept any correct examples that children give. Here is one possible answer:

Here is an example when it is true: $\frac{30}{100}$ is smaller than $\frac{4}{10}$ because $\frac{4}{10} = \frac{40}{100}$.

Here is an example when it is not true: $\frac{95}{100}$ is larger than $\frac{6}{10}$ because $\frac{6}{10} = \frac{60}{100}$.

3) Accept other correct ways of recording the correction in tenths and hundredths.

Equivalents	✓ or ×	Correction
$\frac{30}{100} = \frac{3}{10}$	✓	
$\frac{55}{100} = \frac{5}{10}$ and $\frac{5}{100}$	✓	
$\frac{49}{10} = \frac{4}{10}$ and $\frac{9}{10}$	×	$\frac{49}{100} = \frac{4}{10}$ and $\frac{9}{100}$
$\frac{89}{100} = \frac{8}{100}$ and $\frac{9}{10}$	×	$\frac{89}{100} = \frac{8}{10}$ and $\frac{9}{100}$
$\frac{7}{10}$ and $\frac{4}{100} = \frac{74}{10}$	✓	
$\frac{65}{10} = 6$ and $\frac{5}{100}$	×	$\frac{65}{10} = 6$ and $\frac{5}{10}$

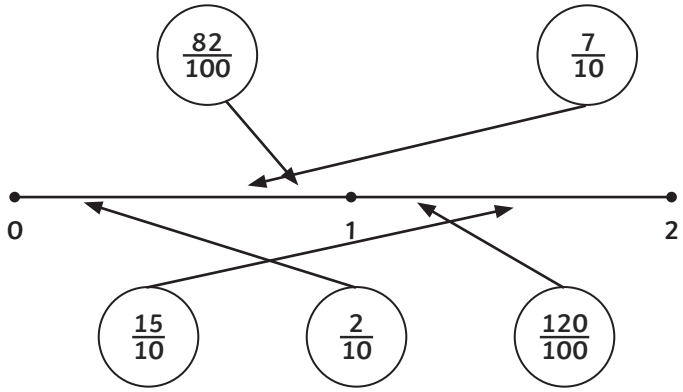
1) Multiple answers possible. Here is one possible answer:

$\frac{79}{100} < \frac{80}{100} = \frac{8}{10} > \frac{45}{100} < \frac{5}{10}$

2) Multiple answers possible. Here is one example:

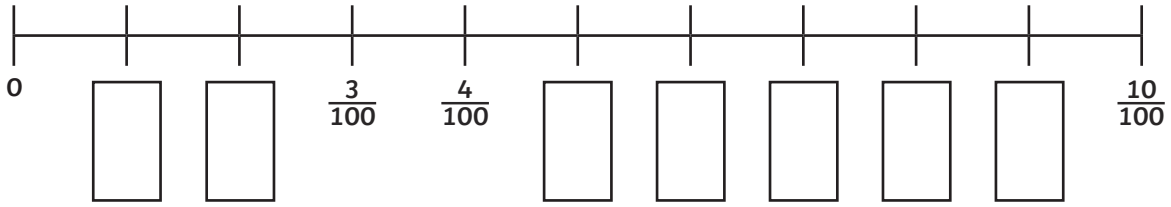
$\frac{40}{100}$	=	$\frac{2}{10}$ and $\frac{2}{10}$
$\frac{42}{10}$	>	$\frac{40}{100}$ and $\frac{7}{10}$
$\frac{60}{100}$	<	$\frac{2}{10}$ and $\frac{38}{100}$
$\frac{82}{100}$	>	$\frac{2}{10}$ and $\frac{3}{10}$
$\frac{50}{100}$ and $\frac{2}{10}$	=	$\frac{30}{100}$ and $\frac{40}{100}$
$\frac{38}{100}$	<	$\frac{2}{10}$ and $\frac{8}{10}$

3) Accept arrows drawn closely to the answers shown.

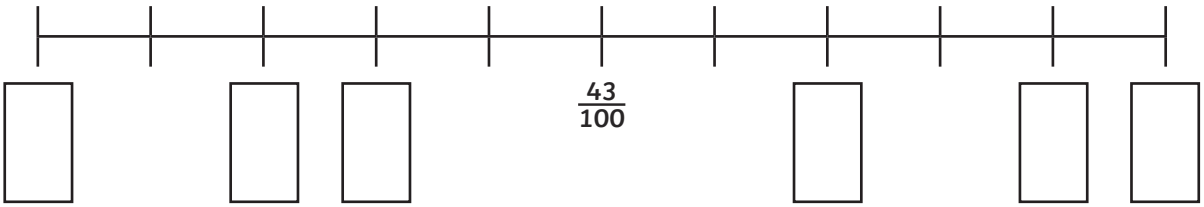


1) Fill in the missing hundredths to complete the number lines.

a)



b)



2) Find the missing numbers. The first one has been done for you.

a) $\frac{1}{10} = \frac{10}{100}$

b) $\frac{2}{10} = \frac{\square}{100}$

c) $\frac{5}{10} = \frac{\square}{100}$

d) $\frac{\square}{10} = \frac{60}{100}$

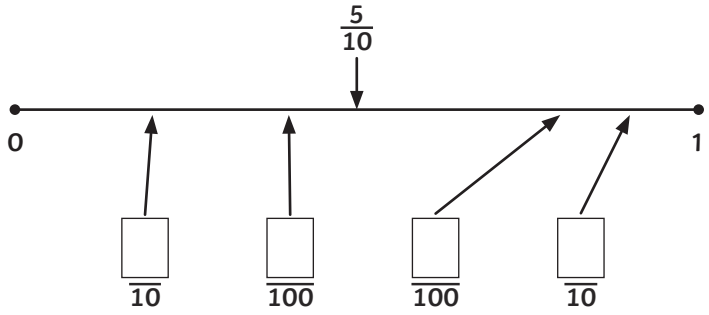
e) $\frac{\square}{10} = \frac{80}{100}$

f) $\frac{\square}{10} = \frac{90}{100}$

3) Fill in the missing tenths or hundredths to complete the sequence.

$\frac{48}{100}$ $\frac{49}{100}$ $\frac{\square}{10}$ $\frac{51}{100}$ $\frac{\square}{100}$ $\frac{\square}{100}$ $\frac{\square}{100}$ $\frac{55}{100}$

4) Find tenths and hundredths fractions that could be approximately where the arrow is pointing.



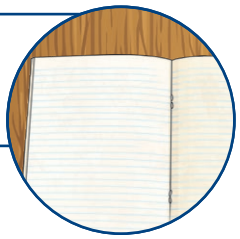
1) Is Mohamed right or wrong? Explain what you know about the denominator in your answer.

Mohamed

$\frac{5}{100}$ is greater than $\frac{5}{10}$. I know this because 100 is greater than 10.

2) Is this always, never or sometimes true? Give examples in your explanation.

A number that contains hundredths is smaller than a number that contains tenths.



3) Cara has been writing equivalents between tenths and hundredths. Tick or cross each statement. If there is a mistake, write the correct answer.

Equivalents	✓ or ×	Correction
$\frac{30}{100} = \frac{3}{10}$		
$\frac{55}{100} = \frac{5}{10}$ and $\frac{5}{100}$		
$\frac{49}{10} = \frac{4}{10}$ and $\frac{9}{10}$		
$\frac{89}{100} = \frac{8}{100}$ and $\frac{9}{10}$		
$\frac{7}{10}$ and $\frac{4}{100} = \frac{74}{10}$		
$\frac{65}{10} = 6$ and $\frac{5}{100}$		

1) Complete the following. Write a different number in each empty box.

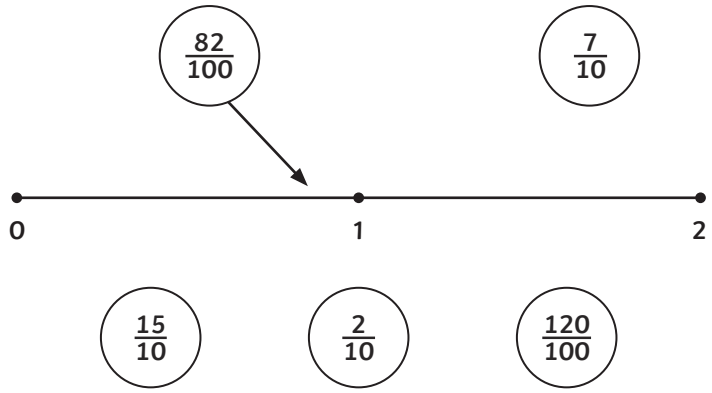
$$\frac{79}{100} < \frac{\square}{100} = \frac{\square}{10} > \frac{\square}{100} < \frac{\square}{10}$$

2) Use these fractions to complete the comparison statements. You can use each fraction more than once. The first one has been done for you.

$\frac{40}{100}$	=	$\frac{2}{10}$ and $\frac{2}{10}$
$\frac{42}{10}$	>	☐ and ☐
$\frac{60}{100}$	<	☐ and ☐
$\frac{82}{100}$	>	$\frac{2}{10}$ and $\frac{\square}{10}$
☐ and ☐	=	☐ and ☐
☐	<	☐ and ☐

$\frac{30}{100}$	$\frac{27}{100}$
$\frac{50}{100}$	$\frac{40}{100}$
$\frac{38}{100}$	$\frac{82}{100}$
$\frac{2}{10}$	$\frac{3}{10}$
$\frac{8}{10}$	$\frac{42}{10}$
$\frac{7}{10}$	$\frac{22}{10}$

3) Draw arrows to mark where each fraction should go on the number line.

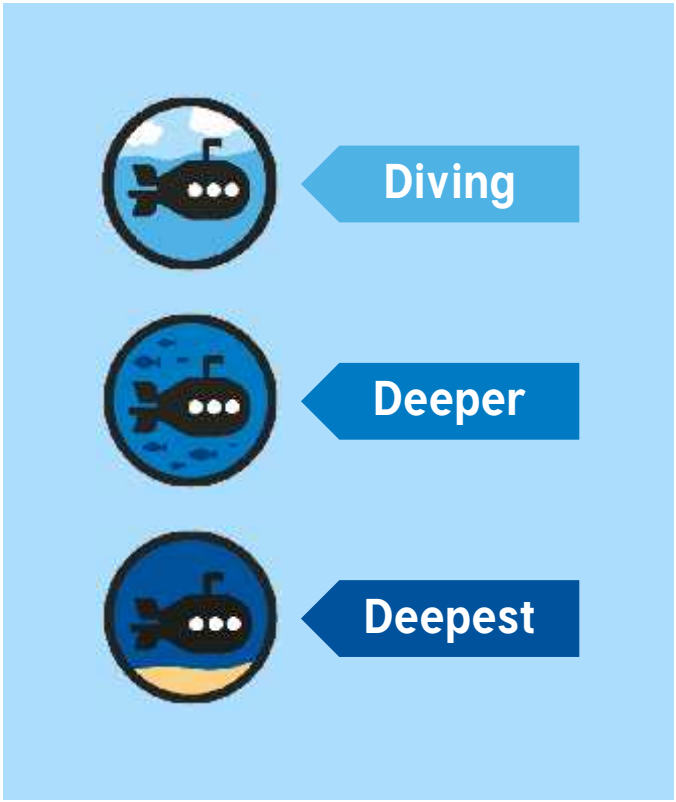


Diving into Mastery

Hundredths

Diving into Mastery Guidance for Educators

Each activity sheet is split into three sections, diving, deeper and deepest, which are represented by the following icons:



These carefully designed activities take your children through a learning journey, initially ensuring they are fluent with the key concept being taught; then applying this to a range of reasoning and problem-solving activities.

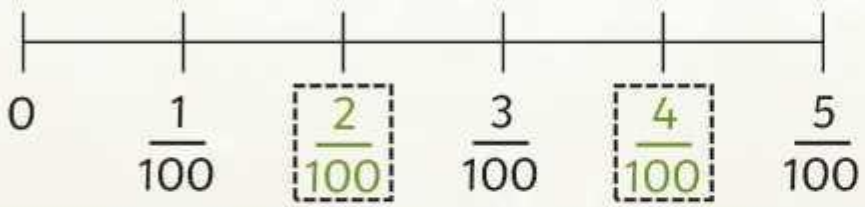
These sheets might not necessarily be used in a linear way. Some children might begin at the 'Deeper' section and in fact, others may 'dive straight in' to the 'Deepest' section if they have already mastered the skill and are applying this to show their depth of understanding.

Aim

- Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten.

Hundredths | **Diving**

Find the equivalents.



30

70

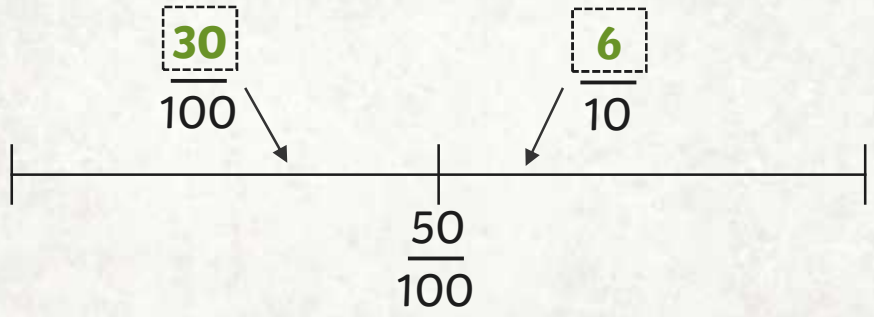
4

Hundredths | **Diving**

Fill in the missing tenths or hundredths to complete the sequence.

$\frac{36}{100}$ $\frac{37}{100}$ $\frac{38}{100}$ $\frac{39}{100}$ $\frac{4}{10}$ $\frac{41}{100}$ $\frac{42}{100}$

Which fractions do you think could be shown by the arrows on the number line?



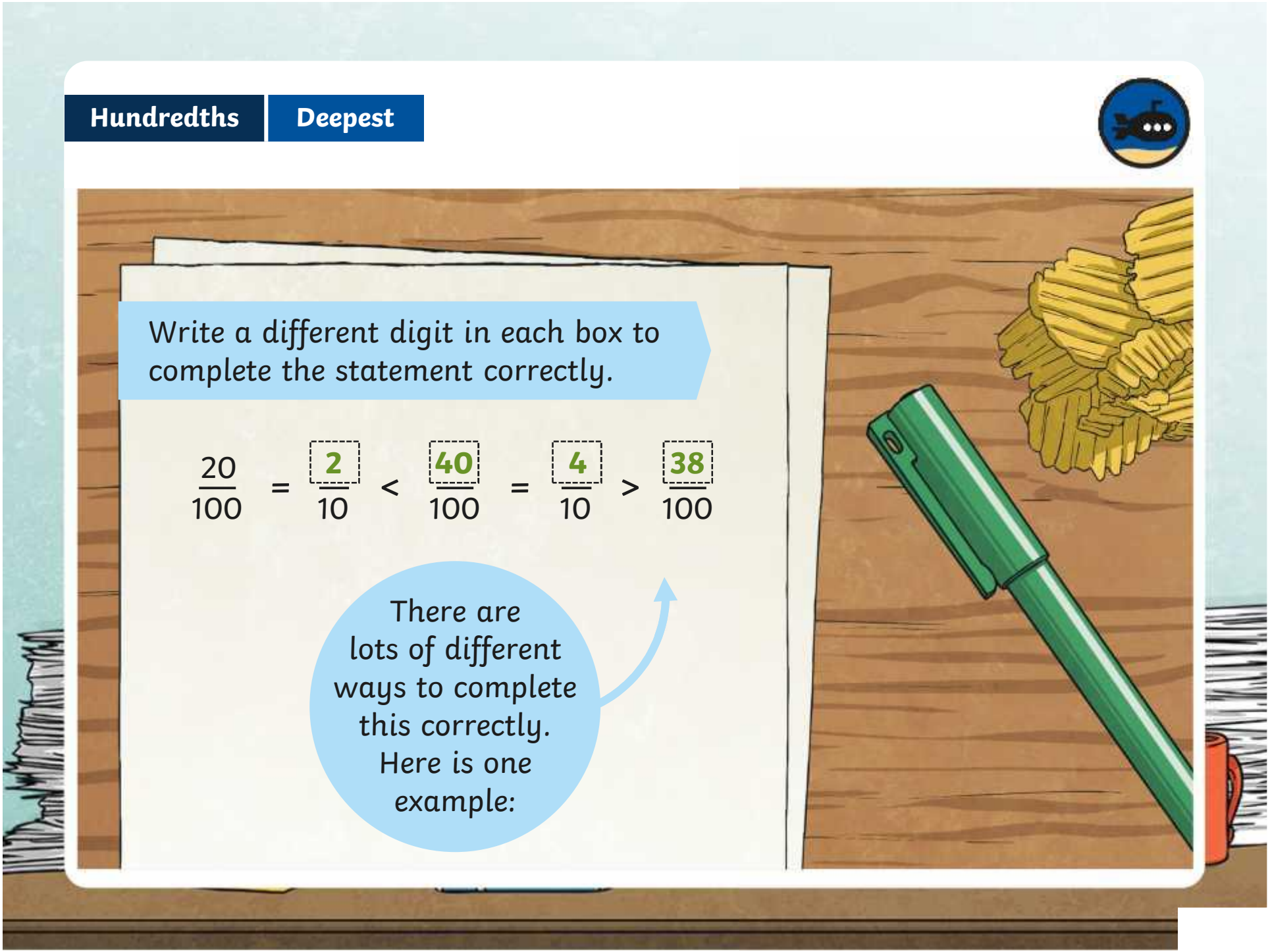
Do you think $\frac{32}{100}$ would be a correct answer here? What about $\frac{29}{100}$? Why?

Hundredths | **Deeper**

Cara has been writing equivalents between tenths and hundredths. Tick or cross each statement. If there is a mistake, write the correct answer.

Equivalents	✓ or ×	Correction
$\frac{8}{10} = \frac{80}{100}$	✓	
$\frac{87}{100} = \frac{8}{100}$ and $\frac{7}{100}$	×	$\frac{87}{100} = \frac{8}{10}$ and $\frac{7}{100}$
$\frac{1}{10}$ and $\frac{83}{100} = \frac{93}{100}$	✓	
$\frac{79}{100} = \frac{7}{100}$ and $\frac{9}{10}$	×	$\frac{79}{100} = \frac{7}{10}$ and $\frac{9}{100}$

Hundredths | **Deepest**



Write a different digit in each box to complete the statement correctly.

$$\frac{20}{100} = \frac{\boxed{2}}{10} < \frac{\boxed{40}}{100} = \frac{\boxed{4}}{10} > \frac{\boxed{38}}{100}$$

There are lots of different ways to complete this correctly. Here is one example:

Hundredths | **Deepest**

There are lots of possible answers.
Here is one example:

$\frac{60}{100}$	=	$\frac{4}{10}$ and $\frac{2}{10}$
$\frac{9}{10}$	>	☐ and ☐
$\frac{79}{100}$	<	$\frac{79}{100}$ and ☐
☐	=	$\frac{40}{100}$ and $\frac{4}{10}$

$\frac{40}{100}$ $\frac{50}{100}$

$\frac{37}{100}$ $\frac{92}{100}$

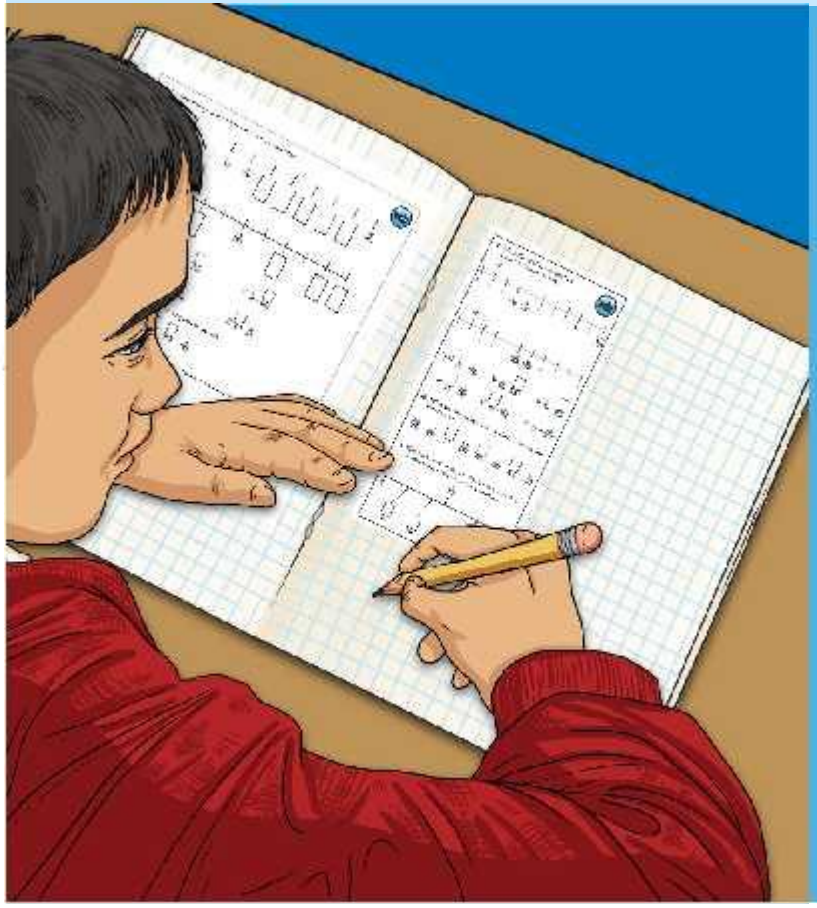
$\frac{38}{100}$ $\frac{4}{10}$

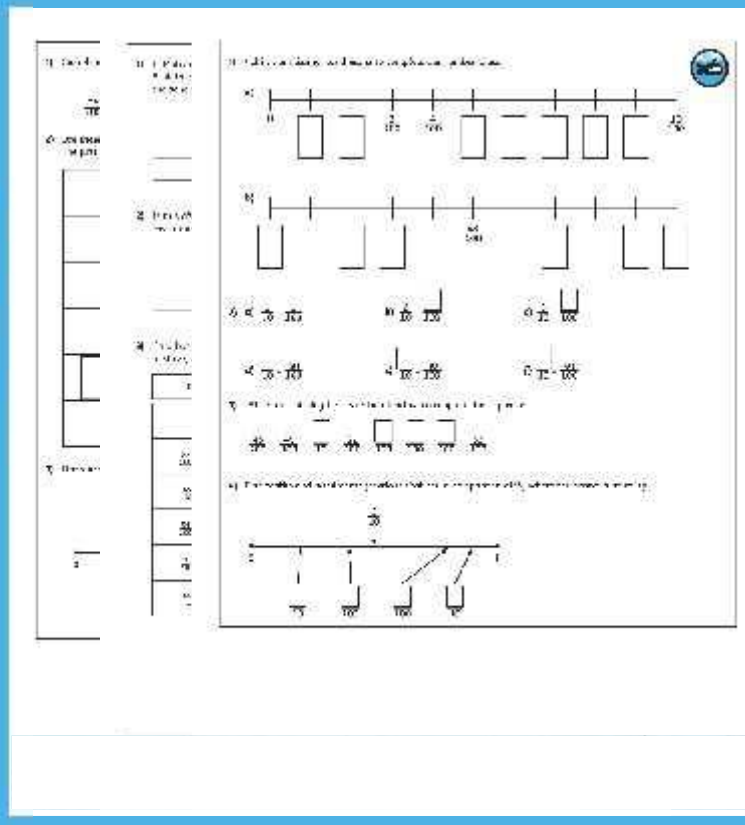
$\frac{2}{10}$ $\frac{39}{10}$

$\frac{8}{10}$ $\frac{7}{10}$

Hundredths

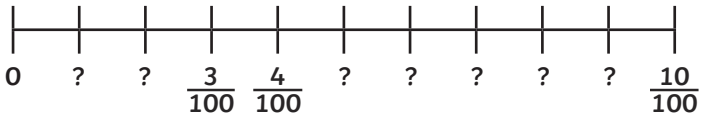
Dive in by completing your own activity!



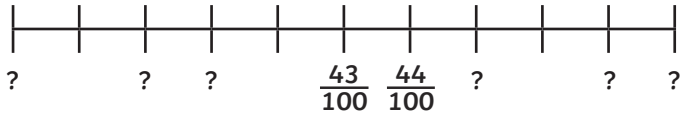


1) Fill in the missing hundredths to complete the number lines.

a)



b)



2) Find the missing numbers. The first one has been done for you.

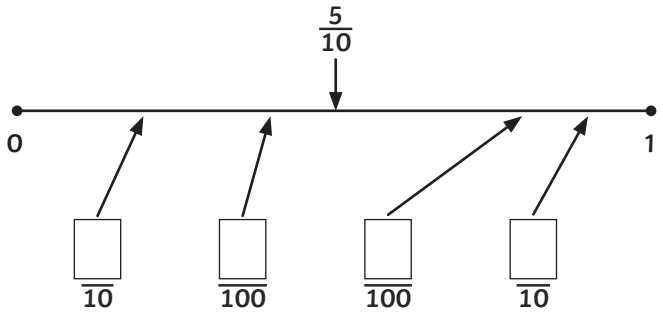
a) $\frac{1}{10} = \frac{10}{100}$ **b)** $\frac{2}{10} = \frac{\square}{100}$ **c)** $\frac{5}{10} = \frac{\square}{100}$

d) $\frac{\square}{10} = \frac{60}{100}$ **e)** $\frac{\square}{10} = \frac{80}{100}$ **f)** $\frac{\square}{10} = \frac{90}{100}$

3) Fill in the missing tenths or hundredths to complete the sequence.

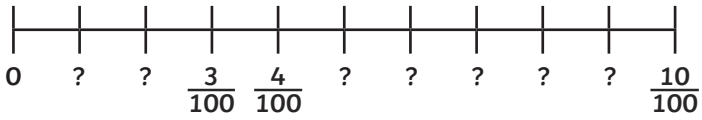
$\frac{48}{100}$ $\frac{49}{100}$ $\frac{\square}{10}$ $\frac{51}{100}$ $\frac{\square}{100}$ $\frac{\square}{100}$ $\frac{\square}{100}$ $\frac{55}{100}$

4) Find tenths and hundredths fractions that could be approximately where the arrow is pointing.

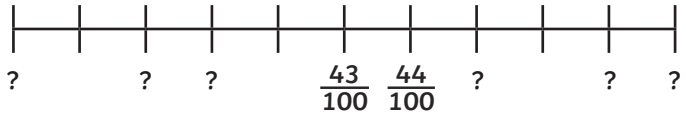


1) Fill in the missing hundredths to complete the number lines.

a)



b)



2) Find the missing numbers. The first one has been done for you.

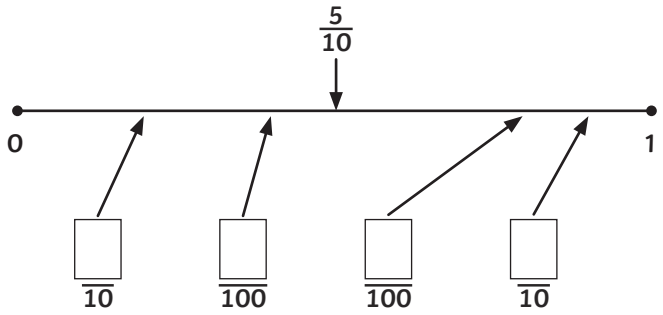
a) $\frac{1}{10} = \frac{10}{100}$ **b)** $\frac{2}{10} = \frac{\square}{100}$ **c)** $\frac{5}{10} = \frac{\square}{100}$

d) $\frac{\square}{10} = \frac{60}{100}$ **e)** $\frac{\square}{10} = \frac{80}{100}$ **f)** $\frac{\square}{10} = \frac{90}{100}$

3) Fill in the missing tenths or hundredths to complete the sequence.

$\frac{48}{100}$ $\frac{49}{100}$ $\frac{\square}{10}$ $\frac{51}{100}$ $\frac{\square}{100}$ $\frac{\square}{100}$ $\frac{\square}{100}$ $\frac{55}{100}$

4) Find tenths and hundredths fractions that could be approximately where the arrow is pointing.



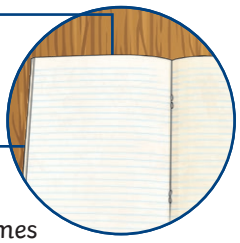
1) Is Mohamed right or wrong? Explain what you know about the denominator in your answer.

Mohamed

$\frac{5}{100}$ is greater than $\frac{5}{10}$. I know this because 100 is greater than 10.

2)

A number that contains hundredths is smaller than a number that contains tenths.



Is this always, never or sometimes true? Give examples in your explanation.

3) Cara has been writing equivalents between tenths and hundredths. Tick or cross each statement. If there is a mistake, write the correct answer.

Equivalents	✓ or ×	Correction
$\frac{30}{100} = \frac{3}{10}$		
$\frac{55}{100} = \frac{5}{10}$ and $\frac{5}{100}$		
$\frac{49}{10} = \frac{4}{10}$ and $\frac{9}{10}$		
$\frac{89}{100} = \frac{8}{100}$ and $\frac{9}{10}$		
$\frac{7}{10}$ and $\frac{4}{100} = \frac{74}{10}$		
$\frac{65}{10} = 6$ and $\frac{5}{100}$		

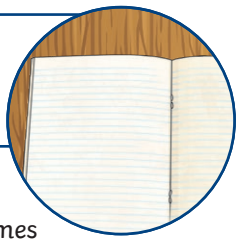
1) Is Mohamed right or wrong? Explain what you know about the denominator in your answer.

Mohamed

$\frac{5}{100}$ is greater than $\frac{5}{10}$. I know this because 100 is greater than 10.

2)

A number that contains hundredths is smaller than a number that contains tenths.



Is this always, never or sometimes true? Give examples in your explanation.

3) Cara has been writing equivalents between tenths and hundredths. Tick or cross each statement. If there is a mistake, write the correct answer.

Equivalents	✓ or ×	Correction
$\frac{30}{100} = \frac{3}{10}$		
$\frac{55}{100} = \frac{5}{10}$ and $\frac{5}{100}$		
$\frac{49}{10} = \frac{4}{10}$ and $\frac{9}{10}$		
$\frac{89}{100} = \frac{8}{100}$ and $\frac{9}{10}$		
$\frac{7}{10}$ and $\frac{4}{100} = \frac{74}{10}$		
$\frac{65}{10} = 6$ and $\frac{5}{100}$		

1) Complete the following. Write a different number in each empty box.

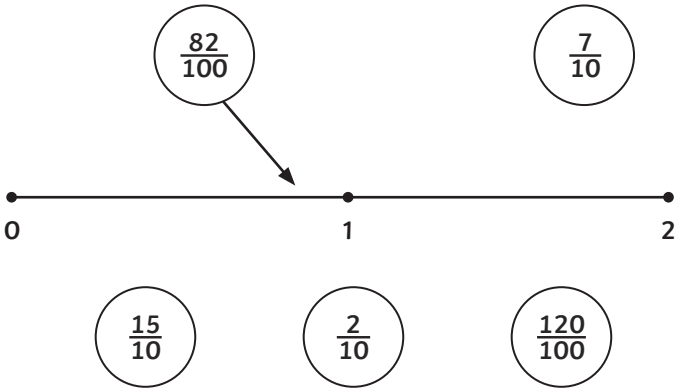
$\frac{79}{100} < \frac{\square}{100} = \frac{\square}{10} > \frac{\square}{100} < \frac{\square}{10}$

2) Use these fractions to complete the comparison statements. You can use each fraction more than once. The first one has been done for you.

$\frac{30}{100}$	$\frac{27}{100}$	$\frac{50}{100}$	$\frac{40}{100}$	$\frac{38}{100}$	$\frac{82}{100}$
$\frac{2}{10}$	$\frac{3}{10}$	$\frac{8}{10}$	$\frac{42}{10}$	$\frac{7}{10}$	$\frac{22}{10}$

$\frac{40}{100}$	=	$\frac{2}{10}$ and $\frac{2}{10}$
$\frac{42}{10}$	>	$\square$ and $\square$
$\frac{60}{100}$	<	$\square$ and $\square$
$\frac{82}{100}$	>	$\frac{2}{10}$ and $\frac{\square}{10}$
$\square$ and $\square$	=	$\square$ and $\square$
$\square$	<	$\square$ and $\square$

3) Draw arrows to mark where each fraction should go on the number line.



$\frac{15}{10}$ $\frac{2}{10}$ $\frac{120}{100}$

1) Complete the following. Write a different number in each empty box.

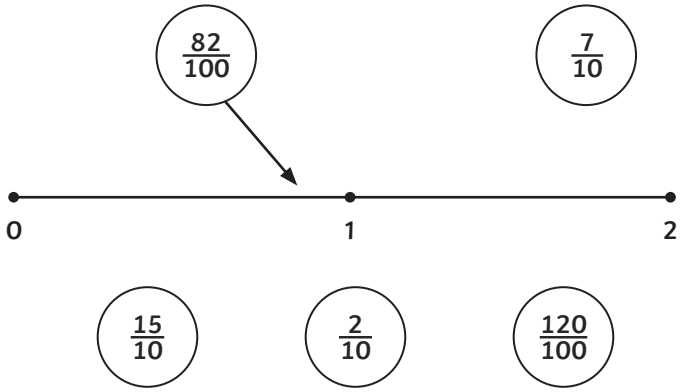
$\frac{79}{100} < \frac{\square}{100} = \frac{\square}{10} > \frac{\square}{100} < \frac{\square}{10}$

2) Use these fractions to complete the comparison statements. You can use each fraction more than once. The first one has been done for you.

$\frac{30}{100}$	$\frac{27}{100}$	$\frac{50}{100}$	$\frac{40}{100}$	$\frac{38}{100}$	$\frac{82}{100}$
$\frac{2}{10}$	$\frac{3}{10}$	$\frac{8}{10}$	$\frac{42}{10}$	$\frac{7}{10}$	$\frac{22}{10}$

$\frac{40}{100}$	=	$\frac{2}{10}$ and $\frac{2}{10}$
$\frac{42}{10}$	>	$\square$ and $\square$
$\frac{60}{100}$	<	$\square$ and $\square$
$\frac{82}{100}$	>	$\frac{2}{10}$ and $\frac{\square}{10}$
$\square$ and $\square$	=	$\square$ and $\square$
$\square$	<	$\square$ and $\square$

3) Draw arrows to mark where each fraction should go on the number line.



$\frac{15}{10}$ $\frac{2}{10}$ $\frac{120}{100}$