Reasoning and Problem Solving
Step 1: Recognise Tenths And Hundredths

National Curriculum Objectives:

Mathematics Year 4: (4F6b) Recognise and write decimal equivalents of any number of tenths or hundredths

Differentiation:

Questions 1, 4 and 7 (Problem Solving)
Developing Provide five possibilities of a number using tenths and hundredths from a set of 2 clues. Numbers less than one with pictorial support.
Expected Provide five possibilities of a number using tenths and hundredths from a set of 2 clues. Numbers less than one.
Greater Depth Provide possibilities of a number using tenths and hundredths from a set of 3 clues. Numbers less than one.

Questions 2, 5 and 8 (Reasoning)
Developing Explain the mistake in representing tenths and hundredths. Numbers less than one with pictorial support.
Expected Explain the mistake in representing tenths and hundredths. Numbers less than one.
Greater Depth Explain the mistake in representing tenths and hundredths. Numbers less than one with unconventional partitioning.

Questions 3, 6 and 9 (Reasoning)
Developing Explain whether a pictorial representation is correct. Numbers less than one with pictorial support.
Expected Explain whether a pictorial representation is correct. Two pictorials and numbers less than one.
Greater Depth Explain whether a pictorial representation is correct. Two pictorials and unconventional partitioning.

More Year 4 Decimals resources.

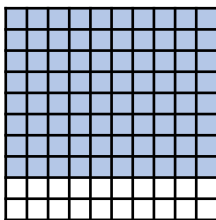## Did you like this resource? Don't forget to review it on our website.

Recognise Tenths And Hundredths

1a. Isaac is thinking of a number which has tenths and hundredths.

My number is less than 1.

The tenths can be represented like this:
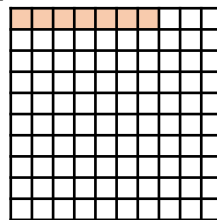
Write 5 possibilities for Isaac's number.

⭐D

PS

1b. Pippa is thinking of a number which has tenths and hundredths.

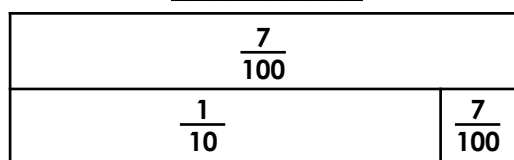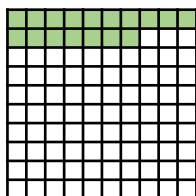My number is less than 1.

The hundredths can be represented like this:

Write 5 possibilities for Pippa's number.

⭐D

PS

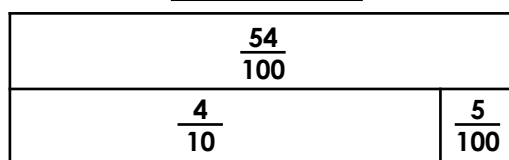**2a.** Hafsa has completed the bar model to match the hundred square.

$\frac{7}{100}$	
$\frac{1}{10}$	$\frac{7}{100}$

Explain the mistake Hafsa has made.

⭐D

R

2b. Felix has completed the bar model to match the hundred square.

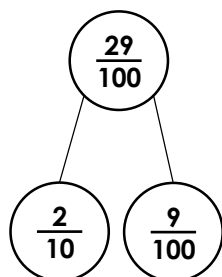| $\frac{54}{100}$	
$\frac{4}{10}$	$\frac{5}{100}$
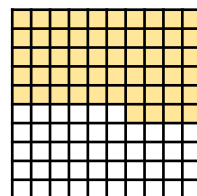
Explain the mistake Felix has made.

⭐D

R

3a. Joe has represented 29 hundredths in two different ways.

$\frac{29}{100}$

$\frac{2}{10}$ $\frac{9}{100}$

Is he correct? Explain your answer.

⭐D
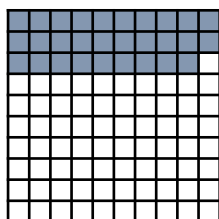
R

3b. Lucy has represented 78 hundredths on a hundred square.

$\frac{78}{100}$

$\frac{7}{10}$ $\frac{8}{100}$

Is she correct? Explain your answer.

⭐D

R

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Reasoning and Problem Solving – Recognise Tenths And Hundredths – Year 4 Developing

4a. Jake is thinking of a number which has tenths and hundredths.

My number is less than 1.

The tenths in my number can be represented with 3 shaded rows of a hundred square.

Write 5 possibilities for Jake's number.

PS

4b. Maddie is thinking of a number which has tenths and hundredths.
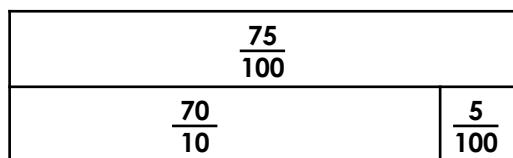
My number is less than 1.

The tenths in my number can be represented with 7 shaded rows of a hundred square.

Write 5 possibilities for Maddie's number.

PS

5a. Millie has completed the bar model to represent 7 tenths and 5 hundredths.
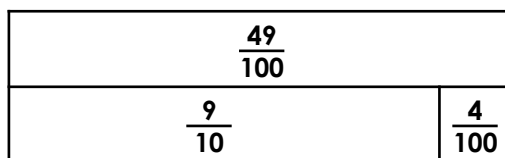
$\frac{75}{100}$	
$\frac{70}{10}$	$\frac{5}{100}$

Explain the mistake Millie has made.

R

5b. Zack has completed the bar model to represent 4 tenths and 9 hundredths.

$\frac{49}{100}$	
$\frac{9}{10}$	$\frac{4}{100}$

Explain the mistake Zack has made.

R

6a. Lucas has represented 84 hundredths in two different ways.

$\frac{84}{100}$	
$\frac{8}{10}$	$\frac{4}{100}$

$\frac{84}{100}$

$\frac{80}{10}$ $\frac{4}{100}$
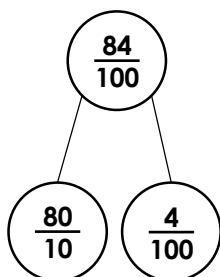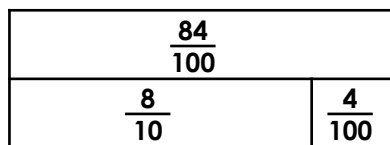
Is he correct? Explain your answer.

R

6b. Zainab has represented 71 hundredths in two different ways.

$\frac{71}{100}$	
$\frac{7}{10}$	$\frac{1}{100}$

$\frac{71}{100}$

$\frac{1}{10}$ $\frac{70}{100}$
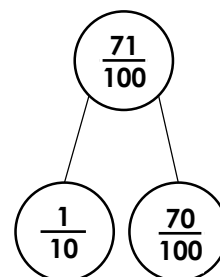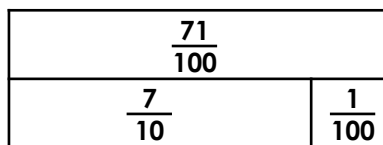
Is she correct? Explain your answer.

R

Recognise Tenths And Hundredths

7a. Toby is thinking of a number which has tenths and hundredths.

> My number is more than 2 tenths but less than 43 hundredths.

> The hundredths can be represented with 6 or less shaded squares on a hundred square.

> The tenths digit is an odd number.

Write 5 possibilities for Toby's number.

GD   PS

7b. Ivy is thinking of a number which has tenths and hundredths.

> My number is more than 5 tenths but less than 88 hundredths.

> The hundredths can be represented with 8 or less shaded squares on a hundred square.

> The hundredths digit is an even number.

Write 5 possibilities for Ivy's number.

GD   PS

8a. Carlos has completed the part-whole model by partitioning ninety-two hundredths.

$\frac{92}{100}$

$\frac{4}{100}$ $\frac{52}{100}$

Explain the mistake Carlos has made.

GD   R

8b. Arlo has completed the part-whole model by partitioning fifty-three hundredths.

$\frac{53}{100}$

$\frac{5}{10}$ $\frac{3}{10}$
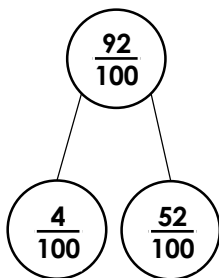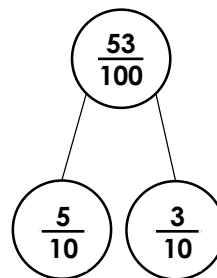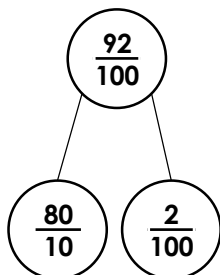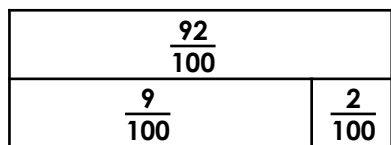
Explain the mistake Arlo has made.

GD   R

9a. Eesa has represented 92 hundredths in two different ways.

$\frac{92}{100}$	
$\frac{9}{100}$	$\frac{2}{100}$

$\frac{92}{100}$

$\frac{80}{10}$ $\frac{2}{100}$

Is he correct? Explain your answer.

GD   R

9b. Tilly has represented 39 hundredths in two different ways.
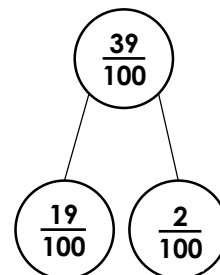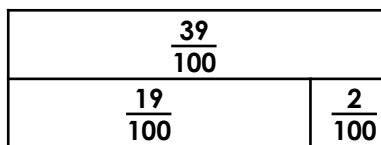
$\frac{39}{100}$	
$\frac{19}{100}$	$\frac{2}{100}$

$\frac{39}{100}$

$\frac{19}{100}$ $\frac{2}{100}$

Is she correct? Explain your answer.

GD   R

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Reasoning and Problem Solving – Recognise Tenths And Hundredths – Year 4 Greater Depth

Reasoning and Problem Solving
Recognise Tenths And Hundredths

Developing

1a. Various answers, for example:
$$\frac{81}{100} \quad \frac{82}{100} \quad \frac{83}{100} \quad \frac{84}{100} \quad \frac{85}{100}$$

2a. Hafsa is incorrect because she should have 17 hundredths in the whole of the bar model.

3a. Joe is correct because both representations have 2 tenths and 9 hundredths.

Expected

4a. Various answers, for example:
$$\frac{35}{100} \quad \frac{36}{100} \quad \frac{37}{100} \quad \frac{38}{100} \quad \frac{39}{100}$$

5a. Millie is incorrect because she has put 70 tenths, rather than 7 tenths.

6a. Lucas is incorrect because he has written 80 tenths instead of 8 tenths in his part-whole model.

Greater Depth

7a. Various answers, for example:
$$\frac{31}{100} \quad \frac{32}{100} \quad \frac{33}{100} \quad \frac{34}{100} \quad \frac{35}{100}$$

8a. Carlos has written 4 hundredths rather than 4 tenths.

9a. Eesa is incorrect because the part-whole model shows a total of 80 tenths instead of 8 tenths. The bar model shows 9 hundredths instead of 9 tenths.

Developing

1b. Various answers, for example:
$$\frac{27}{100} \quad \frac{37}{100} \quad \frac{47}{100} \quad \frac{57}{100} \quad \frac{67}{100}$$

2b. Felix is incorrect because he has mixed up his tenths and hundredths. It should be 5 tenths and 4 hundredths.

3b. Lucy is incorrect because the hundred square shows 80 hundredths, not 78 hundredths.

Expected

4b. Various answers, for example:
$$\frac{74}{100} \quad \frac{75}{100} \quad \frac{76}{100} \quad \frac{77}{100} \quad \frac{78}{100}$$

5b. Zack is incorrect because he has mixed up the numerators. There should be 4 tenths and 9 hundredths.

6b. Zainab is incorrect as the parts of her part-whole model represent 80 hundredths. The answer is 7 tenths and 1 hundredths.

Greater Depth

7b. Various answers, for example:
$$\frac{70}{100} \quad \frac{72}{100} \quad \frac{74}{100} \quad \frac{76}{100} \quad \frac{78}{100}$$

8b. Arlo has written 3 tenths rather than 3 hundredths.

9b. Tilly is incorrect as her part-whole model and bar model show 2 hundredths rather than 2 tenths.

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