

Name:



## Maths Assessment Year 4: Fractions

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1. Recognise and show, using diagrams, families of common equivalent fractions.
2. Count up and down in hundredths.
3. Solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number.
4. Add and subtract fractions with the same denominator.
5. Recognise and write decimal equivalents of any number of tenths or hundreds.
6. Recognise and write decimal equivalents to  $\frac{1}{4}$ ,  $\frac{1}{2}$ ,  $\frac{3}{4}$ .
7. Find the effect of dividing a one or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths.
8. Round decimals with 1 decimal place to the nearest whole number.
9. Compare numbers with the same number of decimal places up to 2 decimal places.
10. Solve simple measure and money problems involving fractions and decimals to 2 decimal places.

Name:

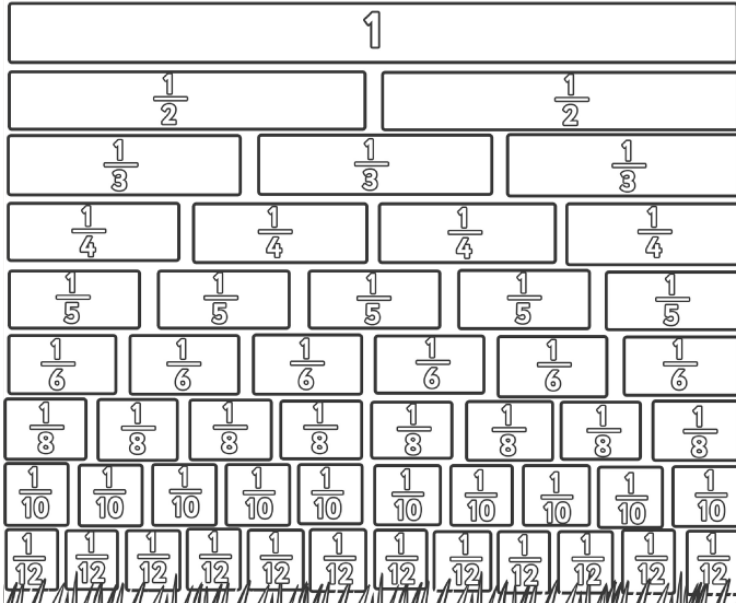
Date:



# Maths Assessment Year 4: Fractions

1. Recognise and show, using diagrams, families of common equivalent fractions.

a) Use the fraction wall to find equivalent fractions:



$$\frac{3}{4} = \frac{\quad}{8}$$

$$\frac{\quad}{12} = \frac{4}{6}$$

$$\frac{3}{\quad} = \frac{6}{10}$$

$$\frac{2}{3} = \frac{4}{\quad} = \frac{\quad}{12}$$

1 mark

1 mark

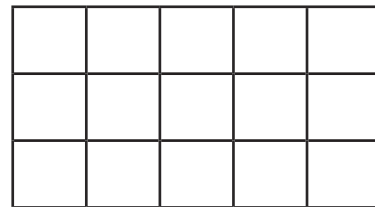
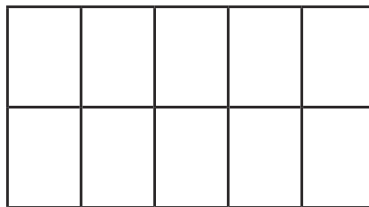
1 mark

1 mark

b) Shade in the shapes to show  $\frac{2}{5}$  on each shape and write the equivalent fraction underneath shape 2 and shape 3:



$\frac{2}{5}$



2 marks

2. Count up and down in hundredths.

Complete these sequences of numbers:

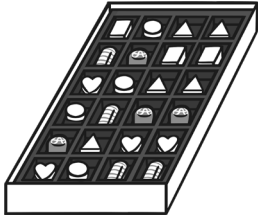
2.47	2.48	2.49	<input type="text"/>	<input type="text"/>	<input type="text"/>
$\frac{38}{100}$	$\frac{39}{100}$	$\frac{40}{100}$	<input type="text"/>	<input type="text"/>	<input type="text"/>
5.32	5.31	5.30	<input type="text"/>	<input type="text"/>	<input type="text"/>
$\frac{75}{100}$	$\frac{74}{100}$	$\frac{73}{100}$	<input type="text"/>	<input type="text"/>	<input type="text"/>

4 marks

Total for this page

3. Solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number.

- a) Dipali buys her Mum a box of chocolates. There are 24 chocolates in the box. Mum eats  $\frac{1}{4}$  of the chocolates as well as giving  $\frac{1}{3}$  of the chocolates to her family. How many chocolates are left? Show your working out.



2 marks

- b) A restaurant sells milkshakes in two sizes. A small milkshake contains 400ml and a large milkshake contains  $\frac{3}{10}$  more.

- i. How much does a large milkshake contain? Show your working out.



2 marks

- ii. If Lucy drinks  $\frac{3}{4}$  of a small milkshake and Alfie  $\frac{1}{2}$  of a large milkshake who drinks the most? Show your working out.



2 marks



Total for this page

4. Add and subtract fractions with the same denominator.

$$\frac{2}{5} + \frac{1}{5} = \boxed{\phantom{00}}$$

$$\frac{1}{6} + \frac{4}{6} = \boxed{\phantom{00}}$$

$$\frac{6}{7} - \frac{3}{7} = \boxed{\phantom{00}}$$

$$\frac{8}{9} - \frac{2}{9} = \boxed{\phantom{00}}$$

4 marks

5. Recognise and write decimal equivalents of any number of tenths or hundreds.

Fill in the missing boxes:

fraction	decimal
$\frac{3}{10}$	
	0.5
$\frac{6}{100}$	
	0.08
$\frac{23}{100}$	
	1.38

6 marks

6. Recognise and write decimal equivalents to  $\frac{1}{4}$ ,  $\frac{1}{2}$ ,  $\frac{3}{4}$ .

Draw lines to match each fraction to its equivalent decimal:

$\frac{1}{4}$

0.5

$\frac{1}{2}$

0.25

$\frac{3}{4}$

0.75

1 mark

Total for this page

7. Find the effect of dividing a one or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths.

Complete the table:

number	divide by	answer	Underlined digit's new value (ones, tenths, hundredths)
<u>7</u> 2	÷10	7.2	7 ones
5 <u>6</u>	÷10		
<u>8</u>	÷10		
<u>1</u> 3	÷100		
<u>6</u>	÷100		



4 marks

8. Round decimals with 1 decimal place to the nearest whole number.

Round each of the following decimals to the nearest whole number:

6.8	
12.4	
9.5	
18.3	
128.7	



5 marks

9. Compare numbers with the same number of decimal places up to 2 decimal places.

Use the symbols < or > to compare these decimals:

1.8		2.4
16.03		16.31
5.21		4.78
11.09		11.12
356.8		324.1
24.18		24.22



6 marks



Total for this page

10. Solve simple measure and money problems involving fractions and decimals to 2 decimal places.

Nina is training for a running race, these are the distances that she runs one week:

Monday	2.15km
Tuesday	2.23km
Wednesday	3.52km
Thursday	rest day
Friday	2.93km
Saturday	3.22km
Sunday	3.65km



a) How far did Nina run on Saturday and Sunday? Show your working out.

1 mark

b) How much farther did Nina run on Saturday than on Tuesday? Show your working out.

1 mark

c) How much farther would Nina need to run to total 20km? Show your working out.

2 marks

Total for this page

Theo's mum has offered to help his savings by adding a tenth of what he saves each month to his savings.

Here is what he saves for the first 6 months of the year:

January	£2.50
February	£3.00
March	£4.00
April	£1.80
May	£2.20
June	£6.00



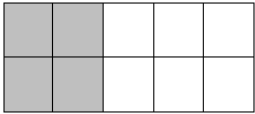
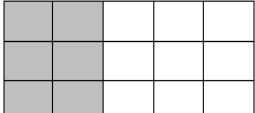
d) Including the tenth extra, how much money did Theo save in January and February together? Show your working out.

2 marks

e) How much money did Theo save, with the tenth extra from January to June? Show your working out.

2 marks

Total for this page

question	answer	marks	notes
<b>1. Recognise and show, using diagrams, families of common equivalent fractions.</b>			
a	$\frac{6}{8}$ $\frac{8}{12}$ $\frac{3}{5}$ $\frac{4}{6}$ $\frac{8}{12}$	4	
b	 $\frac{4}{10}$  $\frac{6}{15}$	2	1 mark each
<b>2. Count up and down in hundredths.</b>			
	2.47 2.48 2.49 <b>2.5 2.51 2.52</b> $\frac{38}{100}$ $\frac{39}{100}$ $\frac{40}{100}$ $\frac{41}{100}$ $\frac{42}{100}$ $\frac{43}{100}$ 5.32 5.31 5.30 <b>5.29 5.28 5.27</b> $\frac{75}{100}$ $\frac{74}{100}$ $\frac{73}{100}$ $\frac{72}{100}$ $\frac{71}{100}$ $\frac{70}{100}$	4	accept 2.50
<b>3. Solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number.</b>			
a	10 left	2	If correct answer 2 marks. If working out shows a sensible way of working out, but the answer is incorrect award 1 mark
b i.	520ml	2	
b ii.	Lucy	2	
<b>4. Add and subtract fractions with the same denominator.</b>			
	$\frac{2}{5} + \frac{1}{5} = \frac{3}{5}$ $\frac{1}{6} + \frac{4}{6} = \frac{5}{6}$ $\frac{6}{7} - \frac{3}{7} = \frac{3}{7}$ $\frac{8}{9} - \frac{2}{9} = \frac{6}{9}$	4	



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<b>5. Recognise and write decimal equivalents of any number of tenths or hundreds.</b>																			
	<table border="1"> <tr> <td><math>\frac{3}{10}</math></td> <td><b>0.3 or .3 or 0.30</b></td> </tr> <tr> <td><b><math>\frac{5}{10}</math> or <math>\frac{1}{2}</math></b></td> <td>0.5</td> </tr> <tr> <td><math>\frac{6}{100}</math></td> <td><b>0.06 or .06</b></td> </tr> <tr> <td><b><math>\frac{8}{100}</math></b></td> <td>0.08</td> </tr> <tr> <td><math>\frac{23}{100}</math></td> <td><b>0.23 or .23</b></td> </tr> <tr> <td><b><math>1 \frac{38}{100}</math></b></td> <td>1.38</td> </tr> </table>	$\frac{3}{10}$	<b>0.3 or .3 or 0.30</b>	<b><math>\frac{5}{10}</math> or <math>\frac{1}{2}</math></b>	0.5	$\frac{6}{100}$	<b>0.06 or .06</b>	<b><math>\frac{8}{100}</math></b>	0.08	$\frac{23}{100}$	<b>0.23 or .23</b>	<b><math>1 \frac{38}{100}</math></b>	1.38	6	Accept equivalent fraction forms.				
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a	6.87km	1																			
b	0.99km	1																			
c	2.3km	2	Accept 2.30 km. If correct answer 2 marks. If working out shows a sensible way of working out, but the answer is incorrect award 1 mark																		
d	£6.05	2	If correct answer 2 marks. If working out shows a sensible way of working out, but the answer is incorrect award 1 mark																		
e	£21.45	2																			
		Total 50																			