

Name:



## Maths Assessment Year 3: Fractions

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1. Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10.
2. Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators.
3. Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators.
4. Recognise and show, using diagrams, equivalent fractions with small denominators.
5. Add and subtract fractions with the same denominator within one whole [for example,  $6/7$ ].
6. Compare and order unit fractions, and fractions with the same denominators.
7. Solve problems that involve all of the above.

Name:

Date:

## Maths Assessment Year 3: Fractions

1. Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10.

a) Complete the missing boxes in this sequence:

$\frac{9}{10}$				$\frac{5}{10}$	$\frac{4}{10}$	
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b) Shade in  $\frac{1}{10}$  of the numbers in this 100 square:

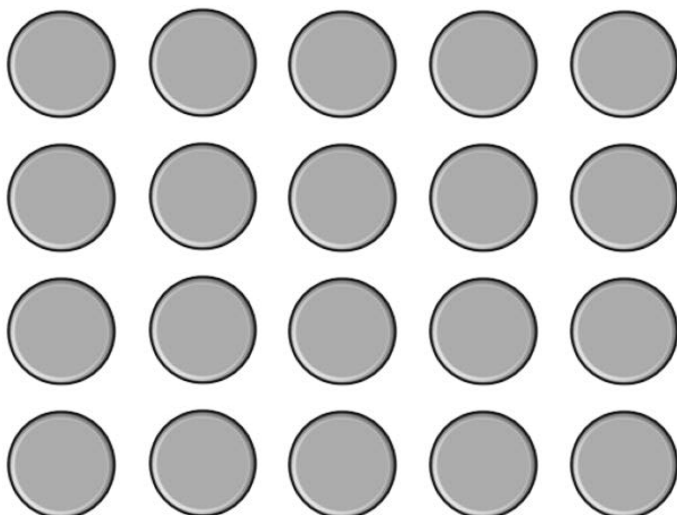
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

c) Write the answer to this calculation as a fraction:

$8 \div 10 =$

2. Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators.

There are 20 counters on the table. Calculate:



$\frac{1}{2}$  of 20 =

$\frac{1}{4}$  of 20 =

$\frac{1}{5}$  of 20 =

$\frac{1}{10}$  of 20 =

$\frac{3}{5}$  of 20 =

1 mark

1 mark

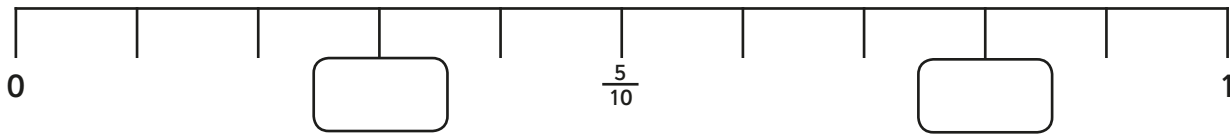
1 mark

5 marks

Total for this page

3. Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators.

a) Write the missing fraction in the box on the numberline:



b) Write a fraction that is equivalent to  $\frac{5}{10}$ .

2 marks

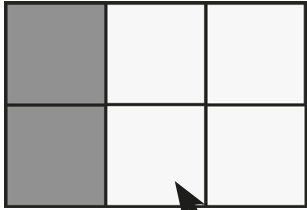
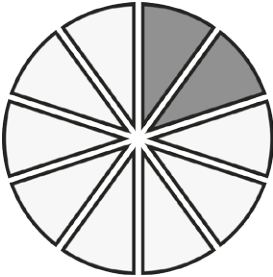
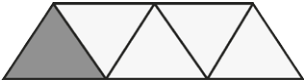
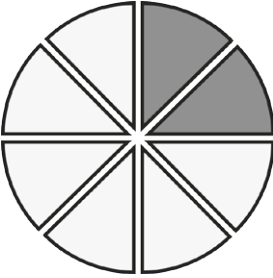
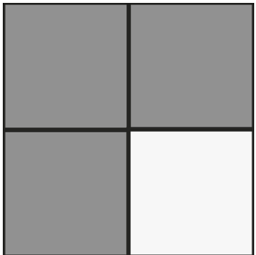
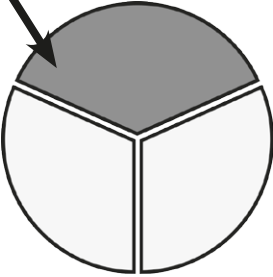
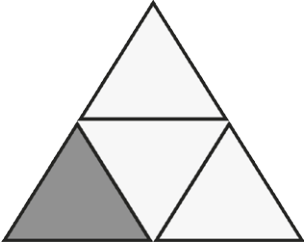
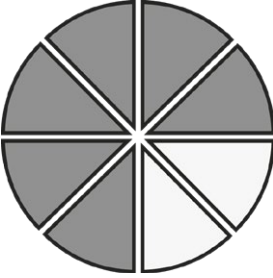
1 mark



Total for this page

4. Recognise and show, using diagrams, equivalent fractions with small denominators.

Write the fraction next to each diagram and draw lines to match the equivalent fractions.

$\frac{2}{6}$			—
—			—
—			$\frac{1}{3}$
—			—

5. Add and subtract fractions with the same denominator within one whole.

$$\frac{5}{7} + \frac{1}{7} = \boxed{\phantom{00}}$$

$$\frac{5}{6} - \frac{2}{6} = \boxed{\phantom{00}}$$



3 marks



2 marks



Total for this page

6. Compare and order unit fractions, and fractions with the same denominators.

Write these fractions in order of size, smallest first:

$$\frac{4}{10} \quad \frac{8}{10} \quad \frac{1}{10} \quad \frac{5}{10}$$

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smallest largest

1 mark

7. Solve problems that involve all of the above.

a) Ten children share six pizzas. What fraction of pizza do they have each?

1 mark

b) Show three different ways of shading  $\frac{1}{4}$  on these rectangles:


2 marks

question	answer	marks	notes																																								
<b>1. Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10.</b>																																											
a	<table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td><math>\frac{9}{10}</math></td> <td><math>\frac{8}{10}</math></td> <td><math>\frac{7}{10}</math></td> <td><math>\frac{6}{10}</math></td> <td><math>\frac{5}{10}</math></td> <td><math>\frac{4}{10}</math></td> <td><math>\frac{3}{10}</math></td> </tr> </table>	$\frac{9}{10}$	$\frac{8}{10}$	$\frac{7}{10}$	$\frac{6}{10}$	$\frac{5}{10}$	$\frac{4}{10}$	$\frac{3}{10}$	1																																		
$\frac{9}{10}$	$\frac{8}{10}$	$\frac{7}{10}$	$\frac{6}{10}$	$\frac{5}{10}$	$\frac{4}{10}$	$\frac{3}{10}$																																					
b	Any 10 numbers shaded	1																																									
c	$\frac{8}{10}$	1																																									
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	$\frac{1}{2}$ of 20 = 10 $\frac{1}{4}$ of 20 = 5 $\frac{1}{5}$ of 20 = 4 $\frac{1}{10}$ of 20 = 2 $\frac{3}{5}$ of 20 = 12	5	Award 1 mark for each correct answer.																																								
<b>3. Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators.</b>																																											
a	$\frac{3}{10}$	2																																									
b	$\frac{1}{2}$ , $\frac{50}{100}$ or other equivalent.	1																																									
<b>4. Recognise and show, using diagrams, equivalent fractions with small denominators.</b>																																											
	<table border="1" style="width: 100%; text-align: center;"> <tr> <td><math>\frac{2}{6}</math></td> <td></td> <td></td> <td>—</td> </tr> <tr> <td>—</td> <td></td> <td></td> <td><b>2</b></td> </tr> <tr> <td><b>1</b></td> <td>—</td> <td></td> <td><b>10</b></td> </tr> <tr> <td>—</td> <td></td> <td></td> <td><b>2</b></td> </tr> <tr> <td><b>5</b></td> <td>—</td> <td></td> <td><b>8</b></td> </tr> <tr> <td><b>3</b></td> <td></td> <td></td> <td><b>3</b></td> </tr> <tr> <td>—</td> <td></td> <td></td> <td>—</td> </tr> <tr> <td><b>4</b></td> <td>—</td> <td></td> <td><b>6</b></td> </tr> <tr> <td><b>1</b></td> <td>—</td> <td></td> <td>—</td> </tr> <tr> <td><b>4</b></td> <td>—</td> <td></td> <td><b>8</b></td> </tr> </table>	$\frac{2}{6}$			—	—			<b>2</b>	<b>1</b>	—		<b>10</b>	—			<b>2</b>	<b>5</b>	—		<b>8</b>	<b>3</b>			<b>3</b>	—			—	<b>4</b>	—		<b>6</b>	<b>1</b>	—		—	<b>4</b>	—		<b>8</b>	3	Award 1 mark for each correct equivalent fraction. The line and both fractions must be correct.
$\frac{2}{6}$			—																																								
—			<b>2</b>																																								
<b>1</b>	—		<b>10</b>																																								
—			<b>2</b>																																								
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	$\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$ $\frac{5}{6} - \frac{2}{6} = \frac{3}{6}$	2	Award 1 mark for each correct answer.																																								

question	answer	marks	notes				
6. Compare and order unit fractions, and fractions with the same denominators.							
	<table border="1" style="width: 100%; text-align: center;"> <tr> <td style="width: 25%;"><math>\frac{1}{10}</math></td> <td style="width: 25%;"><math>\frac{4}{10}</math></td> <td style="width: 25%;"><math>\frac{5}{10}</math></td> <td style="width: 25%;"><math>\frac{8}{10}</math></td> </tr> </table>	$\frac{1}{10}$	$\frac{4}{10}$	$\frac{5}{10}$	$\frac{8}{10}$	1	All must be correct for the mark.
$\frac{1}{10}$	$\frac{4}{10}$	$\frac{5}{10}$	$\frac{8}{10}$				
7. Solve problems that involve all of the above.							
a	$\frac{6}{10}$	1					
b	Any two squares shaded on each rectangle.	2	Award 1 mark for 2 correct and different answers and 2 marks for 3 correct and different answers. Accept answers that would be the same if rotated.				
		Total 19					