

Name:



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.
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, $\frac{6}{7}$].
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:

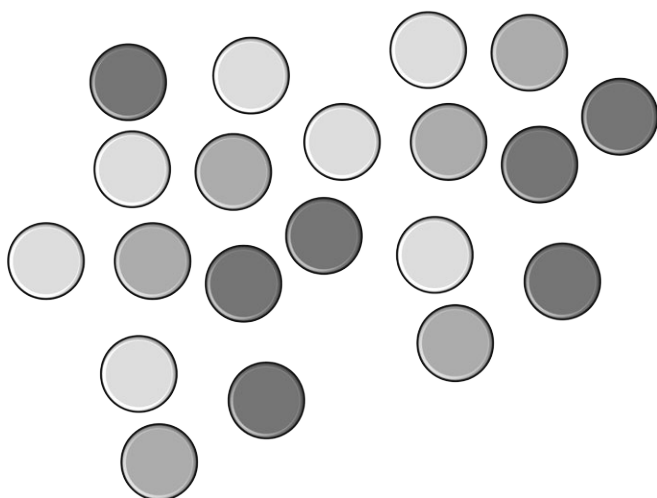
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

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:



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

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

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

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

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

1 mark

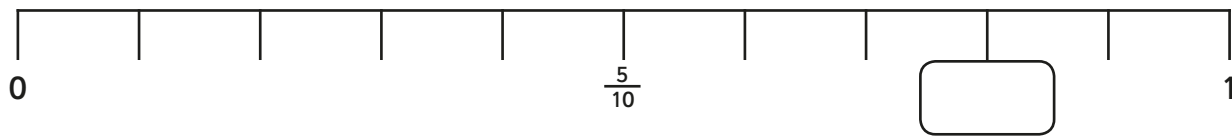
1 mark

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:



1 mark

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

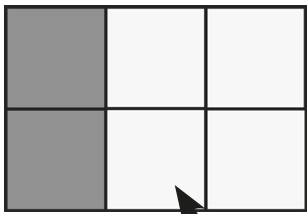
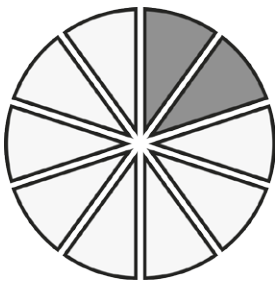
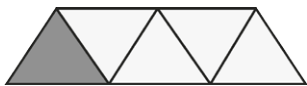
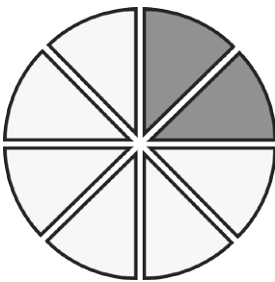
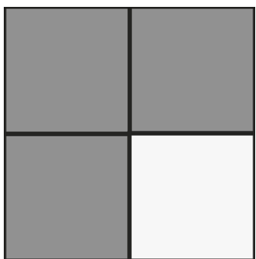
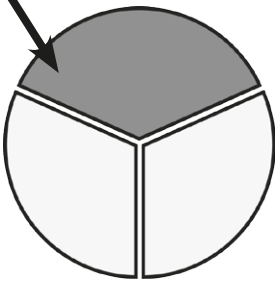
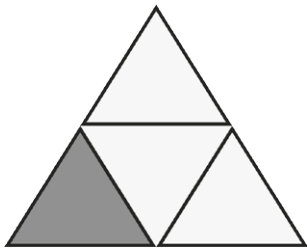
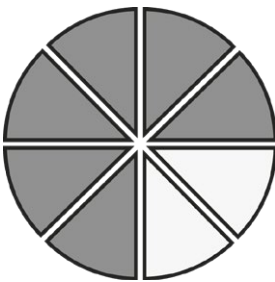
1 mark

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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.

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

3 marks

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

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

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

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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smallestlargest



1 mark

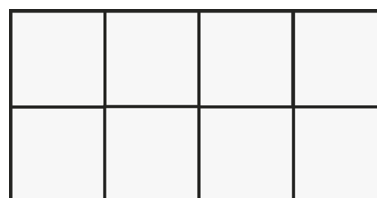
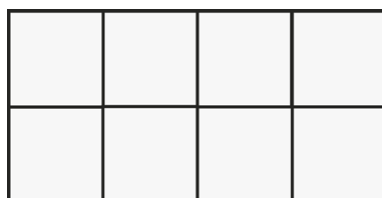
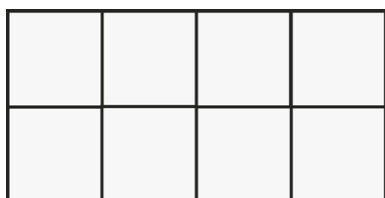
7. Solve problems that involve all of the above.

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



Total for
this page

question	answer	marks	notes																																
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	<table><tr><td>$\frac{9}{10}$</td><td>$\frac{8}{10}$</td><td>$\frac{7}{10}$</td><td>$\frac{6}{10}$</td><td>$\frac{5}{10}$</td><td>$\frac{4}{10}$</td><td>$\frac{3}{10}$</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																																	
2. Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators.																																			
	$\frac{1}{2}$ 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.																																
3. Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators.																																			
a	$\frac{8}{10}$	1																																	
b	$\frac{1}{2}$, $\frac{50}{100}$ or other equivalent.	1																																	
4. Recognise and show, using diagrams, equivalent fractions with small denominators.																																			
	<table><tr><td>$\frac{2}{6}$</td><td></td><td></td><td>—</td></tr><tr><td>—</td><td></td><td></td><td>2</td></tr><tr><td>1</td><td>—</td><td></td><td>10</td></tr><tr><td>5</td><td></td><td></td><td>2</td></tr><tr><td>—</td><td>—</td><td></td><td>8</td></tr><tr><td>3</td><td>—</td><td></td><td>$\frac{1}{3}$</td></tr><tr><td>4</td><td></td><td>—</td><td>—</td></tr><tr><td>1</td><td>—</td><td>—</td><td>6</td></tr></table> <p>4 8</p>	$\frac{2}{6}$			—	—			2	1	—		10	5			2	—	—		8	3	—		$\frac{1}{3}$	4		—	—	1	—	—	6	3	Award 1 mark for each correct equivalent fraction. The line and both fractions must be correct.
$\frac{2}{6}$			—																																
—			2																																
1	—		10																																
5			2																																
—	—		8																																
3	—		$\frac{1}{3}$																																
4		—	—																																
1	—	—	6																																
5. Add and subtract fractions with the same denominator within one whole.																																			
	$\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$ $\frac{5}{6} - \frac{2}{6} = \frac{3}{6}$	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"> <tr> <td>$\frac{1}{10}$</td><td>$\frac{4}{10}$</td><td>$\frac{5}{10}$</td><td>$\frac{8}{10}$</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					