

## Maths Assessment Year 6: Fractions Term 2

#### This assessment section is in two parts.

#### Section A

- 1. Use common factors to simplify fractions; use common multiples to express fractions in the same denomination.
- 2. Compare and order fractions, including fractions > 1.
- 3. Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions.
- 4. Multiply simple pairs of proper fractions, writing the answer in its simplest form.
- 5. Divide proper fractions by whole numbers.

#### Section **B**

- 1. Associate a fraction with division and calculate decimal fraction equivalents.
- 2. Identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places.
- 3. Multiply one-digit numbers with up to two decimal places by whole numbers.
- 4. Use written division methods in cases where the answer has up to two decimal places.
- 5. Solve problems which require answers to be rounded to specified degrees of accuracy.
- 6. Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.



Name:

## Maths Assessment Year 6: Fractions - Term 2 - Section A

1. Use common factors to simplify fractions; use common multiples to express fractions in the same denomination.

#### a) Simplify these fractions:

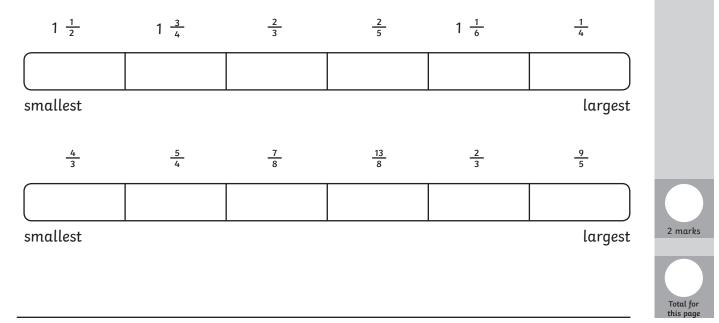
<u>15</u> 20	
<u>3</u> 12	
<u>6</u> 10	
<u>2</u> 8	
<u>6</u> 18	

## b) Identify the equivalent fraction, using the denominators shown:

<u>8</u> 10	=	5
<u>14</u> 16	=	8
<u>4</u> 12	=	6
<u>10</u> 15	=	3
<u>6</u> 24	=	8

2. Compare and order fractions, including fractions > 1.

a) Put these fractions in order, from smallest to largest:



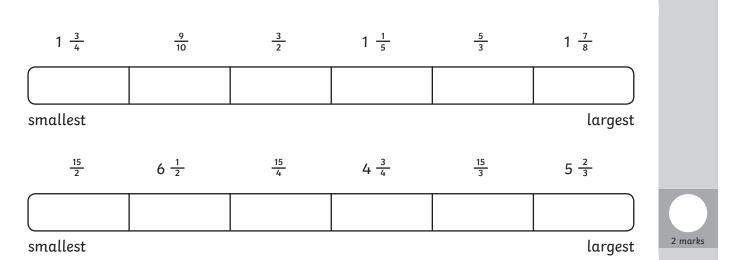
2





5 marks

5 marks



b) Use the symbols < > or = to compare each pair of fractions:

	< > or =	
<u>1</u> 4		<u>3</u> 12
$1^{\frac{4}{5}}$		<u>8</u> 5
<u>3</u> 2		$1 \frac{1}{2}$
<u>11</u> 6		1 3/4
$1 \frac{3}{4}$		<u>5</u> 2
<u>13</u> 10		$1 \frac{2}{5}$

**3**. Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions.

a) Complete these addition calculations. Write the answer in its simplest form, using mixed numbers where needed.

$\frac{3}{5} + \frac{2}{3} =$	
$1 \frac{3}{4} + \frac{3}{5} =$	
$\frac{7}{8}$ + $2\frac{1}{5}$ =	
$\frac{9}{10} + \frac{1}{6} =$	
$2\frac{7}{12} + 1\frac{1}{2} =$	

5 marks

6 marks



$1 \frac{3}{4} - \frac{3}{10} =$		
$2\frac{1}{2} - 2\frac{1}{5} =$		
$\frac{17}{10} - \frac{5}{6} =$		
$2\frac{1}{12} - 1\frac{1}{3} =$		
	• • • • • • • • • • • • • • • • • • • •	
Multiply simple pairs o	f proper fractions, writing the answer in its simp	lest form.
) Match up these calculo	ations to their correct answer:	
$\frac{3}{4} \times \frac{1}{2} =$	$\frac{1}{4}$	
$\frac{5}{8} \times \frac{2}{3} =$	$\frac{3}{8}$	
$\frac{3}{5} \times \frac{5}{12} =$	<del>7</del> 16	
$\frac{7}{12} \times \frac{3}{4} =$	<u>5</u> 12	
) Answer these calculati	ions:	
$\frac{1}{3} \times \frac{4}{5} =$		
$\frac{3}{4} \times \frac{1}{6} =$		
$\frac{1}{10} \times \frac{3}{8} =$		
$\frac{7}{12} \times \frac{2}{5} =$		
12 5		
		•••••
	up each calculation to its correct answer:	
Divide proper fractions ) Draw a line to match		
) Draw a line to match	1	
) Draw a line to match $\frac{3}{4} \div 2 =$	$\frac{1}{15}$	
) Draw a line to match	$\frac{1}{15}$ $\frac{3}{8}$ $\frac{11}{60}$	

**4** 

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#### **b)** Answer these calculations:

$\left(\begin{array}{c}\frac{4}{5} \div 2 = \end{array}\right)$	Ň
$\frac{7}{8} \div 7 =$	
$\frac{8}{9} \div 4 =$	
$\frac{5}{12} \div 10 =$	



4 marks



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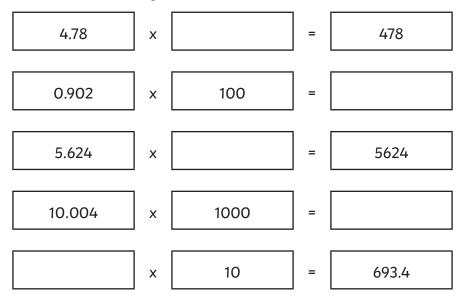


# Maths Assessment Year 6: Fractions - Term 2 - Section B twink 1. Associate a fraction with division and calculate decimal fraction equivalents for a simple fraction. a) Find $\frac{1}{5}$ of 180, showing the calculation(s) you would use: 2 marks b) Find $\frac{3}{4}$ of 140, showing the calculation(s) you would use: 2 marks c) Convert $\frac{3}{8}$ to a decimal: 1 marl d) Convert 0.25 to a fraction, where the denominator is 16. 1 mark 2. Identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places. a) In the numbers below, **circle the digit** that represents the place value written in words: 50.341 tenths hundredths 0.083 193.745 thousandths hundredths 37.091 5 marks thousandths 4.582 Total fo

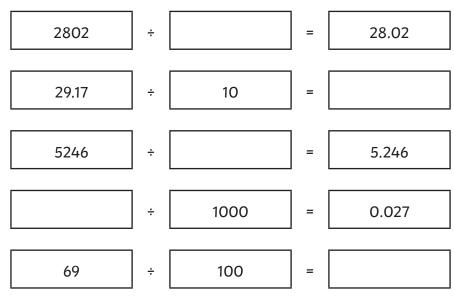
b) Write the value of the digit that is underlined:

10.5 <u>2</u> 4	
9.00 <u>8</u>	
218. <u>7</u> 24	
0.8 <u>3</u> 5	
95. <u>3</u> 71	

c) Fill in the missing numbers in these calculations:



d) Fill in the missing numbers in these calculations:



5 marks







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3. Multiply one-digit numbers with up to two decimal places by whole numbers.

## **a**) Calculate 0.05 x 24.




### **b)** Calculate 0.007 x 16.



2 marks

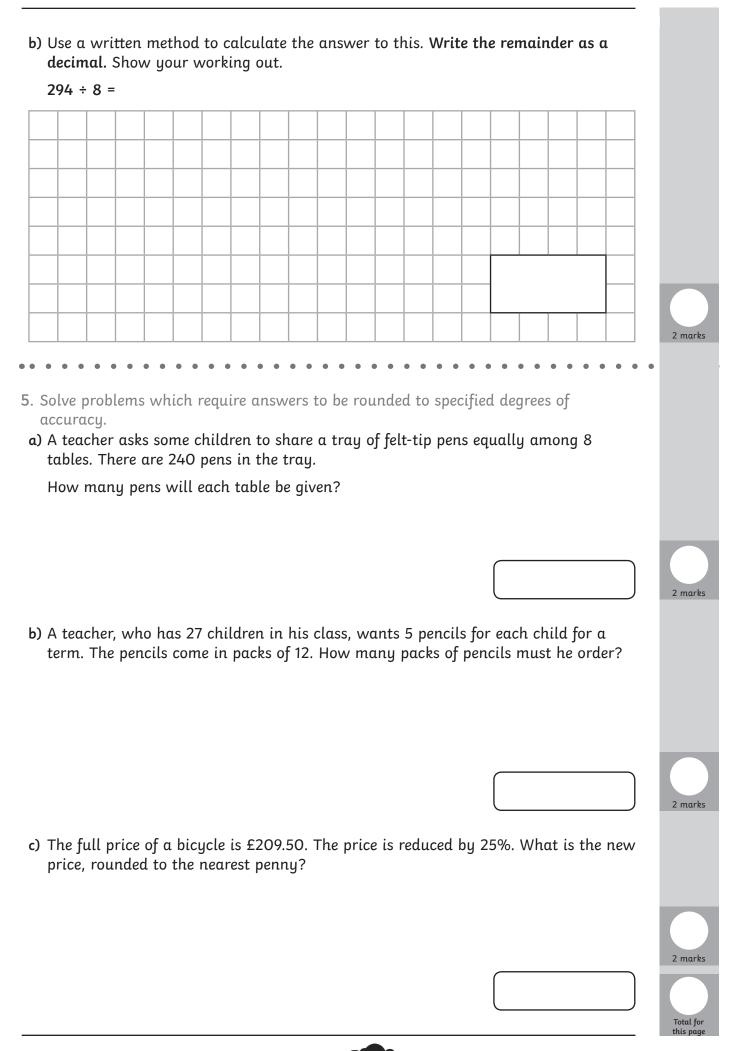
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4. Use written division methods in cases where the answer has up to two decimal places.

# a) Use a written method to calculate the answer to this. Show your working out.

673 ÷ 4 =





d) £1 buys 1.35436 Euros. A traveller buys £200 worth of Euros. How many Euros will they be able to buy, rounded to the nearest cent? 2 marks 6. Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts. a) Fill in the missing information in this chart to identify the equivalent fractions, decimals and percentages: Fraction Decimal Percentage 50%  $\frac{1}{3}$ 0.6 1 8 0.7 <u>9</u> 25 6 marks b) A quarter of the children in a school join the school choir. What percentage of children do not join the choir? 1 mark c) 20% of the children in a school walk to school. What fraction of children do not walk to school? 1 mark d) James and Jackie compete in the standing long jump. James jumps of the distance that Jackie jumps. Jackie jumps exactly 1m. How far does James jump, to the nearest centimetre? 1 mark Total for 10

# Answer Sheet: Maths Assessment Year 6: Fractions - Section A



question	answer	marks	notes				
1. Use common factors to simplify fractions; use common multiples to express fractions in the same denomination.							
a	$\frac{15}{20}$ $\frac{3}{4}$ $\frac{3}{12}$ $\frac{1}{4}$ $\frac{6}{10}$ $\frac{3}{5}$ $\frac{2}{8}$ $\frac{1}{4}$ $\frac{6}{18}$ $\frac{1}{3}$	5					
b	$\frac{8}{10}$ = $\frac{4}{5}$ $\frac{14}{16}$ = $\frac{7}{8}$ $\frac{4}{12}$ = $\frac{2}{6}$ $\frac{10}{15}$ = $\frac{2}{3}$ $\frac{6}{24}$ = $\frac{2}{8}$	5					
2. Compare	and order fractions, including fractions > 1.						
a	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	4					
b	$< > \text{ or } =$ $\frac{1}{4}$ $=$ $\frac{3}{12}$ $1 \frac{4}{5}$ $>$ $\frac{8}{5}$ $\frac{3}{2}$ $=$ $1 \frac{1}{2}$ $\frac{11}{6}$ $>$ $1 \frac{3}{4}$ $1 \frac{3}{4}$ $<$ $\frac{5}{2}$ $\frac{13}{10}$ $<$ $1 \frac{2}{5}$	6					

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question	answer	marks	notes							
3. Add and fractions.	3. Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions.									
α	$\frac{\frac{3}{5} + \frac{2}{3} = 1\frac{4}{15}}{\frac{1}{4} + \frac{3}{5} = 2\frac{7}{20}}$ $\frac{\frac{7}{8} + 2\frac{1}{5} = 3\frac{3}{40}}{\frac{9}{10} + \frac{1}{6} = 1\frac{1}{15}}$ $\frac{2\frac{7}{12} + 1\frac{1}{2} = 4\frac{1}{12}}{\frac{1}{12}}$	5								
b	$ \frac{\frac{2}{3} - \frac{1}{2} = \frac{1}{6}}{1 \frac{3}{4} - \frac{3}{10} = 1 \frac{9}{20}} $ $ \frac{2 \frac{1}{2} - 2 \frac{1}{5} = \frac{3}{10}}{\frac{17}{10} - \frac{5}{6} = \frac{13}{15}} $ $ 2 \frac{1}{12} - 1 \frac{1}{3} = \frac{3}{4} $	5								
4. Multiply	simple pairs of proper fractions, writing the answer in its simplest fo	orm.								
α	$\frac{\frac{3}{4} \times \frac{1}{2}}{\frac{5}{8} \times \frac{2}{3}} = \frac{\frac{1}{4}}{\frac{3}{8}}$ $\frac{\frac{3}{5} \times \frac{5}{12}}{\frac{7}{12} \times \frac{3}{4}} = \frac{\frac{7}{16}}{\frac{5}{12}}$	4								
b	$\frac{1}{3} \times \frac{4}{5} = \frac{4}{15}$ $\frac{3}{4} \times \frac{1}{6} = \frac{3}{24} \text{ or } \frac{1}{8}$ $\frac{1}{10} \times \frac{3}{8} = \frac{3}{80}$ $\frac{7}{12} \times \frac{2}{5} = \frac{14}{60} \text{ or } \frac{7}{30}$	4								
5. Divide pr	oper fractions by whole numbers.									
a	$\frac{3}{4} \div 2 = \frac{1}{15}$ $\frac{5}{6} \div 4 = \frac{3}{8}$ $\frac{1}{5} \div 3 = \frac{11}{60}$ $\frac{11}{12} \div 5 = \frac{5}{24}$	4								
b	$\frac{4}{5} \div 2 = \frac{2}{5}$ $\frac{7}{8} \div 7 = \frac{1}{8}$ $\frac{8}{9} \div 4 = \frac{2}{9}$ $\frac{5}{12} \div 10 = \frac{1}{24}$	4								
	Section A Total:	46								





question	answer	marks	notes								
1. Associate	1. Associate a fraction with division and calculate decimal fraction equivalents for a simple fraction.										
a	180 ÷ 5 = 36	2	Award two marks for a correct answer.								
b	140 ÷ 4 = 35 35 x 3 = 105	2	Award one mark for a correct method, but incorrect answer.								
с	0.375	1									
d	<u>4</u> 16	1									
	the value of each digit in numbers given to th 1 1000 giving answers up to three decimal plo		es and multiply and divide numbers by								
a b c d	$50341$ tenths $0.083$ hundredths $193.745$ thousandths $193.745$ thousandths $37.09$ hundredths $4.582$ thousandths $10.524$ two hundredths $4.582$ thousandths $9.008$ eight thousandths $218.724$ seven tenths $0.835$ three hundredths $95.371$ three tenths $0.835$ three tenths $0.902$ x $100$ = $478$ $0.902$ x $100$ = $90.2$ $5.624$ x $1000$ = $5624$ $10.004$ x $1000$ = $10.004$ $69.34$ x $10$ = $693.4$ $2802$ $\div$ $100$ = $28.02$ $29.17$ $\div$ $10$ = $2.917$ $5246$ $\div$ $1000$ = $5.246$	5 5 ] ] ] ] ] ] ] ] ] ] ] ] ] ] ] ] ] ]	Award one mark for each digit correctly identified. Accept numbers written as words or numerals (e.g. nine or 9). Do not accept tens, hundreds or thousands in place of tenths, hundredths or thousandths. Award one mark for each box correctly filled.								
	$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	]									

13



question	answer			marks	notes
3. Multiply one-digit numbers with up to two decimal places by whole numbers.					
a	1.2			1	
b	0.112			1	
4. Use written division methods in cases where the answer has up to two decimal places.					
a	168.25 or 168 r 1			2	Award 2 marks for a correct answer. Award 1 mark for evidence of a correct calculation, but an incorrect answer.
b	36.75			2	Award 2 marks for a correct answer. Award 1 mark for evidence of a correct calculation, but an incorrect answer. Do not accept answers where the remainder has not been written as a decimal.
5. Solve problems which require answers to be rounded to specified degrees of accuracy.					
a	30 pens			2	Award 2 marks for a correct answer. Award 1 mark for evidence of a correct calculation, but an incorrect answer.
b	12 boxes			2	
С	£157.13			2	
d	€270.87			2	
6. Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.					
a	FractionDecin $\frac{1}{2}$ 0.5 $\frac{1}{3}$ 0.33 $\frac{3}{5}$ or $\frac{6}{10}$ 0.6 $\frac{1}{8}$ 0.125 $\frac{7}{10}$ 0.7 $\frac{9}{25}$ 0.36	5	Percentage 50% 33% 60% 12.5% 70% 36%	6	1 mark for each correctly completed line.
b	75%			1	
с	<u>4</u> 5			1	
d	67cm			1	
Section B Total:				49	
Overall Total:				95	

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