

Name	
Form	
Teacher	

Maths

Homework Booklet

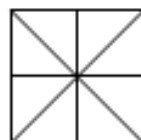
Year 7e Spring

Title	Hand in date	Score achieved
Fractions and Percentages - 1		
Addition and Subtraction of Decimals		
Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers		
Calculating Fractional and Percentage parts - 1		
Ordering, Adding and Subtracting Negative Numbers		
Addition and Subtraction		
Multiplication and Division		
Fractions and Percentages of Amounts		
Directed Number		
Fractional Thinking		
Mixed H		
Mixed I		
Mixed J		
Mixed K		
Mixed L		
Mixed M		
Mixed N		

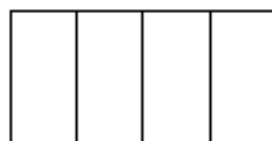
6 Fractions and percentages – 1



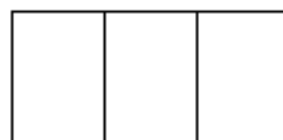
1 Shade 25% of this shape:



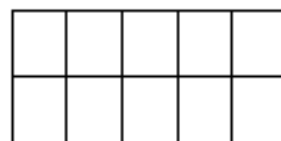
2 Shade 50% of this shape:



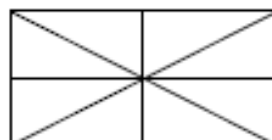
3 Shade $\frac{1}{3}$ of this shape:



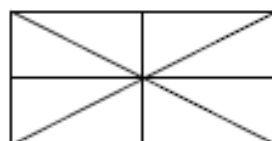
4 Shade $\frac{3}{5}$ of this shape:



5 Shade $\frac{3}{8}$ of this shape:



6 Shade $\frac{3}{4}$ of this shape:



Look at these lines. The posts A and B are marked.

7 Mark a point X which is halfway between A and B:

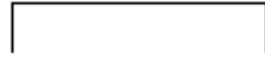


8 Mark a point Y which is $\frac{1}{3}$ of the way from A to B:





4 Addition and subtraction of decimals



1
$$\begin{array}{r} 23.61 \\ + 42.17 \\ \hline \end{array}$$

2
$$\begin{array}{r} 56.37 \\ + 13.28 \\ \hline \end{array}$$

1.....

2.....

3
$$\begin{array}{r} 36.48 \\ + 29.34 \\ \hline \end{array}$$

4
$$\begin{array}{r} 736.8 \\ + 27.9 \\ \hline \end{array}$$

3.....

4.....

5
$$\begin{array}{r} 48.3 \\ + 27.28 \\ \hline \end{array}$$

6
$$\begin{array}{r} 13.26 \\ + 17.842 \\ \hline \end{array}$$

5.....

6.....

7
$$\begin{array}{r} 68.48 \\ - 27.35 \\ \hline \end{array}$$

8
$$\begin{array}{r} 49.27 \\ - 36.32 \\ \hline \end{array}$$

7.....

8.....

9
$$\begin{array}{r} 43.74 \\ - 17.38 \\ \hline \end{array}$$

10
$$\begin{array}{r} 15.83 \\ - 6.29 \\ \hline \end{array}$$

9.....

10.....

11
$$\begin{array}{r} 3.072 \\ - 1.281 \\ \hline \end{array}$$

12
$$\begin{array}{r} 5.3 \\ - 1.962 \\ \hline \end{array}$$

11.....

12.....

13 $28 + 3.6 + 0.87 + 12.3$

13.....

14 $46.5 + 7 + 0.03 + 1.68$

14.....

15 $8.72 - 1.918$

15.....

16 $63.2 - 1.74$

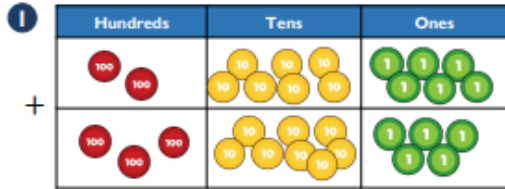
16.....

6 Calculating fractional and percentage parts – 1



- 1 Find $\frac{5}{8}$ of 3 m 1
- 2 Find $\frac{2}{3}$ of 4.5 kg 2
- 3 Find $\frac{4}{5}$ of 700 g 3
- 4 Find $\frac{7}{8}$ of 3 l 4
- 5 Find $\frac{3}{10}$ of 55 km 5
- 6 Find $\frac{7}{16}$ of 120 g 6
- 7 Find $\frac{3}{20}$ of 400 ml 7
- 8 Find $\frac{1}{8}$ of 1 kg 8
- 9 Find 10% of 30 9
- 10 Find 5% of 18 10
- 11 Find 20% of 72 11
- 12 Find 15% of 12 12
- 13 Find 25% of 61 13
- 14 Find 35% of 18 14
- 15 Find 70% of 3 15
- 16 Find 62% of 230 16
- 17 Find 71% of 600 17
- 18 Find 37% of 270 18
- 19 Find 23% of 18 19
- 20 Find 6% of 120 20

Name _____



Write down the addition represented on the place value grid.

_____ + _____

1 mark

Work out the answer to the addition.

1 mark

- 2 Tick the calculations that would give the **same** answer as $342 - 96$

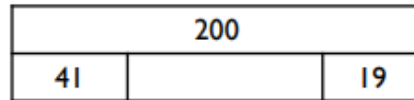
$346 - 100$

$342 - 100 + 4$

$96 - 342$

2 marks

- 3 Complete the bar model.



1 mark

- 4 Kris buys new headphones for £12.48 and a chocolate bar for 60p.

How much does she spend altogether?

£ _____

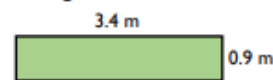
1 mark

Kris had £25 to start with, how much does she have now?

£ _____

1 mark

- 5 Here is a drawing of a farmer's field.

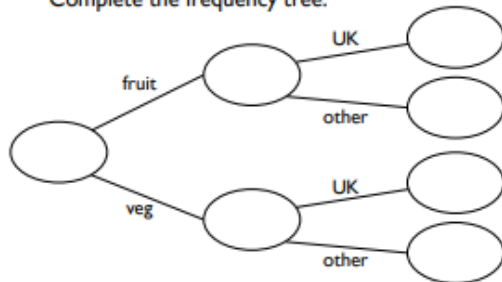


Work out the perimeter of the field.

_____ m

2 marks

- 6 A fruit and veg shop sells 388 products. 185 of these are fruit. 52 types of fruit were grown in the UK 77 types of vegetable were grown in the UK. Complete the frequency tree.



- 7 Deepak and Ganga the tigers were weighed before and after being put on a new diet.

	Before (kg)	After (kg)
Deepak		152.5
Ganga	106.2	97

Deepak lost 11.5 kg. Complete the table.

Which tiger lost the most weight?

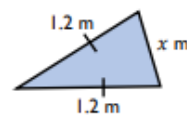
Show working to justify your answer.

2 marks

1 mark

1 mark

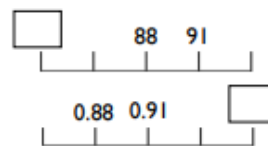
- 8 The isosceles triangle has a perimeter of 4 m. Work out the value of x .



$x =$ _____

2 marks

- 9 Both number lines go up in equal intervals. Work out the missing numbers.



2 marks

- 10 Here are the first 2 terms of a **linear** sequence.

$9\frac{3}{4}$ 10.8

What is the next term?

2 marks

- 11 Given that $a = 1.5 \times 10^2$ and $b = 2.7 \times 10^{-1}$, work out the value of $a + b$.

1 mark

Total marks

Year 7

Multiplication and Division

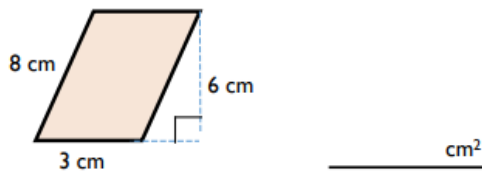


Name _____

- 1 Calculate the area of each shape.



1 mark



1 mark

- 2 Are these statements true (T) or false (F)?

Statement	T	F
Odd numbers only have odd multiples	<input type="checkbox"/>	<input type="checkbox"/>
The lowest common multiple of 8 and 12 is 4	<input type="checkbox"/>	<input type="checkbox"/>
$120 \div 3 = 3 \div 120$	<input type="checkbox"/>	<input type="checkbox"/>

2 marks

- 3 Calculate:

$242 \times 9 =$ _____

1 mark

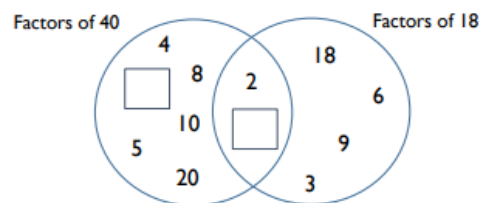
$8035 \div 5 =$ _____

1 mark

- 4 Mr Dee buys 33 packs of pens for his classroom. Each pack costs 86p. How much money does Mr Dee spend on pens?

2 marks

- 5 Complete the Venn diagram.



2 marks

- 6 James records the number of green gummy bears he gets in 5 bags of sweets.



Here are his results.

6 0 9 7 8

What is the mean number of green gummy bears per bag?

2 marks

- 7 Here are some calculation cards.

$12 \text{ mm} \times 10$

$12 \text{ mm} \div 10$

$\frac{6}{25} \text{ m}$

0.12 m

Tick the cards that are equivalent to 12 cm.

2 marks

- 8 Calculate the following.

0.6×3

1 mark

34.6×6

2 marks

- 9 Match each diagram to the correct calculation.



$(2 + 3) \times 2$



$2 + 3 \times 2$



$2 + 3^2$

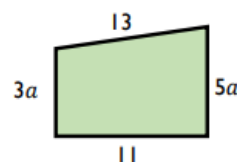
1 mark

- 10 Evaluate the following when $p = 4$

$13 - 3 \times p + 2$

1 mark

- 11 Find the area of this trapezium. Give your answer in terms of a .



1 mark

Total marks

Year 7

Fractions and Percentages



Name _____

- 1 Work out the calculations.
You may use the bar models to help you.

$\frac{1}{2}$ of 60

 1 mark

$\frac{3}{5}$ of 25

 2 marks

$\frac{5}{6}$ of 24

 2 marks

- 2 Whitney has £12 pocket money. She spends 50% of her pocket money on magazines. She spends $33\frac{1}{3}\%$ of her pocket money on apps. How much pocket money does she have left? Show the steps in your working.

 3 marks

- 3 Dexter is thinking of a number. One third of Dexter's number is 12. What number is Dexter thinking of?

 1 mark

Alex is also thinking of a number. Two thirds of Alex's number is 6. What number is Alex thinking of?

 2 marks

- 4 Work out 35% of 80

 2 marks

Tick the cards that show the keys to press to work out 35% of 80 on a calculator.

$35 \times 80 =$

$0.35 \div 80$

$0.35 \times 80 =$

$80 \times 0.35 =$

 2 marks

- 5 Match the cards of equal value.

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

25% of 300

$\frac{9}{10}$ of 20

50% of 36

$\frac{3}{4}$ of 100

$66\frac{2}{3}\%$ of 90

$\frac{5}{6}$ of 72

30% of 40

 2 marks

- 6 Teddy works out 4% of £23.89 on his calculator. The calculator shows:

0.9556

Write down the value of 4% of £23.89 correct to the nearest penny.

 1 mark

- 7 Which of the cards is greater in value? Justify your answer.

140% of 90

$\frac{11}{5}$ of 60

 1 mark

- 8 Work out $66\frac{2}{3}\%$ of $\frac{9}{7}$ of £420

 1 mark

Total marks

Year 7

Directed Number



Name _____

- 1 Use $<$ or $>$ to compare.

-8 2 -27 -43

0 -15

2 marks

- 2 The table shows the temperature in Warsaw at different times during the day.

6am	10am	2pm	6pm	10pm
-5°C	-3°C	0°C	1°C	2°C

What is the difference in temperature between 10am and 10pm?

_____ $^{\circ}\text{C}$

1 mark

The temperature drops 6°C between 10pm and 6am the next day.

What is the temperature at 6am the next day?

_____ $^{\circ}\text{C}$

1 mark

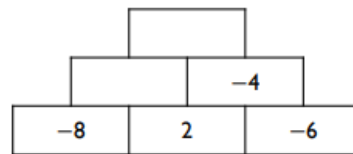
- 3 Calculate:

$-5 - 8 =$ _____

$3 - (-2) =$ _____

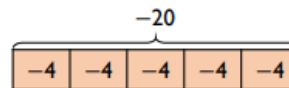
2 marks

- 4 Here is an addition pyramid. The number in each box is the sum of the two numbers below it. Complete the addition pyramid.



2 marks

- 5 Complete the fact family for the bar model.



$5 \times -4 = -20$ $-20 \div 5 =$ _____

_____ \times _____ = _____ _____ \div _____ = _____

2 marks

- 6 $a = -3$ and $b = 10$
Find the value of the expressions.

$ab =$ _____

$a^2 - b =$ _____

2 marks

- 7 Solve the equations.

$3a + 9 = 3$

$a =$ _____

2 marks

$-6 = \frac{h}{3} - 7$

$h =$ _____

2 marks

- 8 Tick the expressions that are equal to 10

$15 - 8 + 3$ $\sqrt{16} + 2$

$-10 + 5 \times 4$ $6^3 - 8$

2 marks

- 9 Ricky says that $\sqrt{169} = 13$

H Shanee thinks this is not the only answer. Why might Shanee think this?

1 mark

- 10 Evaluate.

H $-3^3 =$

1 mark

Total marks

Year 7

Fractional Thinking



Name _____

- 1 Explain why this diagram does not show $\frac{1}{5}$



1 mark

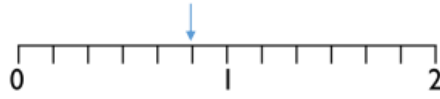
- 2 $\frac{3}{5} = \frac{\square}{10}$



You may use the bar model to help you.

1 mark

- 3 What fraction is the arrow pointing to?



1 mark

What do you need to add to this fraction to make 2?

1 mark

- 4 Calculate.

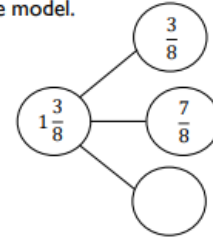
$$\frac{3}{8} + \frac{1}{8} + \frac{1}{8} = \underline{\hspace{2cm}}$$

$$\frac{5}{7} - \frac{2}{7} = \underline{\hspace{2cm}}$$

$$\frac{5}{12} + \frac{1}{4} = \underline{\hspace{2cm}}$$

3 marks

- 5 Complete the part-whole model.



1 mark

- 6 Write the mixed numbers as improper fractions.

$$3\frac{1}{4} = \frac{\square}{4}$$



$$4\frac{2}{3} = \frac{\square}{\square}$$

2 marks

- 7 Calculate $3\frac{5}{12} + 2\frac{1}{3}$

2 marks

- 8 Calculate $\frac{1}{4} + 0.6$

1 mark

- 9 Compare using $<$, $>$ or $=$

$$\frac{6}{10} \bigcirc 0.4 + \frac{2}{5}$$

$$3 - \frac{4}{5} \bigcirc 2 + \frac{1}{8}$$

2 marks

- 10 $a = \frac{5}{6}$ and $b = \frac{2}{3}$

Calculate

$$a - b = \underline{\hspace{2cm}}$$

$$a + b = \underline{\hspace{2cm}}$$

2 marks

- 11 Jay drinks $7\frac{2}{5}$ litres of water in a week.

- H Amina drinks $5\frac{2}{3}$ litres of water in a week.

How much more water does Jay drink than Amina?

2 marks

- 12 Write as a single fraction.

H $\frac{2x}{5} + \frac{3x}{10}$

1 mark

Total marks

Mixed H

1. What number is five less than three hundred and two?		11. Divide 420 by 6.	
2. What temperature is 9 degrees less than 2 degrees Celsius?		12. $6 \times 3 = 23 - ?$	
3. Write down the next two numbers. 17, 23, 29, 35, ..., ...		13. Subtract 39 from 51.	
4. What is one-fifth of thirty-five?		14. What must be added to 73 to make one hundred?	
5. What is 3×5 added to 6×6 ?		15. One orange costs 15p. How much will four oranges cost?	
6. What are the missing numbers? ?, 0.8, 1.3, 1.8, ?		16. $\square - 5 = 69 \div 3$	
7. Two factors of 24 add up to 14. What are they?		17. $(5 \times 7) + (? - 6) = 56$	
8. Divide 64 by 100.		18. What is the product of 0.8 and 7?	
9. Which numbers are greater than 0.3? 0.39 0.07 0.29 0.19 0.4		19. What number is half-way between 14 and 42?	
10. 6 sweets cost 42p altogether. How much do 8 sweets cost?		20. The coordinates of a square are; (4,4), (4,8), (8,8) and (?,?)	

Mixed I

1. What number is four less than five hundred and two?		11. Divide 320 by 4.	
2. What temperature is 9 degrees less than 8 degrees Celsius?		12. $6 \times 7 = 39 + ?$	
3. Write down the next two numbers. 13, 22, 31, 40, ..., ...		13. Subtract 29 from 75.	
4. What is one-sixth of twenty-four?		14. What must be added to 53 to make one hundred?	
5. What is 3×6 added to 9×6 ?		15. One orange costs 18p. How much will three oranges cost?	
6. What are the next two numbers? 0.03, 0.12, 0.21, ..., ...		16. $\square - 16 = 75 \div 3$	
7. Two factors of 18 add up to 5. What are they?		17. $(54 \div 6) + (8 \times 3) =$	
8. Divide 207 by ten.		18. Divide seventy-two by eight.	
9. Which is the smallest number? 0.5 0.57 0.09 1.49 0.071		19. What number is half-way between twenty-one and sixty-three?	
10. 4 biscuits cost 28p altogether. How much do 5 biscuits cost?		20. The coordinates of a square are; (1,7), (1,1), (7,1) and (?,?)	

Mixed J

1. What is one thousand minus five hundred and one?		11. Divide 280 by 4.	
2. What temperature is 10 degrees less than 6 degrees Celsius?		12. $6 \times 4 = 39 - ?$	
3. Write down the next two numbers. 11, 18, 25, 32, ..., ...		13. Subtract 19 from 74.	
4. What is one-sixth of fifty-four?		14. What must be added to 43 to make one hundred?	
5. What is 3×5 added to 8×6 ?		15. One orange costs 23p. How much will three oranges cost?	
6. What are the next two numbers? -15, -11, -7, ..., ...		16. $\square + 15 = 240 \div 4$	
7. Two factors of 20 add up to 9. What are they?		17. $(8 \times 7) - (4 \times 3) =$	
8. Multiply 1.05 by 100.		18. What is 48 divided by 8?	
9. Which is the biggest number? 1.23 0.31 1.03 0.303 1.13		19. What number is half-way between six and thirty-two?	
10. Four sweets cost 36p altogether. How much do seven sweets cost?		20. The coordinates of a square are; (5,2), (8,2), (8,5) and (?,?)	

Mixed K

1. What is one thousand minus six hundred and two?		11. Divide 320 by 4.	
2. What temperature is 10 degrees less than 2 degrees Celsius?		12. $6 \times 6 = 23 + ?$	
3. Write down the next two numbers. 49, 53, 57, 61, ..., ...		13. Subtract 29 from 64.	
4. What is one-quarter of thirty-six?		14. What must be added to 28 to make one hundred?	
5. What is 4×5 added to 6×6 ?		15. One orange costs 31p. How much will three oranges cost?	
6. What are the next two numbers? 4.3, 4, 3.7, ..., ...		16. $50 - \square = 28 + 14$	
7. Two factors of 18 add up to 12. What are they?		17. $(7 \times 3) + (18 \div 2) =$	
8. Divide 600 by 10		18. What is the sum of 30 and 12 divided by 7?	
9. Which is the biggest number? 2.68 2.86 2.8 2 2.806		19. What number is half-way between thirteen and forty-one?	
10. 6 biscuits cost 42p altogether. How much do 4 biscuits cost?		20. The coordinates of a square are $(-7,-7)$, $(6,-7)$, $(6,6)$ and $(?,?)$	

Mixed L

1. What is one thousand minus seven hundred and two?		11. Divide 540 by 9.	
2. What temperature is 10 degrees less than 7 degrees Celsius?		12. $6 \times 9 = 23 + ?$	
3. Write down the next two numbers. 43, 49, 55, 61, ..., ...		13. Subtract 26 from 54.	
4. What is one-quarter of twenty-eight?		14. What must be added to 67 to make one hundred?	
5. What is 4×6 added to 7×6 ?		15. One orange costs 19p. How much will four oranges cost?	
6. What are the missing numbers? ?, 0.9, 1.3, 1.7, ?		16. $\square - 5 = 45 \div 5$	
7. Two factors of 12 add up to 16. What are they?		17. $(6 \times 7) + (? - 6) = 60$	
8. Divide 3.6 by 100.		18. What is the product of 0.9 and 7?	
9. Which numbers are greater than 0.4? 0.29 0.09 0.6 0.49 0.4		19. What number is half-way between 12 and 56?	
10. 9 sweets cost 36p altogether. How much do 7 sweets cost?		20. The coordinates of a square are; (4,4), (4,6), (6,6) and (?,?)	

Mixed M

1. What is one thousand minus five hundred and two?		11. Divide 240 by 6.	
2. What temperature is 10 degrees less than 4 degrees Celsius?		12. $6 \times 8 = 28 + ?$	
3. Write down the next two numbers. 33 , 36 , 39 , 42 , ... , ...		13. Subtract 25 from 52.	
4. What is one-quarter of forty?		14. What must be added to 84 to make one hundred?	
5. What is 4×5 added to 9×6 ?		15. One orange costs 14p. How much will four oranges cost?	
6. What are the next two numbers? 0.02 , 0.12 , 0.22 , ... , ...		16. <input type="text"/> - 15 = $100 \div 4$	
7. Two factors of 18 add up to 15. What are they?		17. $(54 \div 9) + (6 \times 3) =$	
8. Divide 45.7 by ten.		18. Divide seventy-two by four.	
9. Which is the smallest number? 0.502 0.57 0.59 0.5 0.051		19. What number is half-way between twenty-one and sixty-nine?	
10. 5 biscuits cost 40p altogether. How much do 3 biscuits cost?		20. The coordinates of a square are; (5,9), (5,5), (9,5) and (?,?)	

Mixed N

1. What is one thousand minus two hundred and three?		11. Divide 350 by 5.	
2. What temperature is 9 degrees less than 3 degrees Celsius?		12. $6 \times 6 = 28 + ?$	
3. Write down the next two numbers. 38, 34, 30, 26, ..., ...		13. Subtract 29 from 48.	
4. What is one-quarter of sixteen?		14. What must be added to 14 to make one hundred?	
5. What is 10×5 added to 9×3 ?		15. One orange costs 12p. How much will four oranges cost?	
6. What are the next two numbers? -21, -15, -9, ..., ...		16. $\square + 35 = 240 \div 3$	
7. Two factors of 20 add up to 7. What are they?		17. $(8 \times 5) - (5 \times 3) =$	
8. Multiply 0.05 by 100.		18. What is 96 divided by 8?	
9. Which is the biggest number? 1.3 0.31 1.31 0.103 1.13		19. What number is half-way between twelve and thirty-six?	
10. Six sweets cost 36p altogether. How much do seven sweets cost?		20. The coordinates of a square are; (7,3), (11,3), (7,7) and (?,?)	