

Name	
Form	
Teacher	

Maths

Homework Booklet

Year 8c Autumn

Topic	Hand in date	Score achieved
Multiplication Facts		
Fractions and Percentages - 1		
Fractions and Percentages - 2		
Co-ordinates		
Frequency Diagrams		
Probability		
Mixed A		
Mixed B		
Mixed C		
Mixed D		
Mixed E		
Mixed F		



2 Multiplication facts



What are the missing numbers?

1 $6 \times 7 = \square$

2 $4 \times \square = 36$

1.....

3 $\square \times 7 = 56$

4 $72 \div 8 = \square$

2.....

3.....

5 $\square \div 4 = 7$

6 $24 \div \square = 3$

4.....

5.....

7 $\square \times 9 = 81$

8 $\square \div 7 = 5$

6.....

7.....

9 $\square \times 10 = 28$

10 $36\ 000 \div 100 = \square$

8.....

9.....

11 $420 \div \square = 42$

12 $63 \times \square = 6300$

10.....

11.....

13 What is the cost of 6 apples at 8p each?

12.....

13.....p

14 What is the cost of 7 oranges at 9p each?

14.....p

15 What is the cost of 10 pencils at 18p each?

15 £

16 What is the cost of 100 pens at 32p each?

16 £

17 How many pence are in £18?

17.....p

18 Mr Moore bought 6 chairs for £54.
How much was each chair?

18 £

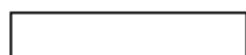
19 Paul bought 10 calculators for £80.
How much was each calculator?

19 £

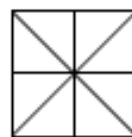
20 Miss Riley bought 100 eggs for £6.
How much was each egg?

20.....p

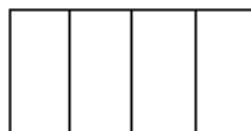
6 Fractions and percentages – 1



- 1 Shade 25% of this shape:



- 2 Shade 50% of this shape:



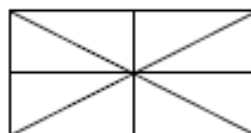
- 3 Shade $\frac{1}{3}$ of this shape:



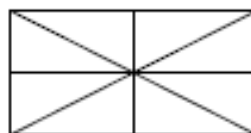
- 4 Shade $\frac{3}{5}$ of this shape:



- 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:



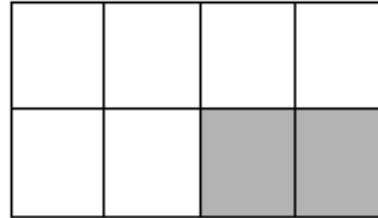
7 Fractions and percentages – 2

1 a What percentage of this shape is shaded?

b What fraction of this shape is shaded?

c What percentage of this shape is not shaded?

d What fraction of this shape is not shaded?



1a

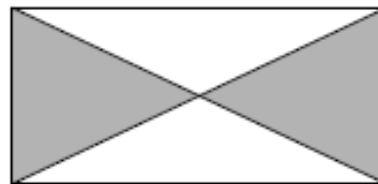
1b.....

1c.....

1d

2 a What percentage of this shape is shaded?

b What fraction of this shape is shaded?

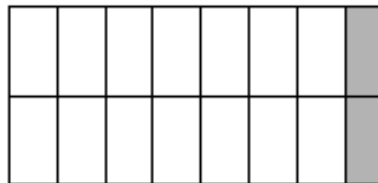


2a

2b.....

3 a What fraction of this shape is shaded?

b What fraction of this shape is not shaded?

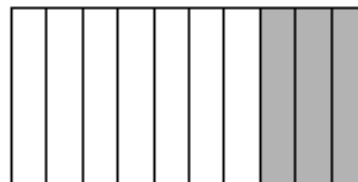


3a

3b.....

4 a What fraction of this shape is shaded?

b What fraction of this shape is not shaded?

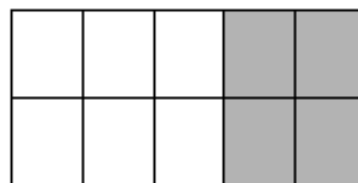


4a

4b.....

5 a What fraction of this shape is shaded?

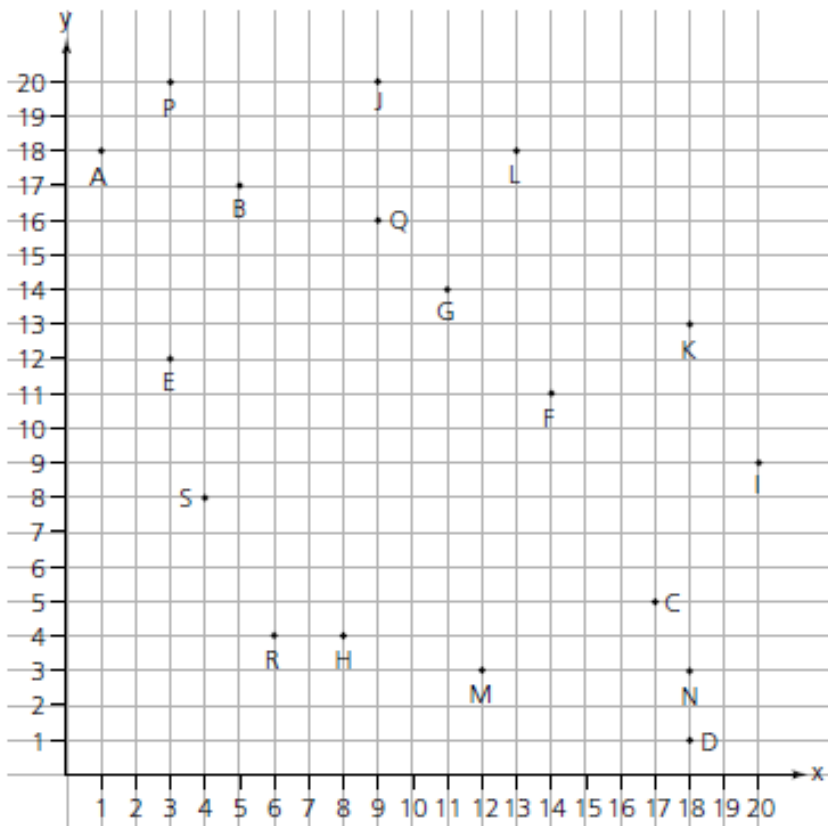
b What fraction of this shape is not shaded?



5a

5b.....

12 Co-ordinates



- 1.....
- 2.....
- 3.....
- 4.....
- 5.....
- 6.....
- 7.....
- 8.....
- 9.....
- 10.....
- 11.....
- 12.....
- 13.....
- 14.....
- 15.....
- 16.....

Give the co-ordinates of the following points:

- | | | |
|-----|-----|-----|
| 1 A | 2 B | 3 C |
| 4 D | 5 M | 6 P |

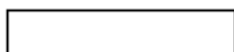
Which letter is at the co-ordinates?

- | | | |
|-------------|------------|------------|
| 7 (3, 12) | 8 (14, 11) | 9 (4, 8) |
| 10 (13, 18) | 11 (18, 1) | 12 (20, 9) |

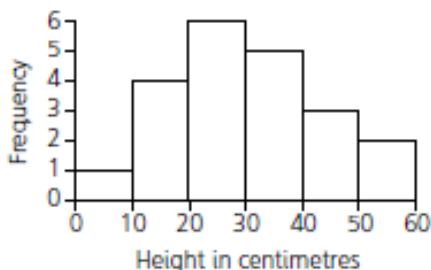
Give the co-ordinates of the mid-point of the line joining:

- | | |
|------------|------------|
| 13 M and N | 14 P and Q |
| 15 R and S | 16 H and S |

27 Frequency diagrams

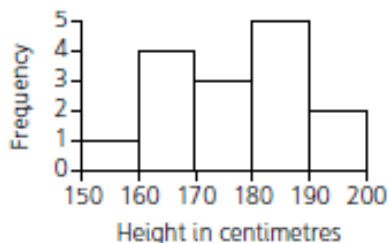


- 1 This frequency diagram shows the heights of some plants in a room:



- | | |
|---|-----------------------------------|
| a How many plants were between 10 cm and 20 cm? | 1a <input type="checkbox"/> |
| b How many plants were between 20 cm and 30 cm? | 1b <input type="checkbox"/> |
| c How many plants were less than 20 cm? | 1c <input type="checkbox"/> |
| d How many plants were between 10 cm and 30 cm? | 1d <input type="checkbox"/> |
| e How many plants were more than 40 cm? | 1e <input type="checkbox"/> |
| f How many plants were in the room? | 1f <input type="checkbox"/> |

- 2 This frequency diagram shows the heights of men in a club:



- | | |
|--|-----------------------------------|
| a How many men were between 180 cm and 190 cm? | 2a <input type="checkbox"/> |
| b How many men were between 170 cm and 180 cm? | 2b <input type="checkbox"/> |
| c How many men were under 170 cm? | 2c <input type="checkbox"/> |
| d How many men were in the club? | 2d <input type="checkbox"/> |

Complete these sentences:

- | | | | |
|-----------------------------|--|---------------------|--------------------------|
| e There were 2 men between: | | cm and.....cm | <input type="checkbox"/> |
| f There were 4 men between: | | cm and.....cm | <input type="checkbox"/> |

30 Probability

A six sided die (dice) is thrown.

State whether the chance of each of the following events happening is certain, likely, even, unlikely or impossible.

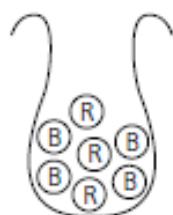
- | | | | |
|---|------------------------------|--------|--------------------------|
| 1 | Shaking more than 7 | 1..... | <input type="checkbox"/> |
| 2 | Shaking less than 7 | 2..... | <input type="checkbox"/> |
| 3 | Shaking a 5 | 3..... | <input type="checkbox"/> |
| 4 | Shaking an odd number | 4..... | <input type="checkbox"/> |
| 5 | Shaking a number less than 5 | 5..... | <input type="checkbox"/> |
| 6 | Shaking a 1 or 2 | 6..... | <input type="checkbox"/> |
| 7 | Shaking an 8 | 7..... | <input type="checkbox"/> |
| 8 | Shaking 3 or less | 8..... | <input type="checkbox"/> |

This bag contains some red and blue counters.

What is the probability of each of the following?

Choose from less than even, even or more than even.

Write 'Less', 'Even' or 'More' in the answer space:



R - Red
B - Blue

- | | | | |
|----|---|---------|--------------------------|
| 9 | Choosing a blue | 9..... | <input type="checkbox"/> |
| 10 | Choosing a red | 10..... | <input type="checkbox"/> |
| 11 | How many reds must be added to the bag to make the chance of choosing a red even? | 11..... | <input type="checkbox"/> |
| 12 | How many reds must be removed from the bag to make the chance of choosing a blue certain? | 12..... | <input type="checkbox"/> |

Mixed A

<p>1. Four times a number is thirty two. What is the number?</p>		<p>10. In a sale, there is twenty-five per cent off all prices. A bed costs thirty- three pounds in the sale.</p>	
<p>2. $14 + \square = 80 \div 4$</p>		<p>How much was it before the sale?</p>	
<p>3. $(16 \div 4) \times (7 - 4) =$</p>		<p>11. What is the mean of these numbers?</p>	
<p>4. What is 42 divided by 6?</p>		<p>2, 6, 9, 7</p>	
<p>5. What is the remainder when forty-three is divided by six?</p>		<p>12. A packet of biscuits costs forty-seven pence.</p>	
<p>6. What number is half-way between thirteen and thirty-one?</p>		<p>Josh buys two packets. How much change does he get from one pound?</p>	
<p>7. The coordinates of a square are; $(7,2)$, $(7,7)$, $(2,7)$ and $(?,?)$</p>		<p>13. Calculate the perimeter of a regular hexagon which has a side of 8 cm long.</p>	
<p>8. What is twenty-three multiplied by eight?</p>			
<p>9. $141 \div 3 =$</p>		<p>14. A tv programme starts at quarter past 4 in the afternoon and lasts for 50 minutes. What time does it finish?</p>	

Mixed B

1. Three times a number is 42. What is the number?		11. In a sale, there is twenty-five per cent off all prices. A chair costs £45 in the sale. How much was it before the sale?	
2. $24 + \square = 120 \div 3$			
3. $(28 \div 4) \times (7 - 2) =$		12. What is the mean of these numbers? 2, 6, 9, 4, 4	
4. What is 5.6 divided by 8?			
5. What is the remainder when forty-five is divided by seven?		13. Joe has some pocket money. He spends 90% of it. He has fifty pence left. How much pocket money did he have?	
6. What number is half-way between fifteen and thirty-seven?			
7. The coordinates of a square are (1,8), (7,8), (7,2) and (?,?)		14. Calculate the perimeter of an equilateral triangle which has a side of 14 cm.	
8. What is twenty-four multiplied by six?			
9. $168 \div 3 =$		15. A film starts at quarter to eleven in the morning and lasts for 1 hour and 25 minutes. What time does it finish?	
10. Subtract one point nine from three point two.			

Mixed C

1. Four times a number is 64. What is the number?		11. In a sale, there is 10 per cent off all prices. A chair costs £63 in the sale. How much was it before the sale?	
2. $\square - 10 = 90 \div 3$			
3. $(6 \times 3) + (? - 1) = 26$		12. What is the median of these numbers? $2, 7, 3, 6, 9, 1, 4$	
4. What is the product of 0.9 and 6?			
5. What is the remainder when thirty-eight is divided by four?		13. Joe has some pocket money. He spends 50% of it. He then spends another £2. He has 70p left. How much pocket money did he have?	
6. What number is half-way between 12 and 34?			
7. The coordinates of a square are; $(3,3), (3,9), (9,9)$ and $(?,?)$		14. Calculate the perimeter of rectangle with sides 6cm and 12cm.	
8. What is twenty-three multiplied by five?			
9. $147 \div 3 =$		15. A film starts at twenty past eleven in the morning and lasts for 1hour and 55 minutes. What time does it finish?	
10. Subtract one point seven from four point one.			

Mixed D

1. Six times a number is two hundred and forty. What is the number?		11. In a sale, there is 50% off all prices. A chair costs £17.50 in the sale. How much was it before the sale?	
2. <input type="text"/> - 15 = 75 ÷ 3			
3. $(36 \div 6) + (4 \times 3) =$		12. What is the median of these numbers? 12, 6, 3, 7, 11	
4. Divide thirty-two by eight.			
5. What is the remainder when thirty-three is divided by seven?		13. A packet of biscuits costs 55 pence. Josh buys three packets. How much change does he get from two pounds?	
6. What number is half-way between twenty-one and fifty-three?			
7. The coordinates of a square are; (0,6), (0,0), (6,0) and (?,?)		14. Calculate the perimeter of a square which has a side of 5.3cm	
8. How many thirties are there in six hundred?			
9. What is twenty-three multiplied by four?		15. How would a quarter to four in the afternoon be shown on a twenty-four hour digital clock?	
10. What is double 12.8?			

Mixed E

1. Six times a number is forty two. What is the number?		11. In a sale, there is twenty-five per cent off all prices. A tv costs £90 in the sale. How much was it before the sale?	
2. $\square + 15 = 120 \div 4$			
3. $(8 \times 4) - (7 \times 3) =$		12. What is the median of these numbers? 8, 4, 9, 2, 3	
4. What is 56 divided by 8?			
5. What is the remainder when forty-nine is divided by five?		13. A packet of biscuits costs eighty-nine pence. Josh buys two packets. How much change does he get from two pounds?	
6. What number is half-way between six and twenty-four?			
7. The coordinates of a square are; (3,2), (8,2), (8,7) and (?,?)		14. Calculate the perimeter of a regular pentagon which has a side of 9 cm.	
8. What is twenty-five multiplied by five?			
9. $87 \div 3 =$		15. A tv programme starts at twenty-five past nine in the evening and lasts for 50 minutes. What time does it finish?	
10. What is double 9.7?			

Mixed F

1. Seven times a number is 280. What is the number?		11. In a sale, there is 25% off all prices. A chair costs £90 in the sale. How much was it before the sale?	
2. $20 - \square = 28 \div 4$			
3. $(5 \times 3) + (18 \div 2) =$		12. What is the mean of these numbers? $2, 8, 4, 6, 5$	
4. What is the sum of 24 and 12 divided by 9?			
5. What is the remainder when 55 is divided by 6?		13. Joe has some pocket money. He spends a fifth of it. He has £2 left. How much pocket money did he have?	
6. What number is half-way between twenty-three and fifty-one?			
7. The coordinates of a square are $(-1,-1), (3,-1), (3,3)$ and $(?,?)$		14. Calculate the perimeter of a rectangle which is 4.5 metres long and 2 metres wide.	
8. How many twenty-fives are there in two hundred?			
9. What is twenty-three multiplied by six?		15. A tv programme begins at 16: 35 and finishes at 17:20. How long was the programme?	
10. What is double 14.6?			