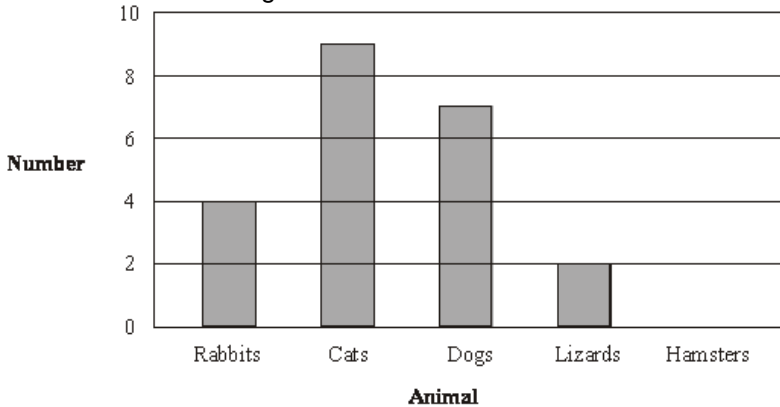


**Foundation GCSE Mathematics Revision Pack**

**DATA HANDLING – CALC**

**Q1.** This bar chart gives information about the numbers of rabbits, cats, dogs and lizards taken to a vet on Monday.



- (a) Write down the number of rabbits taken to the vet on Monday.....(1)  
 (b) Write down the number of dogs taken to the vet on Monday.....(1)

5 hamsters were also taken to the vet on Monday. (c) Use this information to complete the bar chart. (1) **(3 marks)**

**Q2.** Hannah carried out a survey of 20 people at a Fitness Centre. She asked them which activity they liked best. Here are her results.

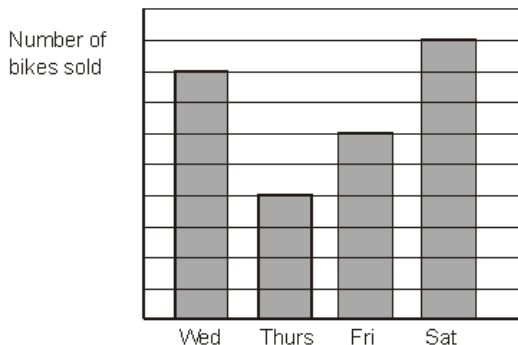
Gym	Tennis	Squash	Swimming	Gym
Swimming	Gym	Tennis	Gym	Squash
Gym	Tennis	Squash	Tennis	Squash
Squash	Gym	Swimming	Gym	Swimming

- (a) Complete the table to show Hannah's results. (2)

Activity	Tally	Frequency
Gym		
Tennis		
Squash		
Swimming		

- (b) Write down the number of people who liked Squash the best..... (1)  
 (c) Which activity was liked best by the most people? ..... (1) (Total 4 marks)

**Q3.** The bar chart shows the numbers of bikes a shop sold on Wednesday, Thursday, Friday and Saturday.



Michael started to draw a pictogram to show the **same** information. He has shown the number of bikes sold on Wednesday.

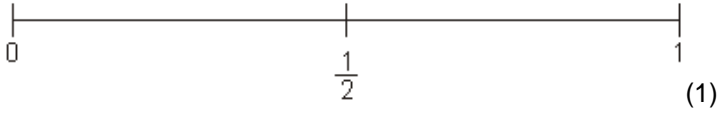
Complete the pictogram.

Wednesday	
Thursday	
Friday	
Saturday	

(Total 3 marks)

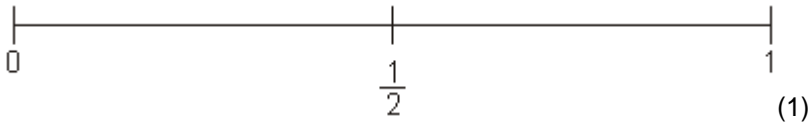
**Q4.** Liam rolls an ordinary dice.

(a) On the probability scale below, mark with a cross ( ) the probability that he gets a number less than 7.



A bag contains 3 blue counters and 1 red counter. Kenneth takes at random one counter from the bag.

(b) On the probability scale below, mark with a cross (X) the probability that he takes a red counter.



Terry spins a coloured spinner. The probability that the spinner will land on green is 0.25

The probability that the spinner will land on yellow is 0.35

(c) (i) Write 0.25 as a fraction..... (1)

(ii) Write 0.35 as a percentage. .... (1)

A weather forecaster says that the probability it will rain tomorrow is  $s$ .

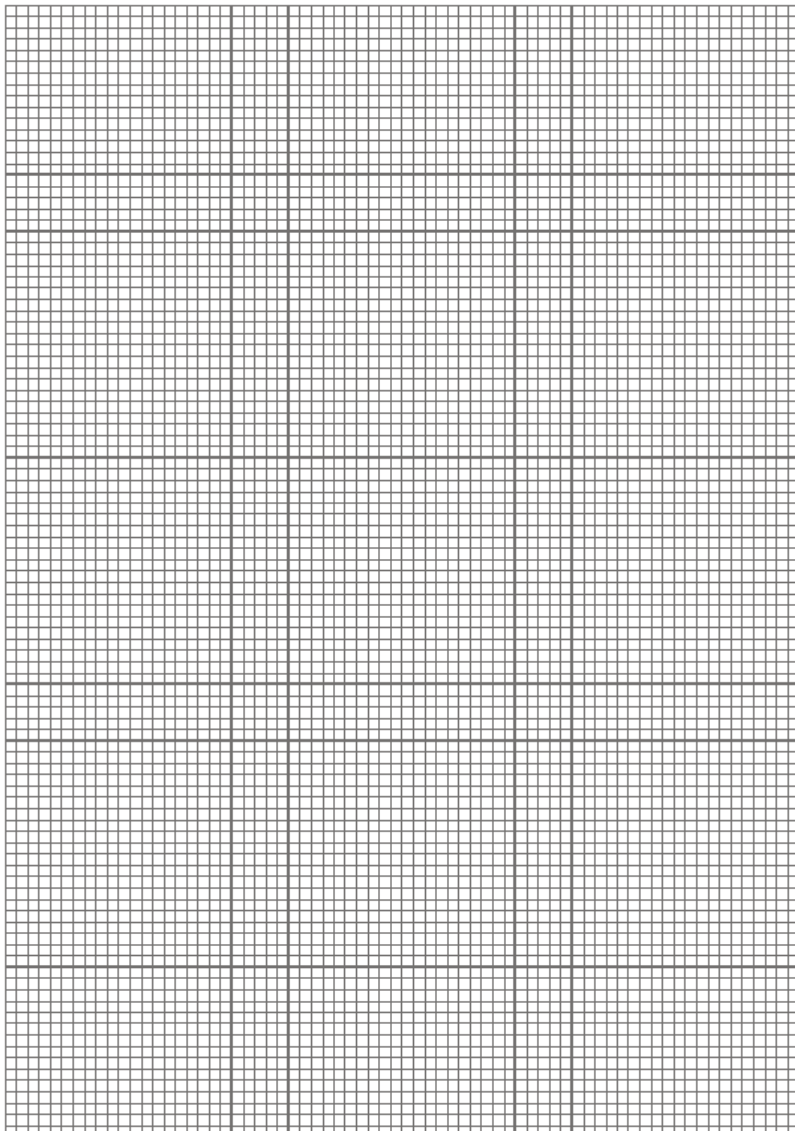
(d) Write down, in terms of  $s$ , the probability that it will **not** rain tomorrow. .... (1)(Total 5 marks)

**Q5.** The table shows information about some students' favourite pets.

	Cat	Dog	Rabbit	Hamster	Goldfish
Boys	6	12	4	10	5
Girls	10	7	6	5	5

On the grid, represent this information in a suitable diagram or chart.

(Total 4 marks)



**Q6.** Ishmael has four white cards and three grey cards.



Ishmael takes at random one white card and one grey card.

(a) Show all the possible outcomes he could get.

(2)

Ishmael takes at random one white card and one grey card.

(b) Work out the probability that he will get a C and a 3. .... (1) (Total 3 marks)

**Q7.** The pictogram shows the numbers of parcels delivered to some houses on Monday, Tuesday and Wednesday.

Monday	
Tuesday	
Wednesday	
Thursday	
Friday	

<b>Key:</b>	
	represents 8 parcels

(a) Write down the number of parcels delivered on Tuesday..... (1)

(b) Write down the number of parcels delivered on Wednesday..... (1)

24 parcels were delivered on Thursday. 18 parcels were delivered on Friday.

(c) Use this information to complete the pictogram. (2) (Total 4 marks)

**Q8.** A teacher took some students on an Outdoor Activity trip. Each student chose one activity to do. The bar chart shows some information about the activities chosen.



(a) Which activity did most boys choose?

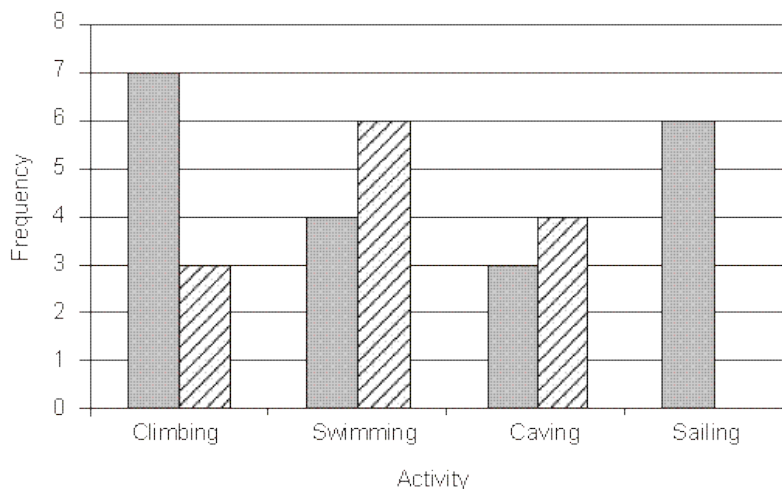
..... (1)

(b) How many boys went on the Outdoor Activity trip?

..... (2)

7 girls went sailing.

(c) Complete the bar chart. (1) (Total 4 marks)



**Q9.** The table shows information about 6 students.

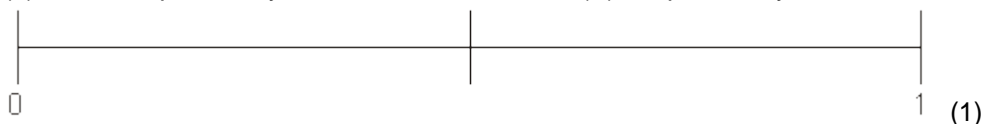
Name	Age in years	Tutor Group	Studying Spanish	Studying French
Callum	16	11A	Yes	No
Seema	16	11B	No	Yes
Mark	15	11B	Yes	Yes
Abby	15	11A	Yes	No
Ben	16	11B	No	Yes
Lori	15	11B	Yes	Yes

- (a) Write down the number of students studying Spanish..... (1)
- (b) Write down the names of the students aged 15 years **and** in Tutor Group 11B..... (1)

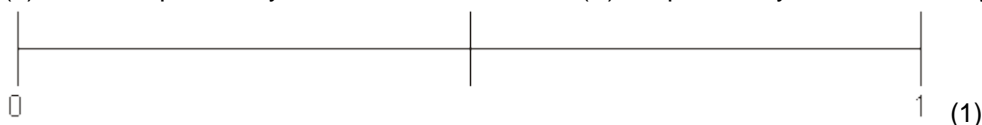
A student is going to be chosen at random. (c) Write down the probability that this student is in Tutor Group 11A.  
 ..... (2) (Total 4 marks)

**Q10.** A bag contains 4 beads. 2 beads are blue. 1 bead is red. 1 bead is yellow. Connor takes at random a bead from the bag.

- (a) On the probability scale, mark with a cross (X) the probability that he takes a blue bead.



- (b) On the probability scale, mark with a cross (X) the probability that he takes a yellow bead.



- (c) On the probability scale, mark with a cross (X) the probability that he takes a white bead.



**Q11.** Callum watched 20 cars go onto a ferry. He counted the number of people in each car. Here are his results.

1 3 3 4 1 2 2 3 5 4  
 2 2 4 5 1 3 2 2 3 2

- (a) Complete the frequency table.

Number of people in a car	Tally	Frequency
1		
2		
3		
4		
5		

- (2)  
 (b) Write down the mode. .... (1)

Fiona counted the number of cars going onto 6 ferries. Here are her results.

20 18 23 17 15 21 (c) Calculate the mean number of cars.

..... (2) (Total 5 marks)

**Q12.** Glen writes down one letter from the word CAT. Then he writes down one number from 1, 2, 3 and 4.

C A T

1 2 3 4

List **all** the possible combinations Glen could write down.

.....  
 .....(Total 2 marks)

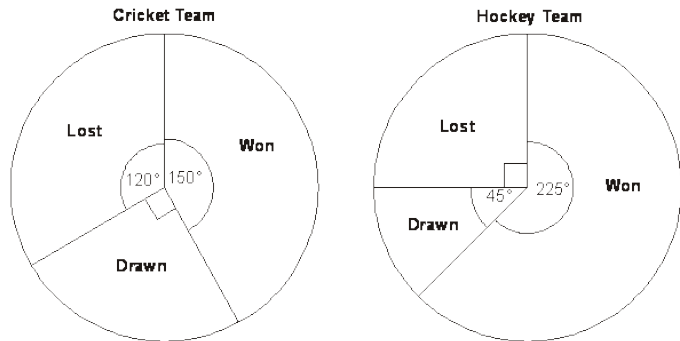
**Q13.** The stem and leaf diagram shows information about the ages, in years, of the people on a fairground ride.

0	8	8	9
1	1	2	3 4 4 4 6 7
2	1	2	3 4 5 6 8
3	1	4	8
4	2	3	6 8
5	0	3	

**Key:** 4 | 2 means 42 years

- (a) How many people were on the fairground ride? ..... (1)
- (b) Work out the median age. .... (1)
- (c) Work out the range of the ages. .... (2) (Total 4 marks)

**Q14.** The pie charts show some information about the numbers of matches won, drawn and lost by a cricket team and by a hockey team last year.



The cricket team won 15 matches. (a) How many matches did the cricket team lose? ..... (2)

(b) Which team won the most matches last year? Tick (✓) **one** box to show your answer.

Cricket                     
  Hockey                     
  Not enough information

Explain your answer.

.....  
 ..... (1) (Total 3 marks)

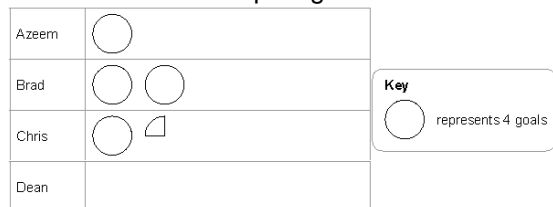
**Q15.** Jake plays a game of throwing a ball at a target. The table shows information about the probability of each possible score.

<b>Score</b>	0	1	2	3	4	5
<b>Probability</b>	0.09	x	0.18	0.16	0.21	0.30

Work out the value of x.

..... (Total 2 marks)

**Q16.** Here is a pictogram. It shows the number of goals scored by Azeem, by Brad and by Chris.



- (a) Write down the number of goals scored by Brad..... (1)
- (b) Write down the number of goals scored by Chris..... (1)
- Dean scored 6 goals.
- (c) Show this information on the pictogram. (1) (Total 3 marks)

**Q17.** The table gives information about the prices and the features of five mobile phones. The ticks (✓) in the table show the features of each phone.

Mobile phone	Price	Feature			
		Camera	MP3	FM Radio	Video
Astra	£24.97	✓			
Crystal	£24.97	✓			✓
Pixar	£39.97	✓	✓	✓	
Spark	£34.23	✓		✓	✓
Tacco	£34.97	✓	✓	✓	✓

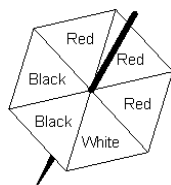
- (a) Which of the five mobile phones is the most expensive? ..... (1)
- (b) Which of the mobile phones have MP3?..... (1)
- (c) Which mobile phone has Video but **not** FM Radio? ..... (1)

Mirza has a monthly plan for his mobile phone. Each month, he pays a total of £9.79 plus the cost of any extra minutes.

**Monthly Plan**  
 For **£9.79** per month you get:  
 100 minutes and unlimited texts.  
 Extra minutes: 24.5p each

- Last month, Mirza used 112 minutes.
- (d) Work out how much he paid in total last month.
- £ ..... (4) (Total 7 marks)

**Q18.**

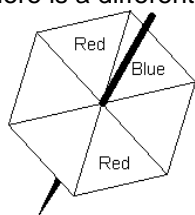


Here is a fair 6-sided spinner. Jack will spin the spinner once. The spinner will land on one of the colours.

Draw a circle around the word to best describe the probability of the following events.

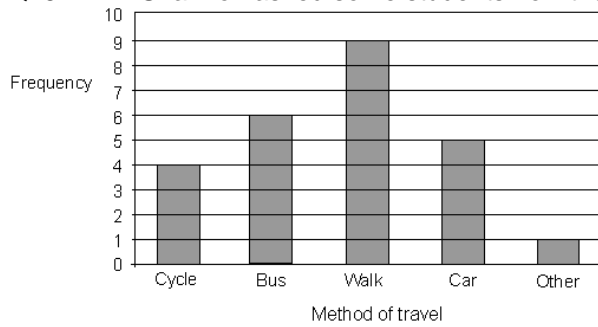
- (a) The spinner will land on White.  
 impossible      unlikely      even      likely      certain
- (1)
- (b) The spinner will land on Red.  
 impossible      unlikely      even      likely      certain
- (1)
- (c) The spinner will land on Pink.  
 impossible      unlikely      even      likely      certain
- (1)

Here is a different fair 6-sided spinner. Jack will spin this spinner once.



The spinner is more likely to land on Blue than to land on Red. (d) Write the missing colours on the spinner. (1)(4)

**Q19.** Shannon asked some students how they travelled to school. She drew this bar chart to show the results.



(a) Which method of travel was used most by the students?

.....(1)

More students walked to school than cycled to school.

(b) How many more?

.....(1)

(c) Work out the number of students Shannon asked.

..... (2) (Total 4 marks)

**Q20.** Matthew has five cards. Each card has a number on it.

**2**

**3**

**6**

**7**

**7**

(a) Write down the median. .... (1)

James has three cards. Each card has a number on it. The numbers are hidden.

**?**

**?**

**?**

The mode of the three numbers is 4. The mean of the three numbers is 5

(b) Work out the three numbers on the cards.

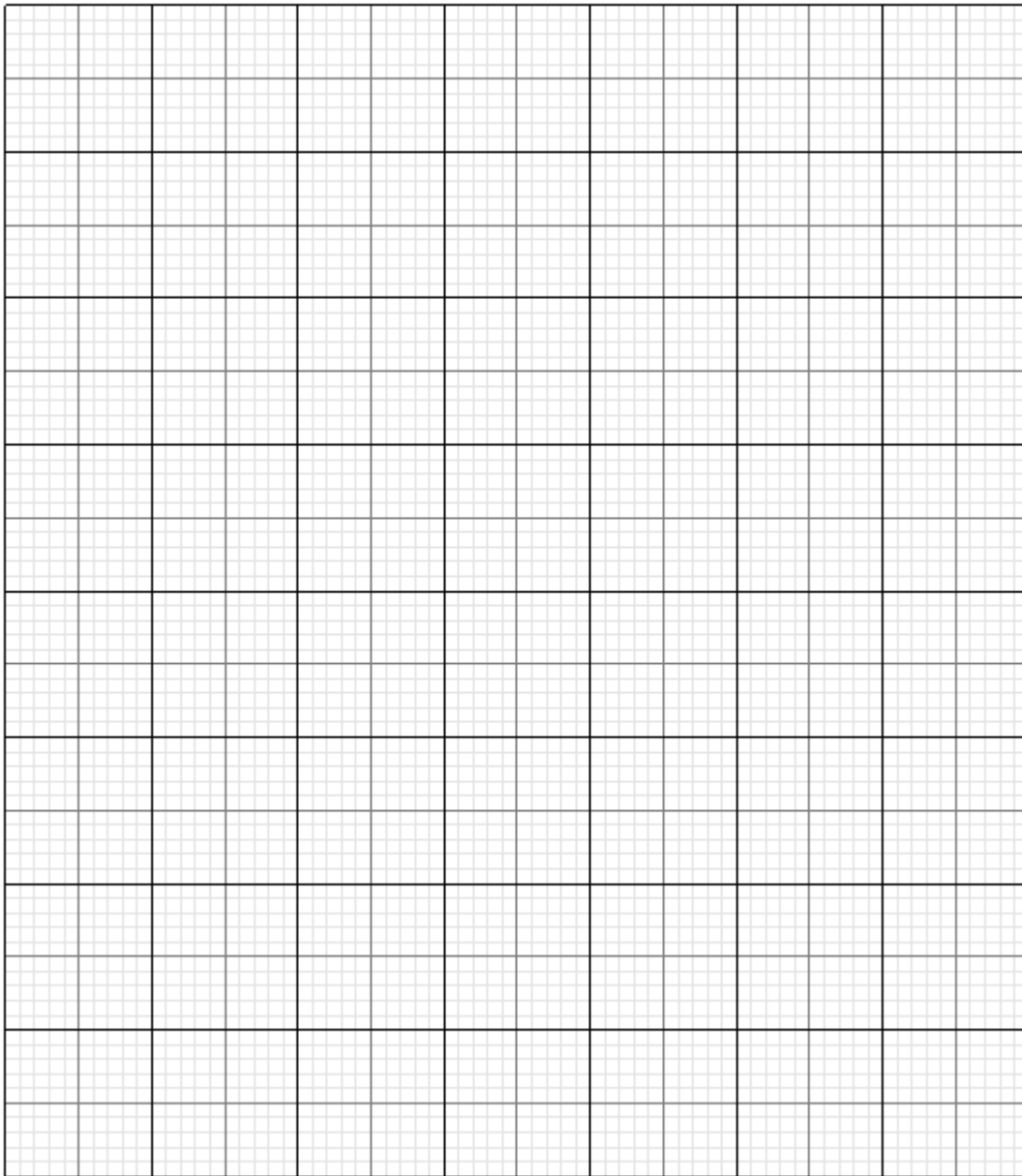
....., ....., ..... (2) (Total 3 marks)

**Q21.** The table shows information about the number of Year 7 pupils absent from Keith's school last week.

	Monday	Tuesday	Wednesday	Thursday	Friday
Boys	8	11	12	14	13
Girls	10	9	12	13	11

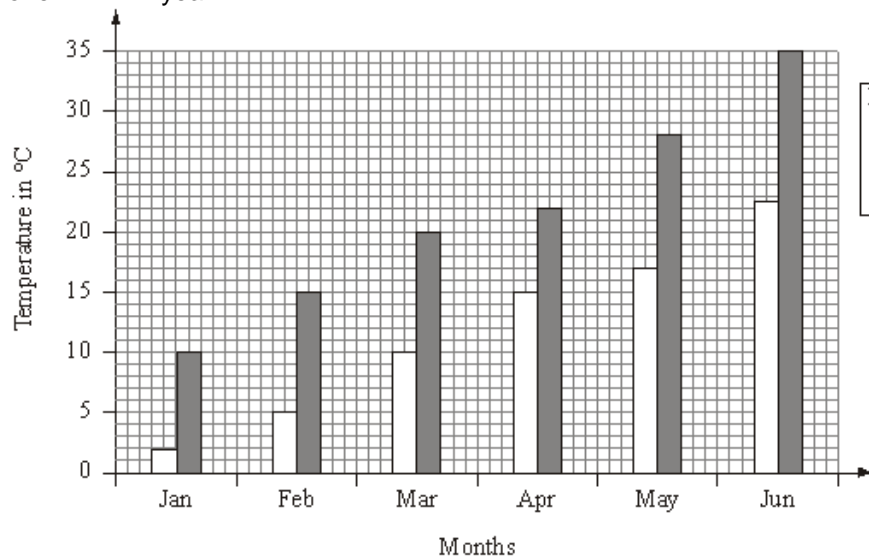
Keith wants to compare this information.

On the grid, draw a suitable diagram or chart.



(Total 4 marks)

**Q22.** The dual bar chart shows the average monthly temperatures in London and Majorca from January to June one year.



Key:  
 □ = London  
 ■ = Majorca

(a) Write down the highest average monthly temperature in Majorca.  
 ..... °C (1)

(b) Using this dual bar chart, write down **two** facts about the average monthly temperatures in London and Majorca.

1.....

2..... (2) (Total 3 marks)

**Q23.** A rugby team played 7 games. Here is the number of points they scored in each game.

3    5    8    9    12    12    16

(a) Work out the range.



..... (2)

(b) Find the median.

..... (1)

The rugby team played another game. They scored 11 points.

(c) Find the median number of points scored in these 8 games.

..... (1) (Total 4 marks)

**Q24.** The table shows some information about 4 cars for sale.

Type of car	Number of doors	Number of previous owners	Cost in £
Saloon	4	0	17 200
Coupé	3	2	12 500
Sports	2	3	14 950
Estate	5	2	11 300

(a) How many doors does the Coupé have? ..... (1)

(b) Which type of car costs less than £12 000? ..... (1)

Simon picks a car at random.

(c) Write down the probability that Simon will pick a car with exactly two previous owners.

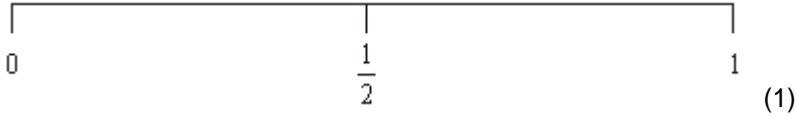
..... (2) (Total 4 marks)

**Q25.** In a box, there are 11 coloured bricks.

5 bricks are red, 2 bricks are blue, 3 bricks are orange and 1 brick is green.

Sally takes one of these bricks at random.

(a) On the probability scale, mark with a letter R, the probability that Sally will take a red brick.



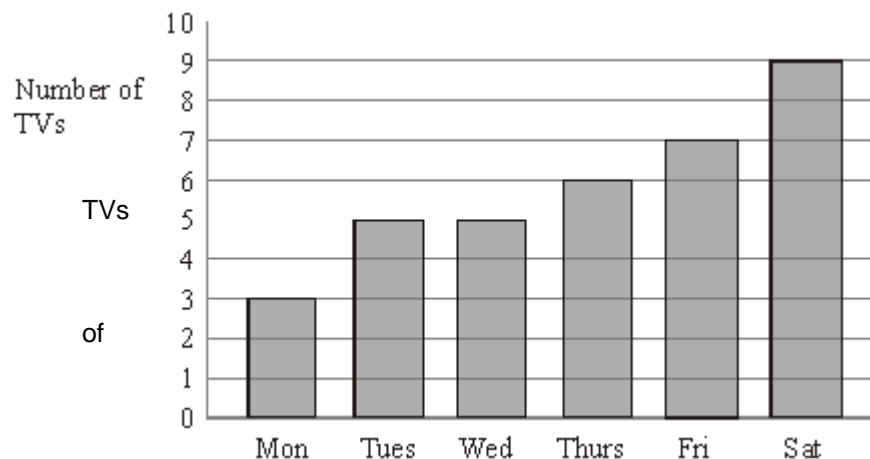
(b) On the probability scale, mark with a letter W, the probability that Sally will take a white brick.



**Q26.** Leah wants to find out which newspapers her friends read. Design a data collection sheet that she can use to carry out a survey.

(Total 3 marks)

**Q27.** The bar chart shows the number of TVs sold by a shop six days last week.



(a) How many TVs were sold on Friday?  
..... (1)

(b) On which day was the **least** number of sold?  
..... (1)

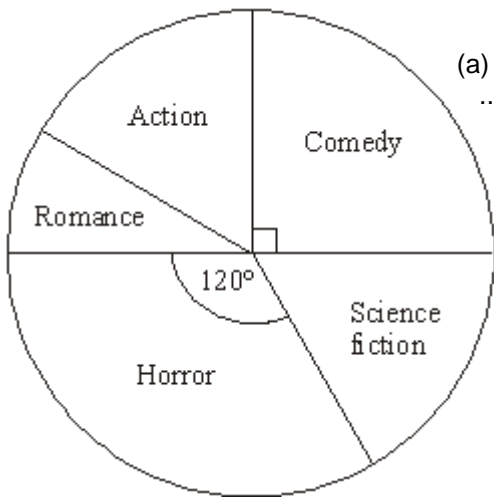
(c) On which two days were the same number TVs sold?  
..... and ..... (1)  
(Total 3 marks)

**Q28** Nick has 6 coins. Each coin comes from a different country. Here is some information about these coins.

Coin	Country	Shape	Weight (g)
20 pence	United Kingdom	7-sided	5
500 yen	Japan	Circular	7
10 centime	Switzerland	Circular	3
1 dollar	Canada	11-sided	7
2 rupee	India	11-sided	6
5 cent	United States	Circular	5

- (a) Which coin comes from Switzerland? ..... (1)
- (b) Which coin has the same weight as the 500 yen coin? ..... (1) (Total 2 marks)

**Q29.** Colin carried out a survey. He asked some students in Year 10 which type of film they liked best. He used the results to draw this pie chart.



- (a) What fraction of the students said "Comedy"?  
..... (1)
- 20 students said "Horror".
- (b) Work out the total number of students Colin asked.  
..... (2) (Total 3 marks)

**Q30.** Here is a pictogram. It shows the number of books read by Asad, by Betty, and by Chris.

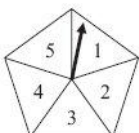
Asad	
Betty	
Chris	
Diana	
Erikas	

key represents 4 books

- (a) Write down the number of books read by (i) Asad,.....  
(ii) Chris. .... (2)

Diana read 12 books. Erikas read 9 books. (b) Show this information on the pictogram. (2) (Total 4 marks)

**Q31.** Ishah spins a fair 5-sided spinner. She then throws a fair coin.



(a) List all the possible outcomes she could get. The first one has been done for you. (1, head)  
 .....

Ishah spins the spinner once and throws the coin once. (b) Work out the probability that she will get a 1 and a head.  
 ..... (1) (Total 3 marks)

**Q32.** The pictogram shows the numbers of hours of sunshine on Monday, Tuesday and Wednesday one week.

Monday	
Tuesday	
Wednesday	
Thursday	
Friday	

**Key:**  
 represents 2 hours

- (a) Write down the number of hours of sunshine on (i) Monday, ..... hours  
 (ii) Wednesday. .... hours (2)

On Thursday there were 4 hours of sunshine.

(b) Show this on the pictogram. (1)

On Friday there were 7 hours of sunshine.

(c) Show this on the pictogram. (1) (Total 4 marks)

**Q33.** The table shows some information about six cars.

Make of car	Age (years)	Number of doors	Engine size (litres)
BMW	7	4	2.2
Ford	5	3	1.4
Mazda	8	4	1.8
Skoda	5	5	1.4
Rover	8	5	1.4
Volvo	9	2	2.4

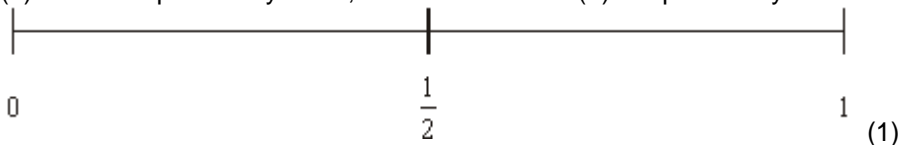
One of these cars has an engine size of 2.4 litres.

(a) Write down the make of this car. .... (1)

One of these cars is 8 years old and has 4 doors. (b) Write down the make of this car. ....(1) (2)

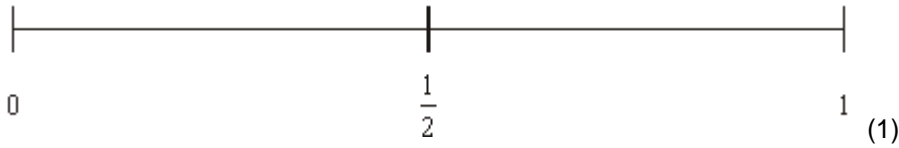
**Q34.** Tom throws an ordinary coin once.

(a) On the probability scale, mark with a cross (x) the probability that the coin will show tails.



Tom rolls an ordinary dice once.

(b) On the probability scale, mark with a cross (x) the probability that he will score a number less than 6.



Tom takes a Maths test.

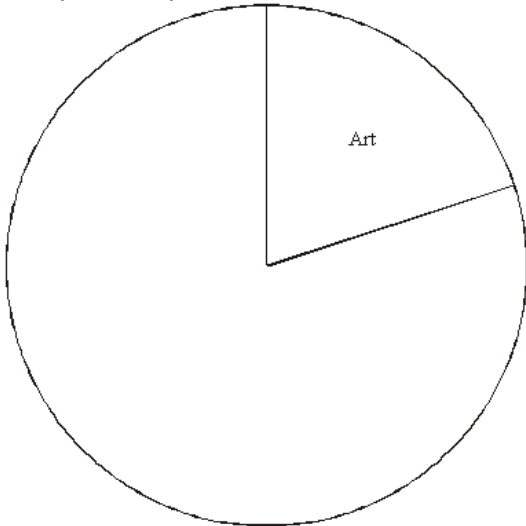
(c) On the probability scale, mark with a cross (x) the probability that he will score more than full marks.



**Q35.** 60 students were asked to choose one of four subjects. The table gives information about their choices.

Subject	Number of students	Angle
Art	12	72°
French	10	
History	20	
Music	18	

Complete the pie chart to show this information.



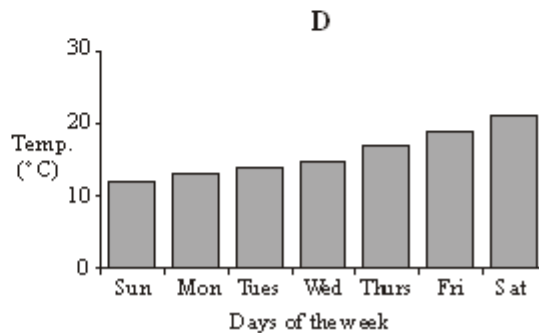
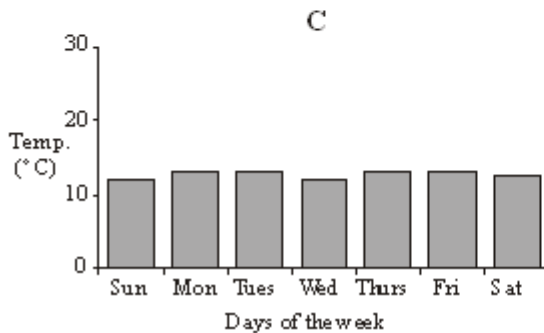
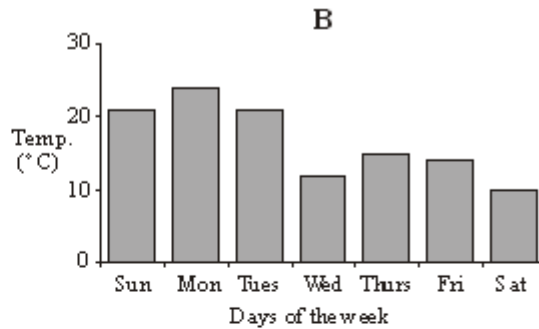
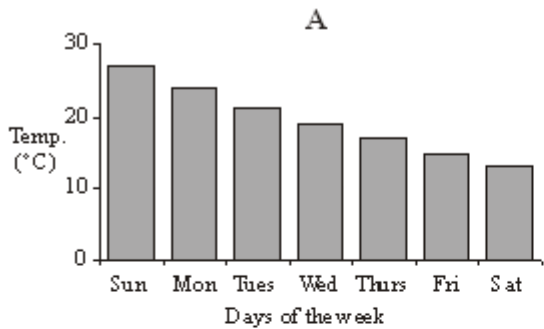
(Total 3 marks)

**Q36.** Here are fifteen numbers.

10 12 13 15 15 17 19 20 20 20 21 25 25 25 25

- (a) Find the mode. .... (1)
- (b) Find the median. .... (1)
- (c) Work out the range. .... (2) (Total 4 marks)

**Q37.** Here are four bar charts showing information about the temperatures at midday in four different cities last week.

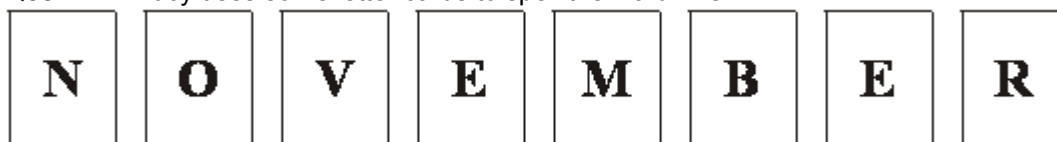


Put a cross in the box underneath the letter of the bar chart which best matches the sentences. One has already been done for you.

	A	B	C	D
(i) Each temperature at midday was higher than the day before.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(ii) Each temperature at midday was about the same.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(iii) Each temperature at midday was lower than the day before.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(Total 2 marks)

**Q38.** Lucy uses some letter cards to spell the word "NOVEMBER".



Lucy takes one of these cards at random. Write down the probability that Lucy takes a card with a letter E.

..... (Total 2 marks)

**Q39.** Here are ten numbers. 7 6 8 4 5 9 7 3 6 7

(a) Work out the range.

..... (2)

(b) Work out the mean.

..... (2) (Total 4 marks)

**Q40.** Here is part of a train timetable from Peterborough to London.

Station	Time of leaving
Peterborough	08 44
Huntingdon	09 01
St Neots	09 08
Sandy	09 15
Biggleswade	09 19
Arlesey	09 24

(a) Which station should the train leave at 09 01? ..... (1)

The train arrives in Sandy at 09 12

(b) How many minutes should the train wait in Sandy?  
..... minutes (1)

The train should take 41 minutes to travel from Arlesey to London.

(c) What time should the train arrive in London?  
..... (1) (Total 3 marks)

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**Q41.** The pictogram shows the number of plates sold by a shop on Monday, Tuesday, Wednesday and Thursday of one week.

Monday	
Tuesday	
Wednesday	
Thursday	
Friday	
Saturday	

Key:  represents 10 plates
----------------------------

(a) Work out the number of plates sold on Monday.

.....  
(1)

(b) Work out the number of plates sold on Tuesday.

.....  
(1)

The shop sold 40 plates on Friday.

The shop sold 25 plates on Saturday.

(c) Use this information to complete the pictogram.

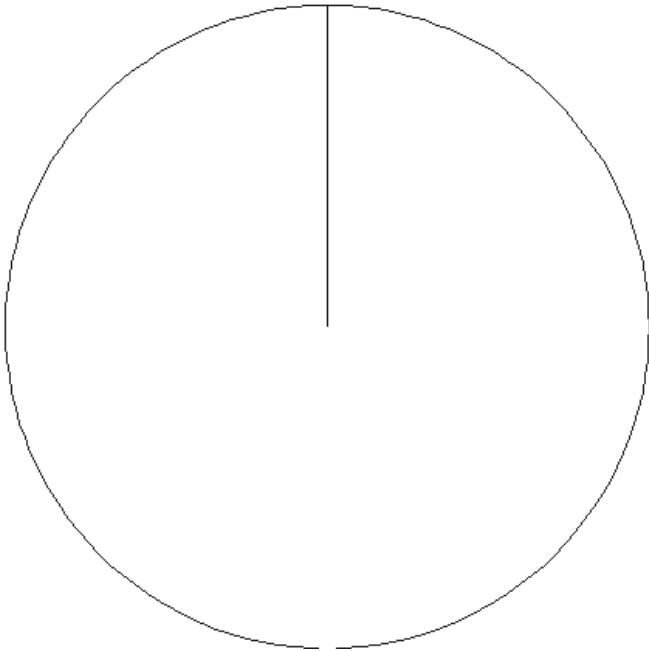
(2)  
(Total 4 marks)

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**Q42.** The table gives information about the numbers of fish in a lake.

Fish	Frequency	
Perch	10	
Bream	23	
Carp	39	

Draw an accurate pie chart to show this information.



(Total 4 marks)

**Q43.** Sarah works in a post office. She recorded the number of parcels posted on each of 16 days. Here are her results.

2 2 5 3 2 4 2 2 3 6 4 6 2 2 3 3

(a) Complete the frequency table to show Sarah's results.

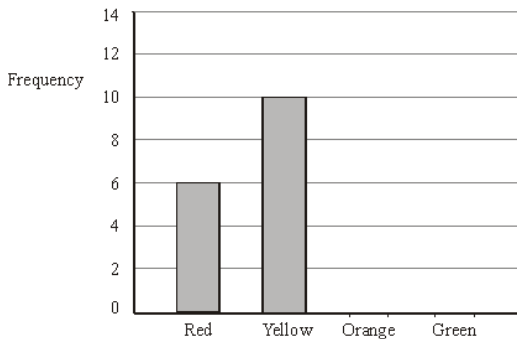
Number of parcels	Tally	Frequency
2		
3		
4		
5		
6		

(2)

(b) Write down the mode. .... (1)

(c) Work out the range. .... (2) (Total 5 marks)

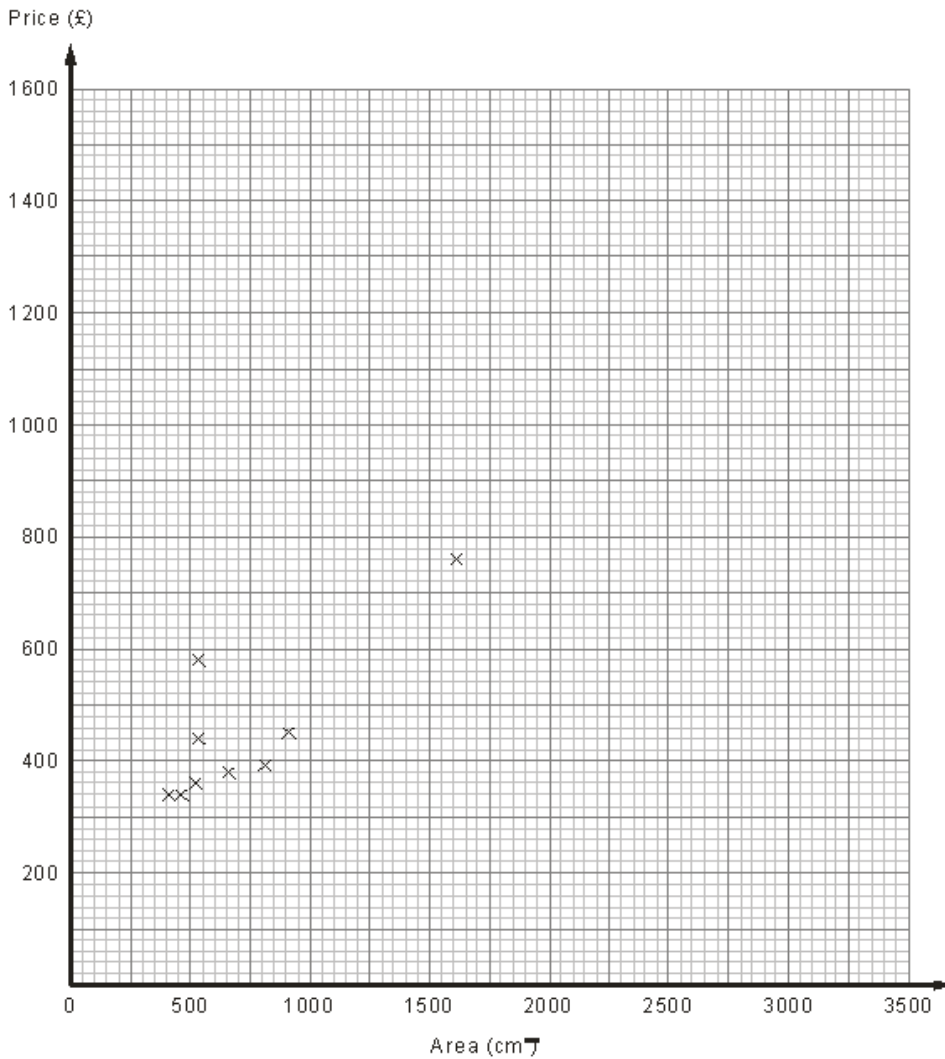
**Q44.** There are only red, yellow, orange and green sweets in a bag. Peter recorded the colour of each sweet in the bag. The bar chart shows some information about his results.



8 sweets were orange. 5 sweets were green.

- (a) Complete the bar chart. (2)
- (b) Write down the number of red sweets. .... (1)
- (c) What colour sweet is the mode? .... (1)
- (d) Work out the total number of sweets in the bag. .... (1) (5)

**Q45.** Pablo is an artist. He wants to find estimates for the prices of some of the new pictures he has painted. The scatter graph, below, gives information about the area and the price of some of his old pictures.



The table shows the area and the price of another three of his old pictures.

Area (cm <sup>2</sup> )	2000	2900	3260
Price (£)	1150	1250	1500

(a) Find an estimate of the price of a new picture with an area of 2500 cm<sup>2</sup>.

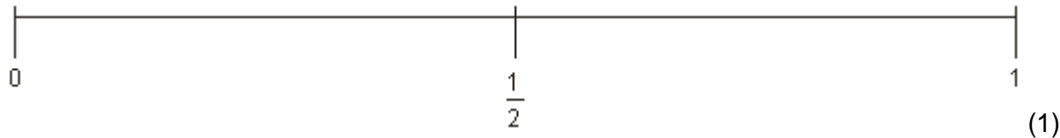
£ .....(3)

All Pablo's pictures are rectangles. One of his pictures has a price of £1000. Its length is 48 cm.

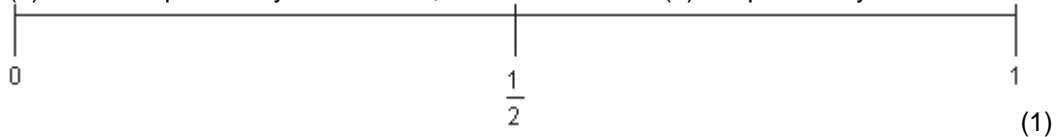
(b) Find an estimate for the width of the picture.

..... cm (2) (Total 5 marks)

**Q46.** (a) On the probability scale below, mark with a cross (x) the probability that it will snow in London in June.



(b) On the probability scale below, mark with a cross (x) the probability that it will rain in Manchester next year.

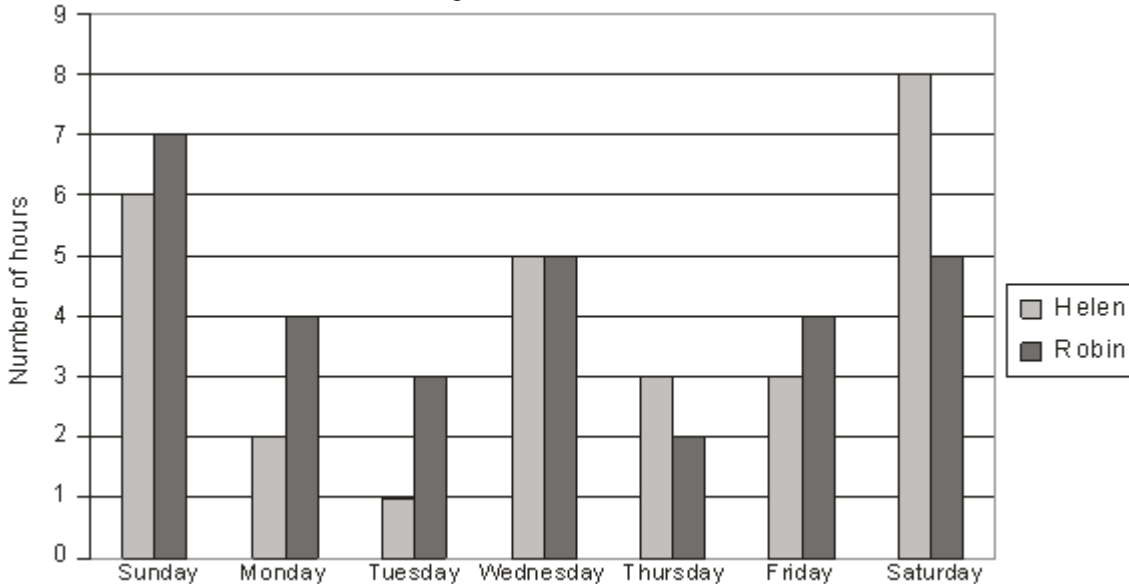


(c) What is the **probability** that you will get a head when you flip a fair coin?

..... (1) (Total 3 marks)



**Q47.** Here is a dual bar chart showing the number of hours of TV that Helen and Robin watched each day last week.



(a) Write down the number of hours of TV that Helen watched on Monday.

..... hours (1)

(b) How many more hours of TV did Robin watch than Helen watch last week?

..... (2)

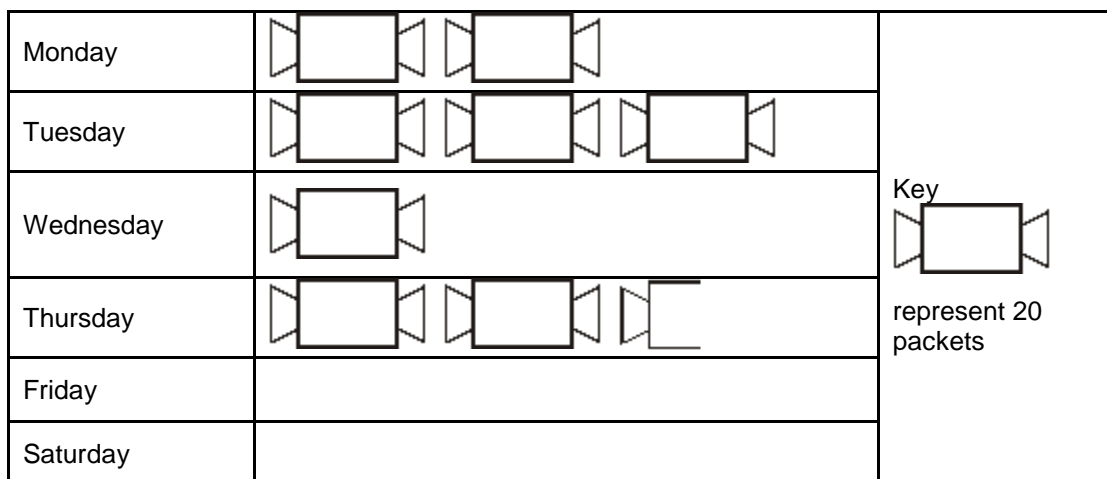
(c) Find the median of the number of hours Robin watched TV last week.

..... (2)

(d) On Saturday and Sunday Helen watched 7 programmes altogether. Work out the average length of the programmes that she watched.

..... (2) (Total 7 marks)

**Q48.** The pictogram shows the number of packets of toffees sold by a shop some days in one week.



(a) Write down the number of packets of toffees that were sold on

(i) Tuesday, ..... packets

(ii) Thursday. .... packets (2)

40 packets were sold on Friday. 30 packets were sold on Saturday.

(b) Use this information to complete the pictogram. (2) (Total 4 marks)

**FOUNDATION GCSE - CALCULATOR REVISION – ALGEBRA – MARK SCHEME**

**M1.**

	Answer	Mark	Additional Guidance
(a)	4	1	<b>B1</b> cao
(b)	7	1	<b>B1</b> cao
(c)	Bar at 5	1	<b>B1</b> cao. Bars may be narrow, but cannot be so narrow as to be a "bar line".
<b>Total for Question: 3 marks</b>			

**M2.**

	Working	Answer	Mark	Additional Guidance
(a)	Gym     IHH II 7 Tennis    IIII 4 Squash    IHH 5 Swimming IIII 4	7, 4, 5, 4	2	<b>B2</b> for all frequencies correct ( <b>B1</b> for 2 frequencies or 2 tallies correct or one tally with its frequency correct)
(b)		5	1	<b>B1</b> for 5 or '5' ft from table
(c)		Gym	1	<b>B1</b> for gym or 'gym' ft from table
<b>Total for Question: 4 marks</b>				

**M3.**

Working	Answer	Mark	Additional Guidance
	<p>Key   represents 8 bikes</p>	3	<b>B2</b> for all 3 days correct (B1 for at least one day correct, i.e. one circle for Thursday  or one and a half circles or ft $1\frac{1}{2} \times$ 'Thursday' for Friday  or two and a quarter circles or ft $2\frac{1}{4} \times$ 'Thursday' for Saturday) <b>B1</b> for a correct key
<b>Total for Question: 3 marks</b>			

**M4.**

	Working	Answer	Mark	Additional Guidance
(a)		Cross at 1	1	<b>B1</b> for cross at 1 (allow $\pm 2$ mm tolerance)
(b)		$\frac{1}{4}$ Cross at $\frac{1}{4}$	1	$\frac{1}{4}$ <b>B1</b> for cross at $\frac{1}{4}$ (allow $\pm 5$ mm tolerance)
(c)(i)		$\frac{1}{4}$	2	$\frac{1}{4}$
(ii)		35		<b>B1</b> for $\frac{1}{4}$ oe fraction <b>B1</b> for 35 or 35.0
(d)		$1 - s$	1	<b>B1</b> cao
<b>Total for Question: 5 marks</b>				

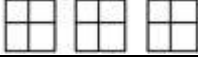

**M5.**

	Working	Answer	Mark	Additional Guidance
<b>QWC</b> (i)		Diagram or chart	4	<b>B1</b> for a key or suitable labels to identify boys and girls <b>B1</b> for 5 correct animal labels <b>B1</b> for a diagram or chart (combined or separate) set up for comparison, e.g. dual bar chart, back-to-back stem and leaf diagrams, pie charts, pictograms, vertical (stick) diagrams, etc <b>C1</b> fully correct diagram or chart <b>QWC:</b> <b>Fully correct diagram or chart and all labelling is correct and clear</b>
<b>Total for Question: 4 marks</b>				

M6.

	Working	Answer	Mark	Additional Guidance
(a)		(A,1), (A,2), (A,3), (B,1), (B,2), (B,3), (C,1), (C,2), (C,3), (D,1), (D,2), (D,3)	2	<b>B2</b> for listing all 12 outcomes (B1 for listing 6 outcomes, ignore repeats)
(b)		$\frac{1}{12}$	1	<b>B1</b> ft for $\frac{1}{12}$
<b>Total for Question: 3 marks</b>				

M7.

	Working	Answer	Mark	Additional Guidance
(a)		40	1	<b>B1</b> cao
(b)		28	1	<b>B1</b> cao
(c)(i)	$24 \div 8 = 3$		1	<b>B1</b> cao
(ii)	$18 \div 8 = 2\frac{1}{4}$		1	<b>B1</b> cao
<b>Total for Question: 4 marks</b>				

M8.

	Working	Answer	Mark	Additional Guidance
(a)		Climbing	1	<b>B1</b> cao
(b)	$7 + 4 + 3 + 6$	20	2	<b>M1</b> for adding at least 2 correct readings (eg. $7 + 6$ , or $7 + 6 + 3$ ; however answers alone of 13 or 16 get no marks) <b>A1</b> cao
(c)		Bar of height 7	1	<b>B1</b> for a bar of height 7, shaded or unshaded on either side of the boys bar
<b>Total for Question: 4 marks</b>				

M9.

	Answer	Mark	Additional Guidance
(a)	4	1	<b>B1</b> cao
(b)	Mark and Lori	1	<b>B1</b> cao (accept M and L)
(c)	$\frac{2}{6}$	2	<b>M1</b> for $\frac{2}{n}$ where $2 < n \leq 6$ or $\frac{n}{6}$ where $n < 6$ <b>A1</b> for $\frac{2}{6}$ oe (condone incorrect cancelling) [SC: <b>B1</b> for 2 out of 6 or $2 : 6$ or 2 in 6 or 1 out of 3, etc. if <b>M0</b> scored]
<b>Total for Question: 4 marks</b>			

M10.

	Answer	Mark	Additional Guidance
(a)	X at $\frac{1}{2}$	1	<b>B1</b> for X marked at $\frac{1}{2}$ cao (allow the X above or below the line)
(b)	X at $\frac{1}{4}$	1	<b>B1</b> for X marked at $\frac{1}{4}$ (allow the X above or below the line) [Tolerance: the X must be between the '1' in the word 'probability' above and the 'a' in the word 'scale' above]
(c)	X at 0	1	<b>B1</b> for X marked at 0 cao (allow the X above or below the line)
<b>Total for Question: 3 marks</b>			

**M11.**

	Working	Answer	Mark	Additional Guidance
(a)		3, 7, 5, 3, 2	2	<b>M1</b> for at least 1 correct frequency or 1 correct tally cell <b>A1</b> all frequencies correct (with or without the tally column completed or incorrectly completed)
(b)		2	1	<b>B1</b> for 2 or ft from (a)
(c)	$20 + 18 + 23 + 17 + 15 + 21$ $114 \div 6$	19	2	<b>M1</b> for “ $(20 + 18 + 23 + 17 + 15 + 21)$ ” [= 114] $\div 6$ <b>A1</b> cao [SC: <b>B1</b> for an answer of 96.5 if M0 scored]
<b>Total for Question: 5 marks</b>				

**M12.**

Answer	Mark	Additional Guidance
C1, C2, C3, C4 A1, A2, A3, A4 T1, T2, T3, T4	2	B2 for all 12 correct pairs (in any order, eg C1 or 1C) with no incorrect combinations. ( <b>B1</b> for at least 8 different correct pairs, ignoring any extra incorrect combinations) Note: Ignore any repeats
<b>Total for Question: 2 marks</b>		

**M13.**

	Working	Answer	Mark	Additional Guidance
(a)		27	1	<b>B1</b> cao
(b)	$(27 + 1)/2 = 14$ so 14th is median value	23	1	<b>B1</b> cao
(c)	$53 - 8$	45	2	<b>M1</b> for $53 - 8$ <b>A1</b> cao [SC: <b>B1</b> for 8 to 53 or $8 - 53$ oe or 8 and 53 identified if M0 A0 awarded]
<b>Total for Question: 4 marks</b>				


**M14.**

	Working	Answer	Mark	Additional Guidance
(a)	15 matches = $150^\circ$ 1 match = $10^\circ$ $120 \div 10 = 12$	12	2	<b>M1</b> for $150 \div 15 (=10)$ or $120 \div 10$ [Note: 10 seen on the answer line with no working gets no marks] <b>A1</b> cao
(b)		Not enough information ticked and reason given	1	<b>B1</b> for "Not enough information" ticked (or not and not contradicted) and correct explanation eg Explains that we don't know actual number of matches hockey team won. OR explains we don't know number of matches. OR explains that pie charts only show the proportions (eg. "cannot compare sizes of angles only") [ <b>B0</b> for any contradictory responses]
<b>Total for Question: 3 marks</b>				

**M15.**

Answer	Mark	Additional Guidance
0.06 or 6%	2	<b>M1</b> for $1 - (0.09 + 0.18 + 0.16 + 0.21 + 0.30)$ oe OR <b>M1</b> for $100 - (9 + 18 + 16 + 21 + 30)$ oe OR <b>M1</b> for $1 - \left( \frac{9}{100} + \frac{18}{100} + \frac{16}{100} + \frac{21}{100} + \frac{30}{100} \right)$ <b>A1</b> for 0.06 or 6% (6 only gets A0) or $\frac{6}{100}$ oe [SC: <b>B1</b> for 6 on the answer line without working, if M0 scored]
<b>Total for Question: 2 marks</b>		

## M16.

	Answer	Mark	Additional Guidance
(a)	8	1	B1 cao
(b)	5	1	B1 cao
(c)		1	B1 cao

**Total for Question: 3 marks**

## M17.

	Answer	Mark	Additional Guidance
(a)	Pixar	1	B1 cao
(b)	Pixar, Tacco	1	B1 cao
(c)	Crystal	1	B1 cao
(d)	12.73	4	M1 for 112-100 or 12 seen M1 for $24.5 \times 12'$ or sight of digits 294. Do not allow '12' to be 100. M1 (dep on one prior M1) for $9.79 + 2.94'$ A1 cao

**Total for Question: 7 marks**

## M18.

	Answer	Mark	Additional Guidance
(a)	unlikely	1	B1 cao
(b)	even	1	B1 cao
(c)	impossible	1	B1 cao
(d)	e.g. blue, blue, blue	1	B1 for two or three 'blue' and no 'red'

**Total for Question: 4 marks**

## M19.

	Working	Answer	Mark	Additional Guidance
(a)		Walk	1	B1 cao
(b)		5	1	B1 cao
(c)	$4 + 6 + 9 + 5 + 1 = 25$	25	2	M1 for adding the frequencies 4,6,9,5,1 or adding 5 frequencies allow one misread error i.e $4+6+9+6+1$ A1 cao

**Total for Question: 4 marks**

## M20.

	Answer	Mark	Additional Guidance
(a)	6	1	B1 cao
(b)	4, 4, 7	2	M1 for identifying two of the numbers as 4 or the sum as 15 (may be implied by three numbers that sum to 15) A1 for 4, 4 and 7 in any order

**Total for Question: 3 marks**

## M21.

Answer	Mark	Additional Guidance
Diagram or chart	4	B1 for a key or suitable labels to identify boys and girls The key may be ignored if unclear provided the graph is clear, ie if different colours are used to shade in the graph. Give benefit to candidate. B1 for 5 correct labels for days clearly in the appropriate place B1 for a diagram(s) or chart(s)(combined or separate) set up for comparison, showing data for at least three days e.g. dual bar chart, back-to-back stem and leaf diagrams, pie charts, pictograms, etc C1 fully correct diagram or chart to include all axes labeled. QWC: Fully correct diagram or chart and all labelling is correct and clear

**Total for Question: 4 marks**

## M22.

	Answer	Mark	Additional Guidance
(a)	35	1	B1 cao
(b)	Warmer in Majorca Increase in temperature from Jan to Jun	2	B2 for two acceptable comparisons/observations [B1 for one comparisons/observation]

**Total for Question: 3 marks**

**M23.**

	Working	Answer	Mark	Additional Guidance
(a)	16 – 3	13	2	<b>M1</b> for 16 – 3 <b>A1</b> cao [3 to 16, 3 – 16 oe gets <b>B1</b> if M0 scored]
(b)		9	1	<b>B1</b> cao (take care that this is not the result of an attempt to find the mean)
(c)		10	1	<b>B1</b> cao (take care that this is not the result of an attempt to find the mean)
<b>Total for Question: 4 marks</b>				

**M24.**

	Answer	Mark	Additional Guidance
(a)	3	1	<b>B1</b> cao
(b)	Estate	1	<b>B1</b> cao
(c)	$\frac{2}{4}$ oe	2	<b>M1</b> for a fraction with a denominator of 4 or numerator of 2 $\frac{2}{4}$ <b>A1</b> for $\frac{2}{4}$ oe (accept 0.5 or 50%) <b>SC B1</b> for 2 out of 4 or 1 out of 2 <b>B0</b> for 1 : 2 or 2 : 4 or 4 : 2 etc
<b>Total for Question: 4 marks</b>			

**M25.**

	Answer	Mark	Additional Guidance
(a)	Between $\frac{1}{4}$ and $\frac{1}{2}$ but nearer to $\frac{1}{2}$	1	<b>B1</b> for a mark between $\frac{1}{4}$ and $\frac{1}{2}$ but nearer to $\frac{1}{2}$ than $\frac{1}{4}$
(b)	At 0	1	<b>B1</b> for a clear mark at 0 within $\pm 2$ mm
<b>Total for Question: 2 marks</b>			

**M26.**

Answer			Mark	Additional Guidance
Type	Tally	Frequency	3	<b>B1</b> for Type of newspaper (or listing examples) <b>B1</b> for Tally (or tally marks shown) <b>B1</b> for Frequency (or Total or evidence of totalling)
<b>Total for Question: 3 marks</b>				

**M27.**

	Answer	Mark	Additional Guidance
(a)	7	1	<b>B1</b> cao
(b)	Monday	1	<b>B1</b> cao accept abbreviations
(c)	Tuesday and Wednesday	1	<b>B1</b> cao accept abbreviations (not T)
<b>Total for Question: 3 marks</b>			


**M28.**

	Answer	Mark	Additional Guidance
(a)	10 centime	1	<b>B1</b> for 10 centime or centime
(b)	1 dollar	1	<b>B1</b> for 1 dollar or dollar
<b>Total for Question: 2 marks</b>			

**M29.**

	Working	Answer	Mark	Additional Guidance
(a)		$\frac{1}{4}$	1	$\frac{1}{4}$ <b>B1</b> for $\frac{1}{4}$ or equivalent fraction
(b)	20 × 3	60	2	<b>M1</b> for 360 ÷ 120 or 3 seen or 360 ÷ (120 ÷ 20) or three of 20, 10, 10, 15, 5 seen either on the diagram or seen in a sum of 4 or 5 numbers <b>A1</b> ca
<b>Total for Question: 3 marks</b>				





**M30.**

	Answer	Mark	Additional Guidance
(a)(i)	8	1	<b>B1</b> cao
(ii)	10	1	<b>B1</b> cao
(b)		2	<b>B1</b> cao <b>B1</b> cao
<b>Total for Question: 4 marks</b>			

**M31.**

	Working	Answer	Mark	Additional Guidance
(a)	(1,H), (2,H), (3,H), (4,H), (5,H), (1,T), (2,T), (3,T), (4,T), (5,T)		2	<b>B2</b> for listing 10 outcomes with no extras <b>(B1</b> for listing 4 additional outcomes, ignore repeats or extras)
(b)		$\frac{1}{10}$	1	<b>B1ft</b> for $\frac{1}{10}$ o.e. or 1/their total Accept decimals or percentages
<b>Total for Question: 3 marks</b>				

**M32.**

	Answer	Mark	Additional Guidance
(a)(i)	8	2	<b>B1</b> for 8 or eight
(ii)	5		<b>B1</b> for 5 or five
(b)		1	<b>B1</b> cao
(c)		1	<b>B1</b>  accept 
<b>Total for Question: 4 marks</b>			

**M33.**

	Answer	Mark	Additional Guidance
(a)	Volvo	1	<b>B1</b> cao
(b)	Mazda	1	<b>B1</b> cao
<b>Total for Question: 2 marks</b>			

**M34.**

	Answer	Mark	Additional Guidance
(a)		1	<b>B1</b> for cross at $\frac{1}{2}$ (allow $\pm 2$ mm tolerance)
(b)		1	<b>B1</b> for cross between $\frac{3}{4}$ and 1
(c)		1	<b>B1</b> for cross at 0 (allow $\pm 2$ mm tolerance)
<b>Total for Question: 3 marks</b>			

**M35.**

Answer	Mark	Additional Guidance
Overlay of pie chart –angles of $60^\circ$ , $120^\circ$ , $108^\circ$	3	<b>B3</b> for fully correct labelled pie chart within guidelines ( <b>B2</b> for pie chart with correct angles within guidelines and no labels or for one angle drawn correctly within guidelines and labelled) <b>(B1</b> for 1 angle drawn in guidelines and not labelled or for 1 correct angle in table or sight of $360 \div 60$ or $72 \div 12$ or 6)
<b>Total for Question: 3 marks</b>		

**M36.**

	Working	Answer	Mark	Additional Guidance
(a)		25	1	<b>B1</b> cao
(b)		20	1	<b>B1</b> cao
(c)	25-10	15	2	<b>M1</b> for sight of 10 and 25 together <b>A1</b> cao
<b>Total for Question: 4 marks</b>				

**M37.**

	Answer	Mark	Additional Guidance
(i)	C	2	<b>B1</b> for each correct answer
(ii)	A		
<b>Total for Question: 2 marks</b>			

**M38.**

Working	Answer	Mark	Additional Guidance
$\frac{2}{8}$	$\frac{2}{8}$	2	<b>M1</b> for $\frac{x}{8}$ ( $x < 8$ ) or ( $x > 2$ ) <b>A1</b> for $\frac{2}{8}$ o.e.
<b>Total for Question: 2 marks</b>			

M39.

	Working	Answer	Mark	Additional Guidance
(a)		6	2	<b>M1</b> for $9 - 3$ or $3 - 9$ <b>A1</b> cao
(b)	$(7+6+8+4+5+9+7+3+6+7) \div 10$	6.2	2	<b>M1</b> for $(7 + 6 + 8 + 4 + 5 + 9 + 7 + 3 + 6 + 7) \div 10$ <b>A1</b> cao
<b>Total for Question: 2 marks</b>				

M40.

	Answer	Mark	Additional Guidance
(a)	Huntingdon	1	<b>B1</b> cao
(b)	3	1	<b>B1</b> cao
(c)	10 05	1	<b>B1</b> cao
<b>Total for Question: 3 marks</b>			

M41.

	Answer	Mark	Additional Guidance
(a)	20	1	<b>B1</b> cao
(b)	15	1	<b>B1</b> cao
(c)	4 circles on Fri $2\frac{1}{2}$ circles on Sat	2	<b>B1</b> cao <b>B1</b> cao
<b>Total for Question: 4 marks</b>			

M42.

	Working	Answer	Mark	Additional Guidance
	$10/72 \times 360 = 50$ perch $23/72 \times 360 = 115$ bream $39/72 \times 360 = 195$ carp	50, 115, 195	4	<b>M1</b> for evidence of method for at least one angle (could be implied by one correct angle on pie chart or in the table) <b>A2</b> all three angles drawn $\pm 2^\circ$ tolerance, any order ( <b>A1</b> at least one angle correctly drawn $\pm 2^\circ$ , or all three angles in the table) <b>B1</b> names of fish as labels (dep on at least one angle drawn correctly, and exactly three sectors; initials will do) <b>NB:</b> Ignore table if pie chart provides marks
<b>Total for Question: 4 marks</b>				

M43.

	Working	Answer	Mark	Additional Guidance
(a)		7, 4, 2, 1, 2	2	<b>M1</b> for at least one correct frequency or tally <b>A1</b> for 7, 4, 2, 1, 2 cao ( <b>B2</b> for correct frequencies without the use of tallies)
(b)		2	1	<b>B1</b> for 2 or ft values in table <b>NB:</b> <b>B0</b> if the 7 is given with the 2
(c)	$6 - 2 =$	4	2	<b>M1</b> for identifying 6 and 2, eg 6-2, as long as 6 and 2 are not identified with any incorrect operation <b>A1</b> cao
<b>Total for Question: 5 marks</b>				

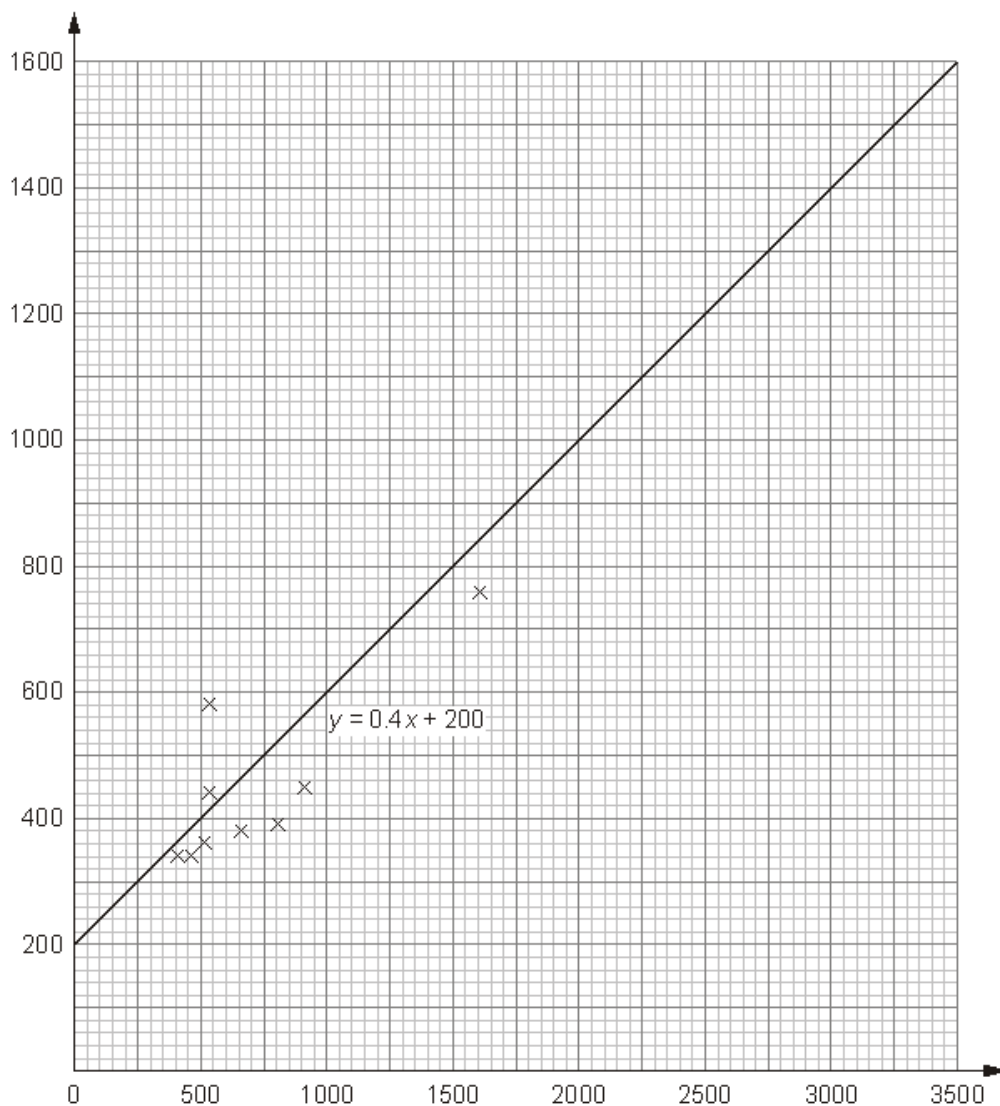
M44.

	Working	Answer	Mark	Additional Guidance
(a)		Bars at 8 and 5	2	<b>B1</b> for bar of height 8 (above orange) <b>B1</b> for bar of height 5 (above green)
(b)		6	1	<b>B1</b> for 6 cao
(c)		yellow	1	<b>B1</b> ft for yellow or ft from their diagram
(d)	$6 + 10 + 8 + 5$	29	1	<b>B1</b> correct answer or ft by adding the heights of the columns on the graph
<b>Total for Question: 5 marks</b>				

M45.

	Working	Answer	Mark	Additional Guidance
(a)	Plots further data Draws line of best fit Reads off value from 2500	£ 1100 — 1200	3	M1 plots further figures M1 draws line of best fit A1 1100 — 1200
(b)	Draws $y = 1000$ '2000' $\div 48$	42	2	M1 draws $y = 1000$ and divides by 48 A1 40 — 44
<b>Total for Question: 5 marks</b>				





M46.

	Working	Answer	Mark	Additional Guidance
(a)		Correct plot	1	<b>B1</b> Cross placed within 0.5 cm to right of 0 inclusive
(b)		Correct plot	1	<b>B1</b> Cross placed within 0.5 cm to left of 1 inclusive
(c)		$\frac{1}{2}$	1	<b>B1</b> 0.5 oe
<b>Total for Question: 3 marks</b>				

M47.

	Working	Answer	Mark	Additional Guidance
(a)		2	1	<b>B1</b> cao
(b)	$7 + 4 + 3 + 5 + 2 + 4 + 5 = 30$ $6 + 2 + 1 + 5 + 3 + 3 + 8 = 28$ <b>OR</b> $1 + 2 + 2 + 0 - 1 + 1 - 3 = 2$	2 hours	2	<b>M1</b> finds the totals of Robin and Helen. <b>A1</b> cao <b>OR</b> <b>M1</b> find the differences of Robin and Helen <b>A1</b> cao
(c)	2 3 4 4 5 5 7	4 hours	2	<b>M1</b> orders the values <b>A1</b> cao
(d)	$(6 + 8) \div 7$	2	2	<b>M1</b> attempts to find mean <b>A1</b> 2 cao
<b>Total for Question: 7 marks</b>				

M48.

	Working	Answer	Mark	Additional Guidance
(a)		60 50	2	<b>B1</b> 60 cao <b>B1</b> 50 cao
(b)		2 full packets 1.5 full packets	2	<b>B1</b> 2 full packets cao <b>B1</b> 1.5 full packets
<b>Total for Question: 4 marks</b>				