

1(a). Three schools, Abbey, Barts and Clark, took part in a music competition.

This table shows the number of students from each school who took part.

	Abbey	Barts	Clark	Totals
Boys	35		42	90
Girls	43	58		120
Totals	78			210

(i) Complete the table.

[2]

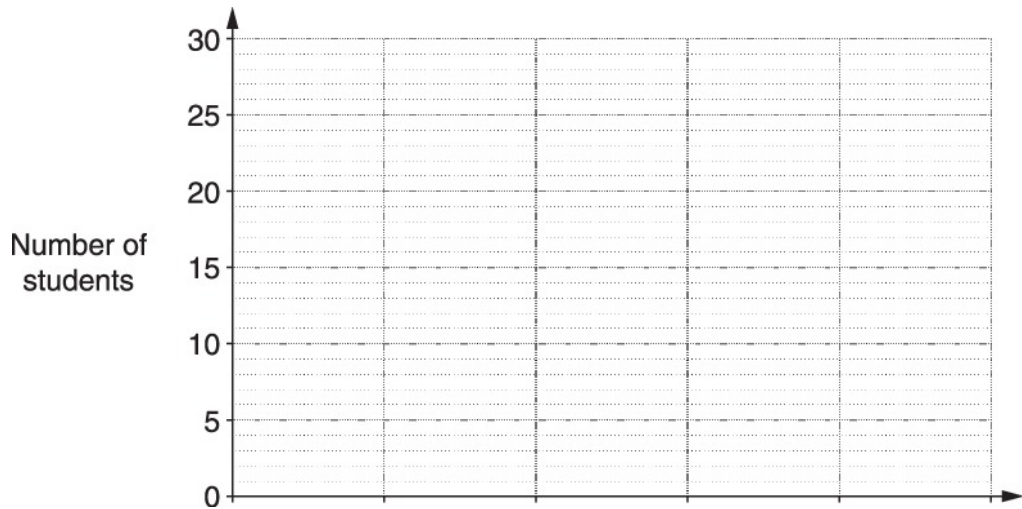
(ii) For Abbey School, how many more girls than boys took part in the competition?

----- [1]

(b). Here are the ways in which the students from Barts School took part in the competition.

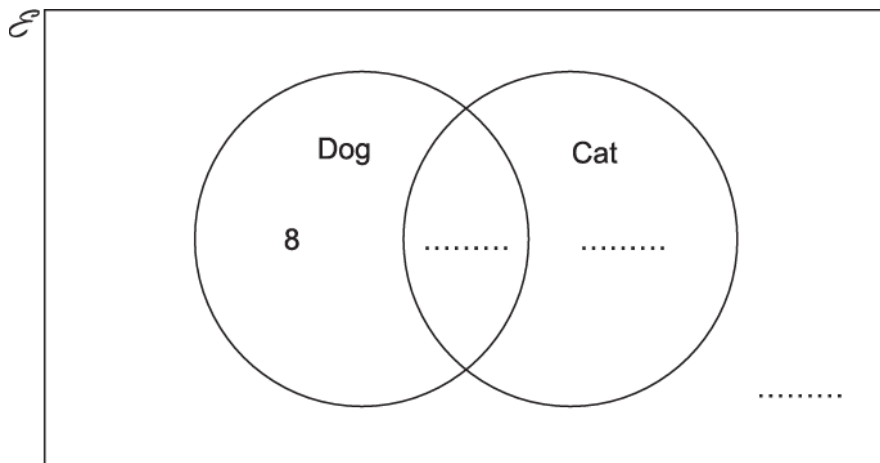
	Number of students
Singing only	25
Playing instrument only	18
Technical support only	11
More than one way	17

Draw a bar chart to represent this information.



[3]

2. Here is a Venn diagram.



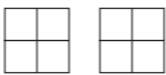
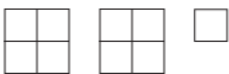
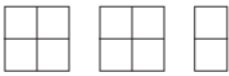

30 students are asked if they have a dog or cat.

- 21 have a dog.
- 16 have a cat.
- 8 have a dog, but not a cat.

Complete the Venn diagram.

[3]

3(a). The pictogram shows how some passengers spent most of their time on a flight.

Reading	
Watching films	
Listening to music	
Playing games	
Other	

Key:  represents 40 people

How many passengers spent most of their time playing games?

(a) ..... [1]

(b). How many more passengers spent most of their time watching films than reading?

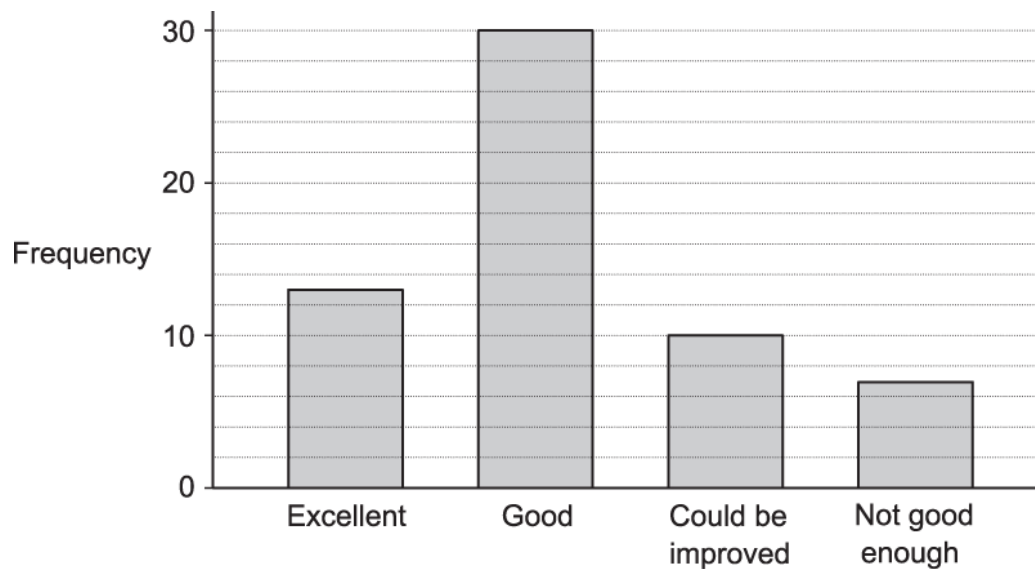
(b) ..... [1]

(c). There were 360 passengers on the plane.

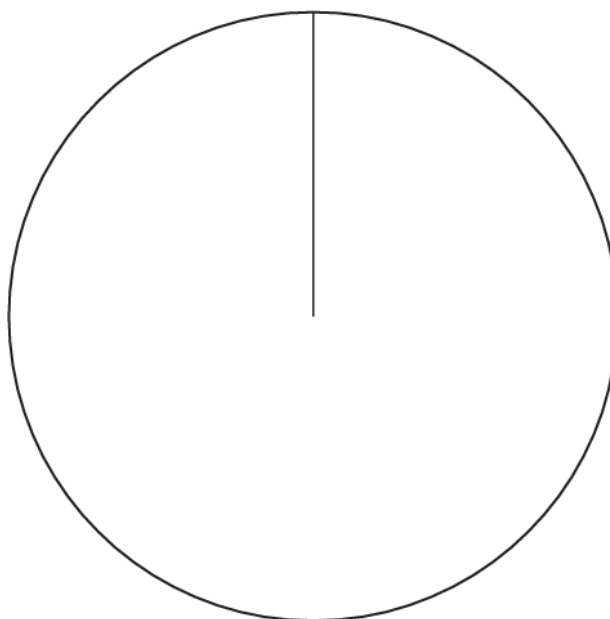
Complete the pictogram for listening to music.

[3]

4. Cambury Council asked 60 customers what they thought of the local leisure centre.  
The results are shown in this bar chart.

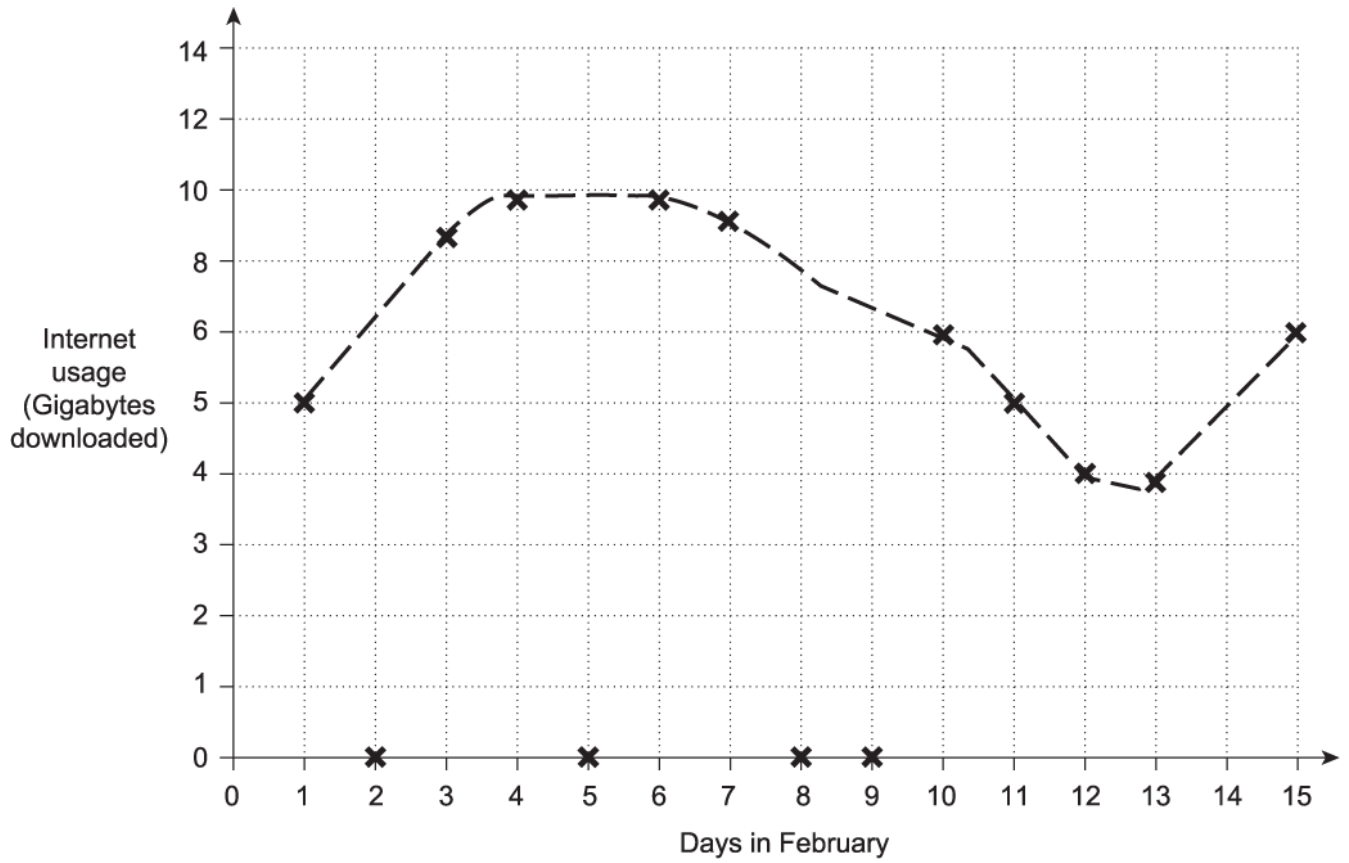


Draw and label a pie chart to represent this data.



[5]

5. Shinya's internet service provider gives him a graph of his internet usage in the first part of February.



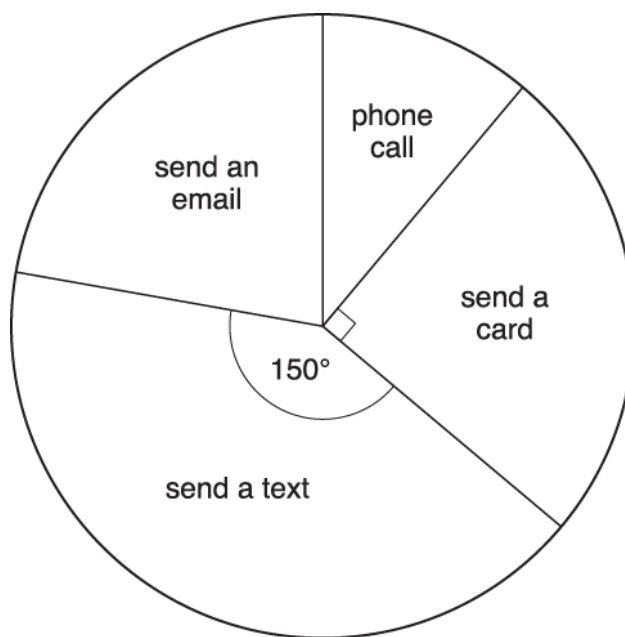
State two reasons why this graph is misleading.

1

2

[2]

6. The pie chart represents the way 144 people wish their friends Happy Birthday.



What fraction of the people send a card?

-----

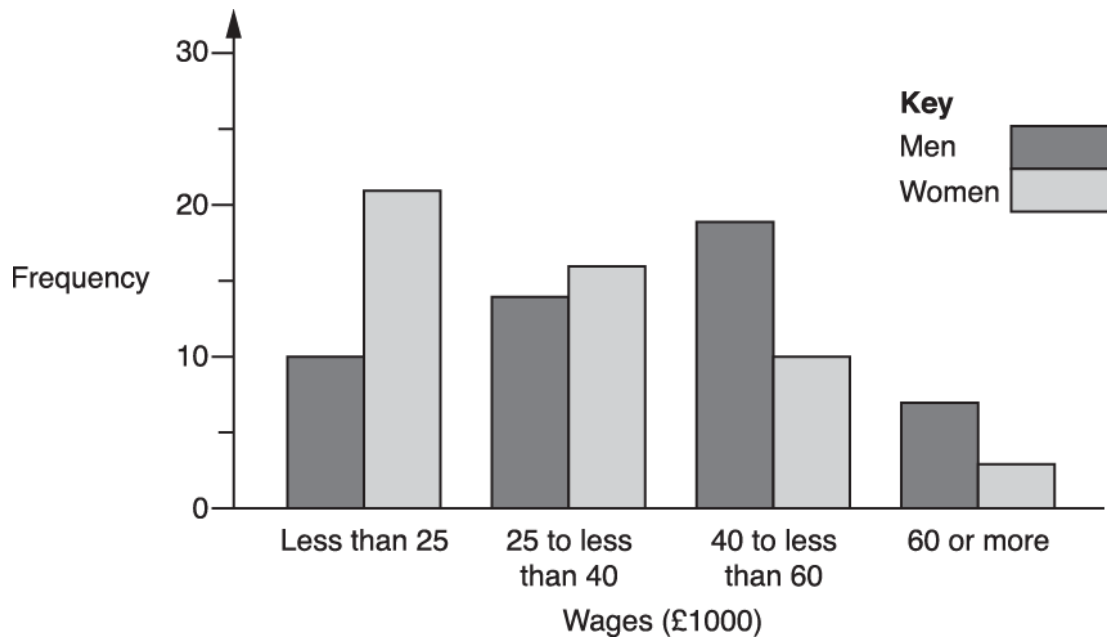
[1]



7. Fifty men and fifty women were asked:

'How much did you earn last year?'

The results are recorded in this bar chart.



(i) How many men earned from £25 000 to less than £40 000?

-----

[1]

(ii) What is the total number of men and women earning £60 000 or more?

-----

[1]

(iii) Work out the **percentage** of women who earned less than £40 000.

----- %



(iv) Compare the wages of the fifty men and fifty women.  
Give figures to support your answer.

-----  
-----  
-----



8. The table summarises information about the visitors to a library on one day.

	Under 18	18 to 60	Over 60	Total
Male	38	12		100
Female	56		45	150
Total			95	250

(i) Complete the table.

[2]

(ii) Find the ratio of male to female visitors.

Write the ratio in its simplest form.

----- :

[2]

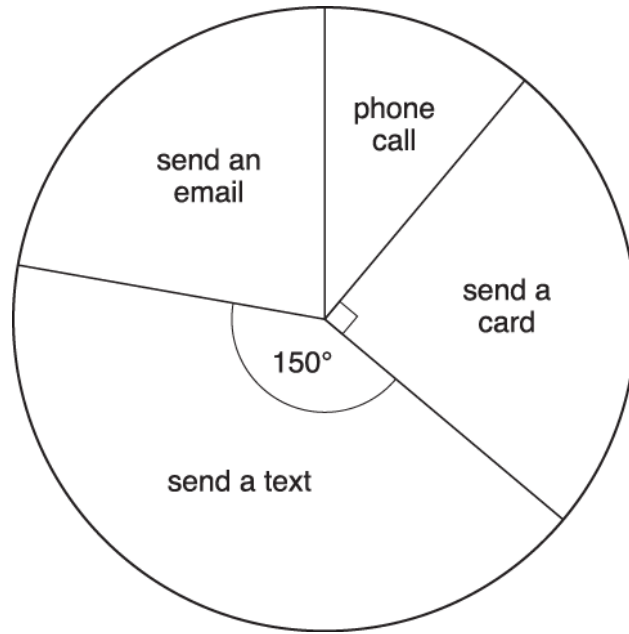
(iii) What fraction of the total number of visitors were females aged over 60?

Write the fraction in its simplest form.

-----

[2]

9. The pie chart represents the way 144 people wish their friends Happy Birthday.



How many of the 144 people send a text?

----- [3]

10. In a game, Ted can win, draw or lose.  
The probability that he wins is 0.38.  
The probability that he draws is 0.47.

Work out the probability that Ted loses.

---

[2]



11(a) This table shows the National Minimum Wage for 2011 to 2015.

This wage is the smallest amount that a person of a particular age should be paid for each hour they work.

Dates	21 and over	18 to 20	Under 18
1st Oct 2014 – 30th Sept 2015	£6.50	£5.13	£3.79
1st Oct 2013 – 30th Sept 2014	£6.31	£5.03	£3.72
1st Oct 2012 – 30th Sept 2013	£6.19	£4.98	£3.68
1st Oct 2011 – 30th Sept 2012	£6.08	£4.98	£3.68

In November 2014, Gareth was 18 years old.  
He was paid the minimum wage.

How much was he paid for working 8 hours?

£ ..... [2]



(b). Zoltan has always been paid the minimum wage for his work.  
He had his 21st birthday on 1st October 2013.

Work out how much his hourly pay increased on his 21st birthday.

£ ..... [3]

12. A dentist has this information about her patients.

Number of fillings	0	1 or 2	3 or 4	More than 4
Probability	0.25	0.17		0.4

(i) Complete the table.

[2]

(ii) One of the patients is chosen at random.

What is the probability that this person has 2 fillings or fewer?

(ii) -----

[2]

(iii) The dentist has 1500 patients altogether.

How many of these patients have 1 or 2 fillings?

(iii) -----

[2]

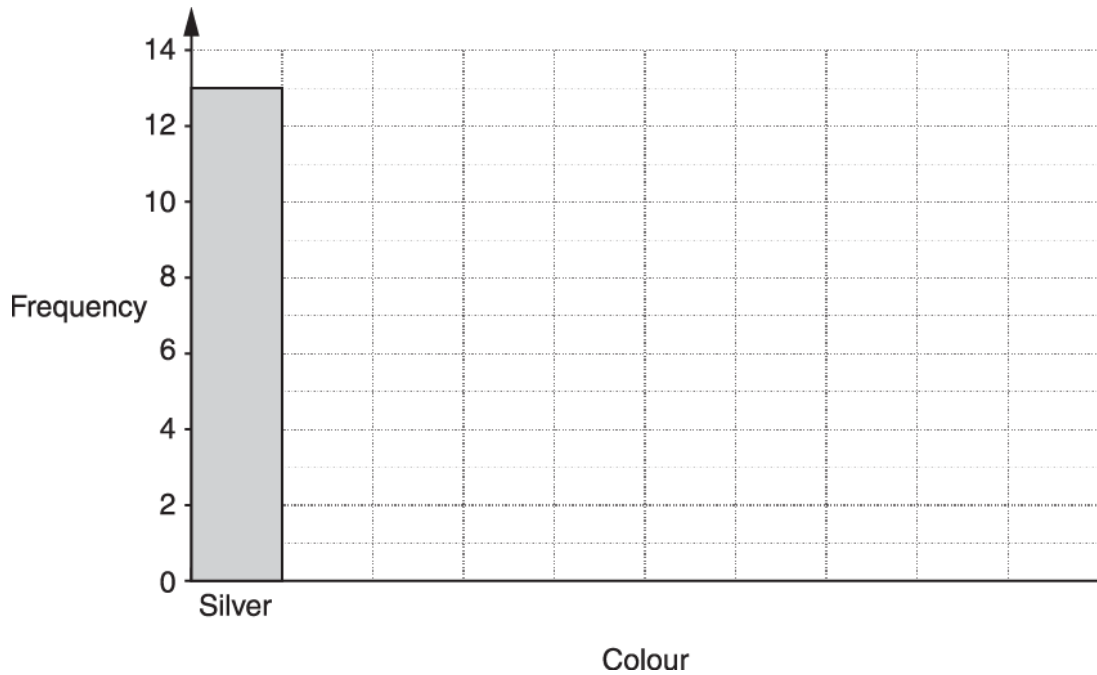
13. Jan counted the cars in the village car park one morning.  
Here is her record sheet.

Colour of car	Tally	Frequency
Silver		
Red		
Black		
Green		
Other		

- (i) Complete the frequency column of her record sheet.

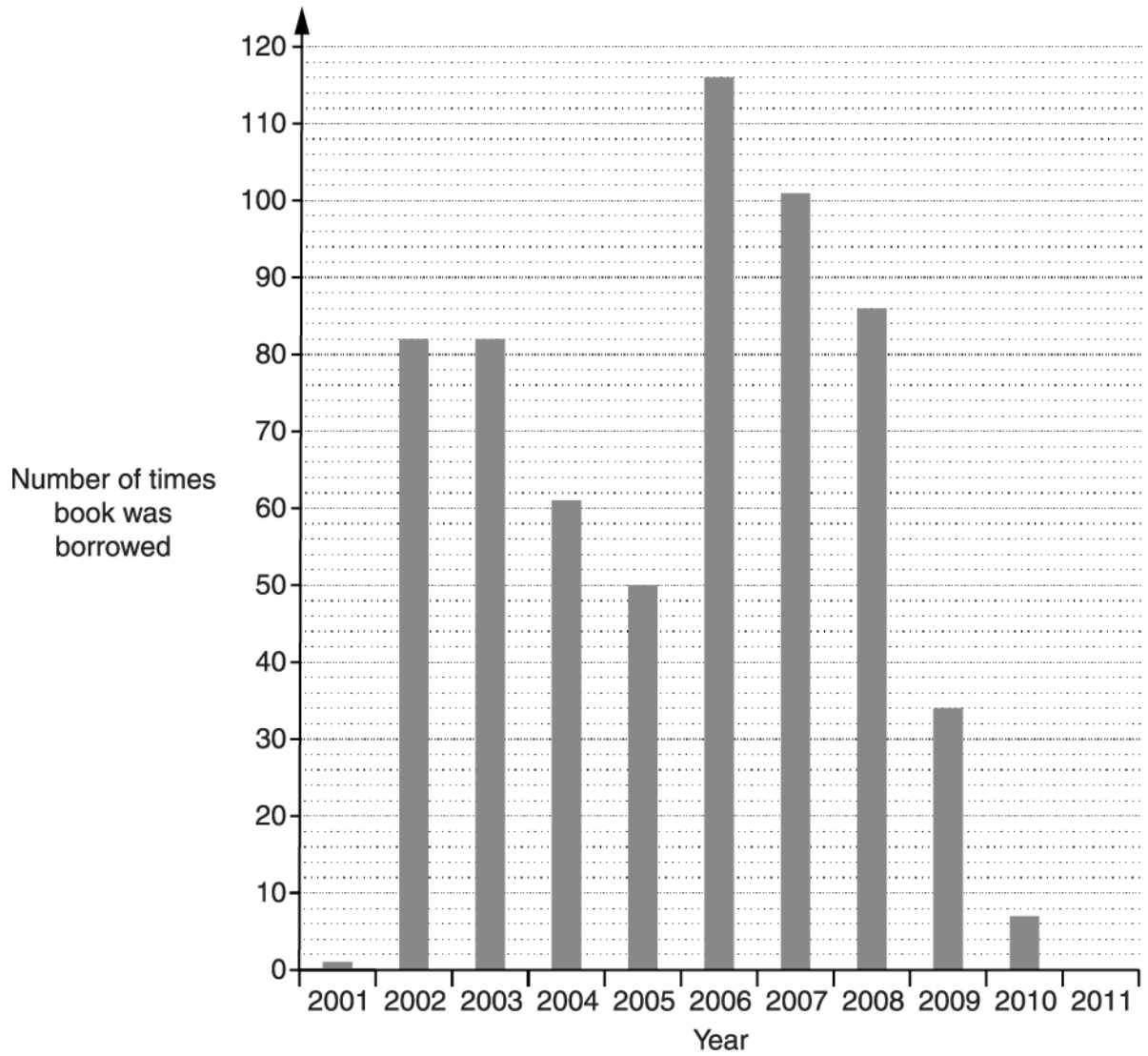
[1]

- (ii) Complete this bar chart to represent the data.



[2]

14(a) This bar chart shows the number of times that copies of one maths textbook were borrowed from a group of libraries each year from 2001 to 2010.



In which year was the book borrowed the most and how many times was this?

In \_\_\_\_\_ and it was borrowed \_\_\_\_\_ times. [2]



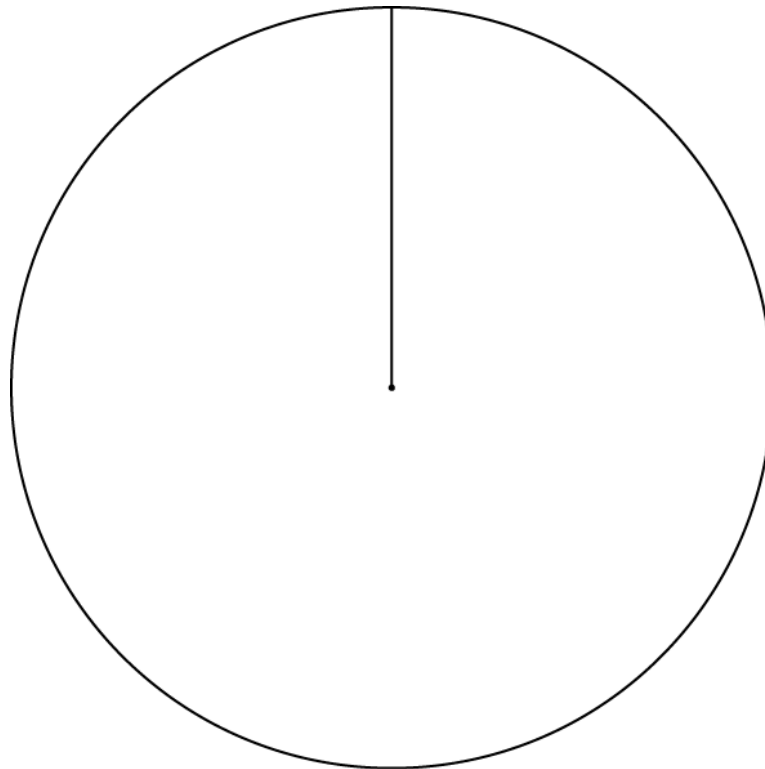
(b). How many **more** times was it borrowed in 2008 than in 2004?

----- [2]

15. Four people stand in an election to represent their class.  
Here are the number of votes they each obtain.

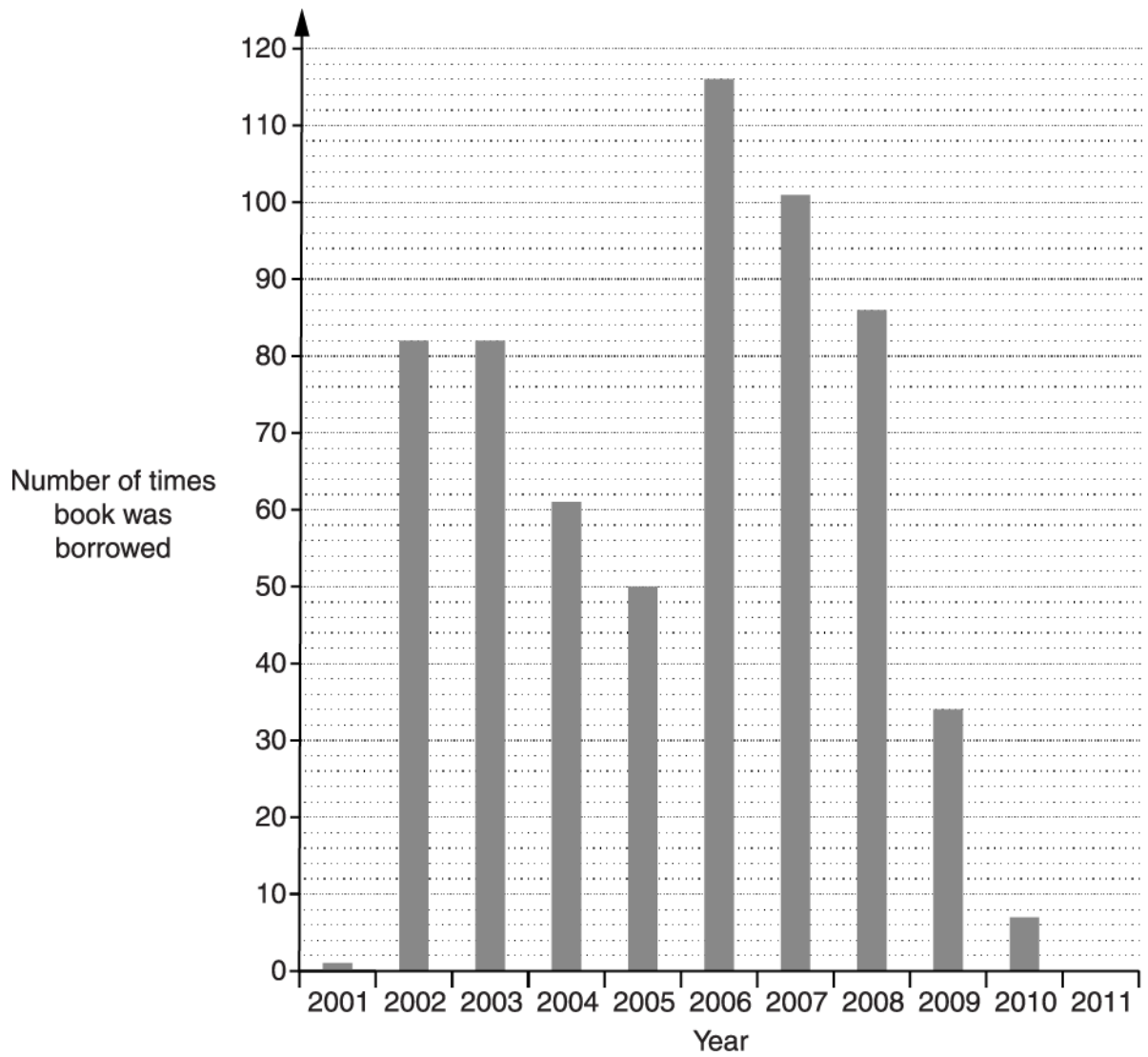
Name	Number of votes
Jessie	5
Anton	10
Vivek	8
Silpa	7
Total	30

Use the circle below to construct and label an accurate pie chart to represent these results.



[3]

16. This bar chart shows the number of times that copies of one maths textbook were borrowed from a group of libraries each year from 2001 to 2010.

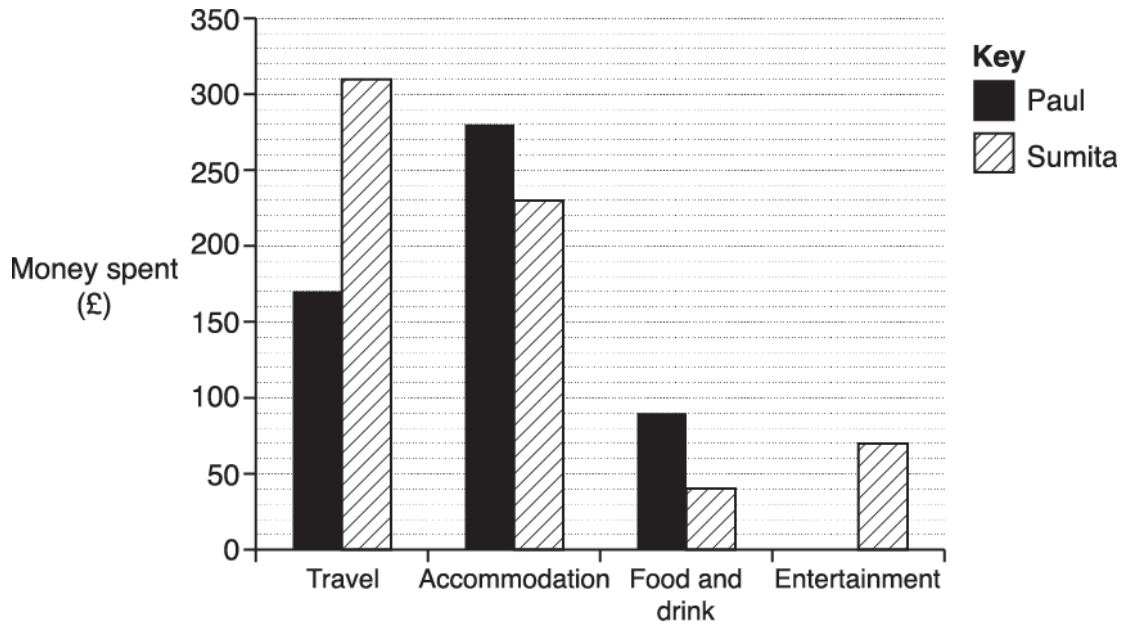


In 2011 it was borrowed 23 times.

Complete the chart by drawing the bar for 2011.

[1]

17(a) This bar chart shows the amounts that Paul and Sumita spent on their holidays.



Paul spent £120 on entertainment.

Complete the bar chart to show this information.

(b). How much did Sumita spend on travel? [1]

(b) £ ..... [1]

(c). Whose holiday cost more altogether, and by how much?

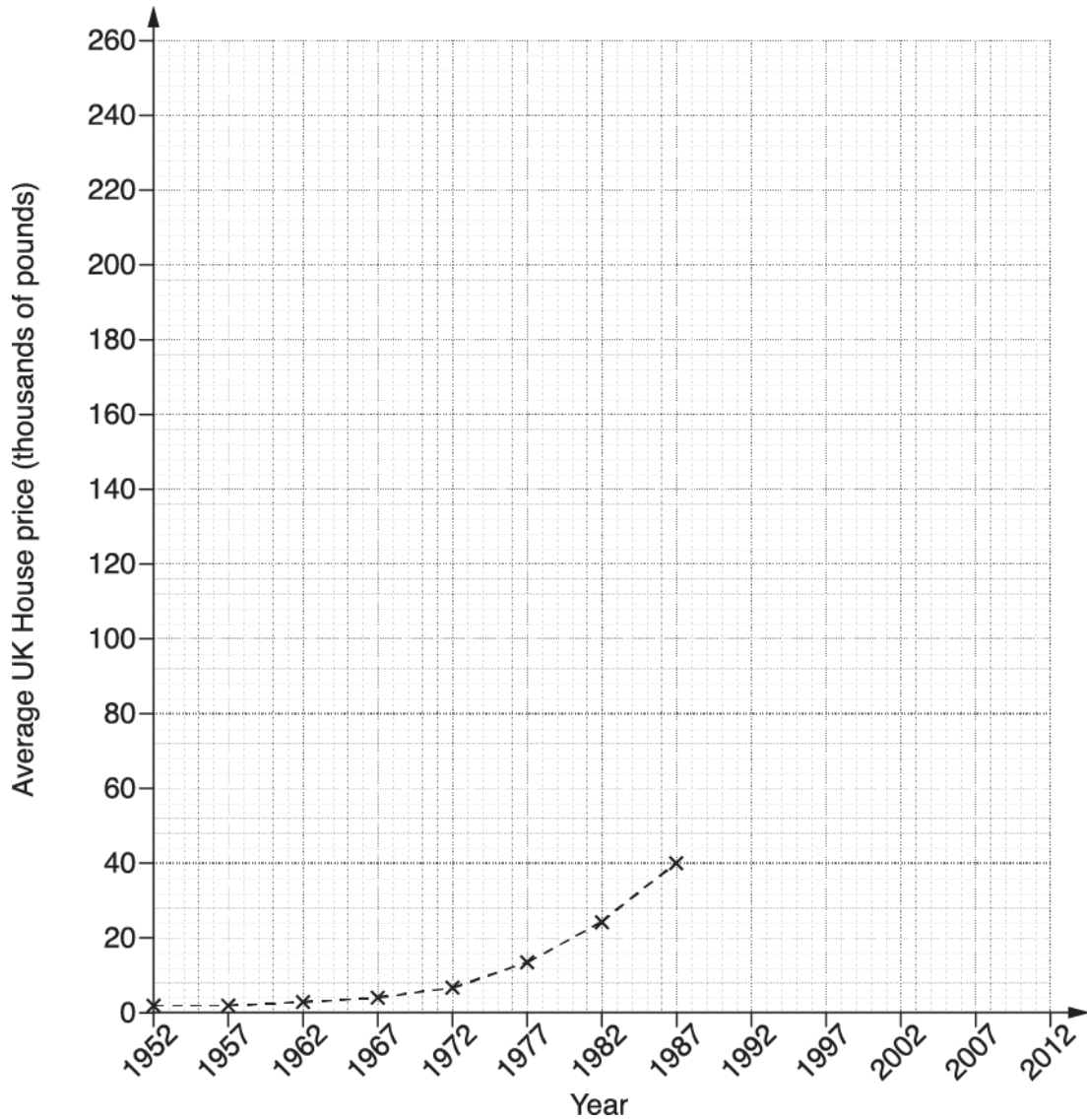
..... holiday cost more, by £ ..... [3]



18(a) This table shows the average price of a house in the UK every five years from 1952 to 2012.

The prices are given to the nearest £1000.

Year	1952	1957	1962	1967	1972	1977	1982	1987	1992	1997	2002	2007	2012
Price (thousands of pounds)	2	2	3	4	7	14	24	40	61	76	128	223	246



Complete the time series graph to show all the data.

[2]



(b). In which 5 year period did the average house price increase the most?

from \_\_\_\_\_ to \_\_\_\_\_ [1]



(c). Helen said that house prices did not increase from 1952 to 1957.

Explain why Helen might be wrong. Use figures to support your answer.

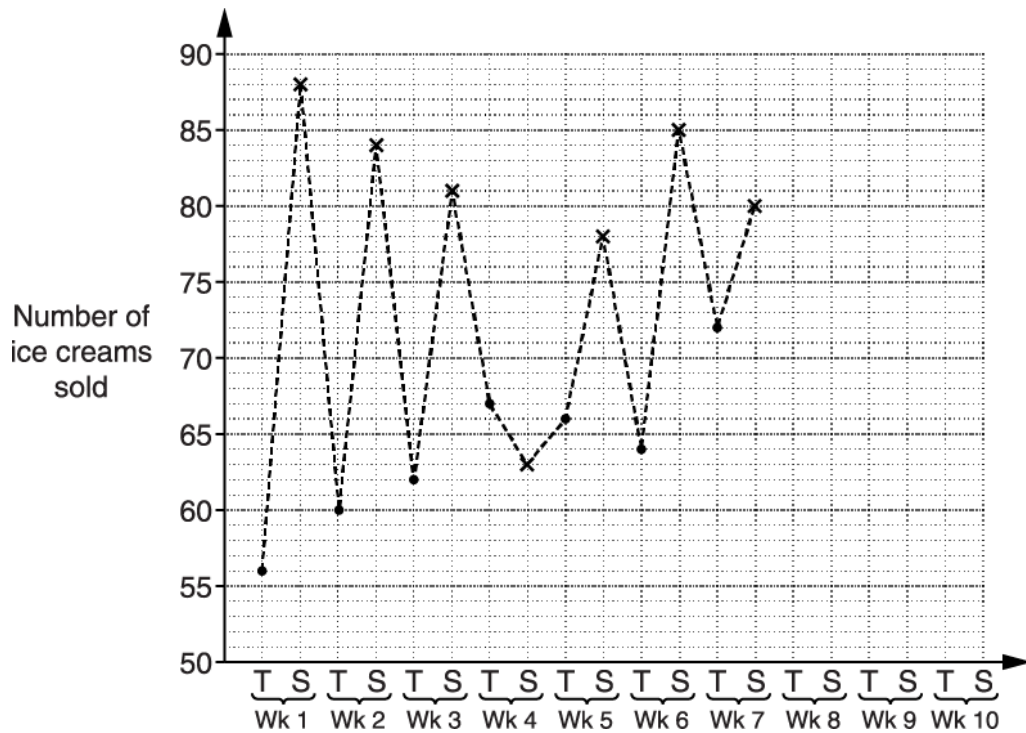
-----  
----- [2]



19(a) Robin sells ice creams at a market on Thursdays and Saturdays.

He records how many ice creams he sells on each of these days for 10 weeks.

Week (Wk)	1	2	3	4	5	6	7	8	9	10
Thursday (T)	56	60	62	67	66	64	72	74	77	78
Saturday (S)	88	84	81	63	78	85	80	84	86	83



Complete the time series graph.

The first 7 weeks have been done for you.

[2]



(b). Look at the time series graph.

Make two comments about Robin's data.

(1)

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(2)

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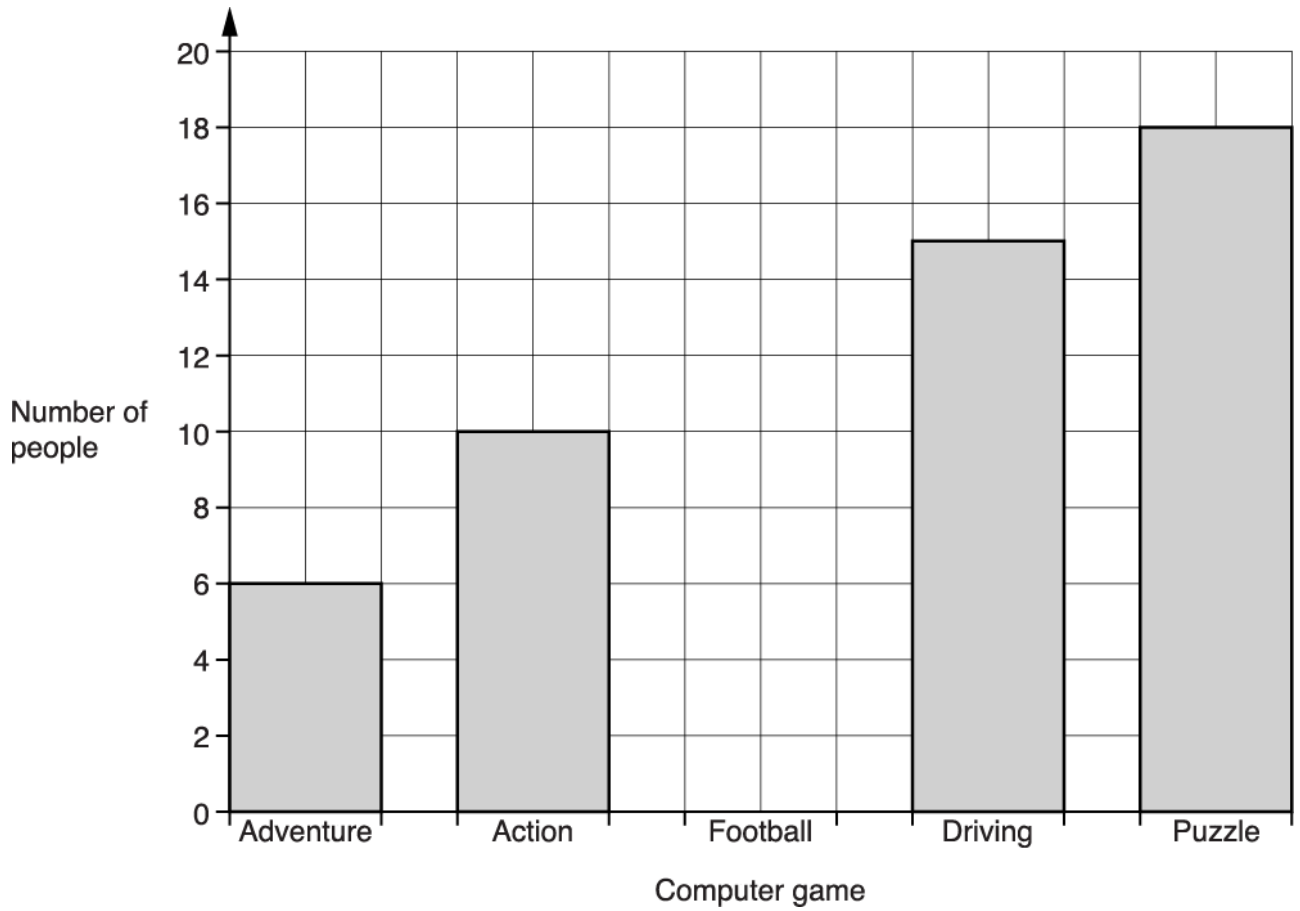
[2]





20(a) Leonie asked 60 people what their favourite type of computer game was.

She recorded her results on the bar chart below.



How many people answered Driving?

----- [1]



(b). 9 people answered Football.

Show this on the bar chart.

[1]



(c). What was the least popular type of game?

----- [1]



(d). How many **fewer** people chose Action than Puzzle?

----- [1]

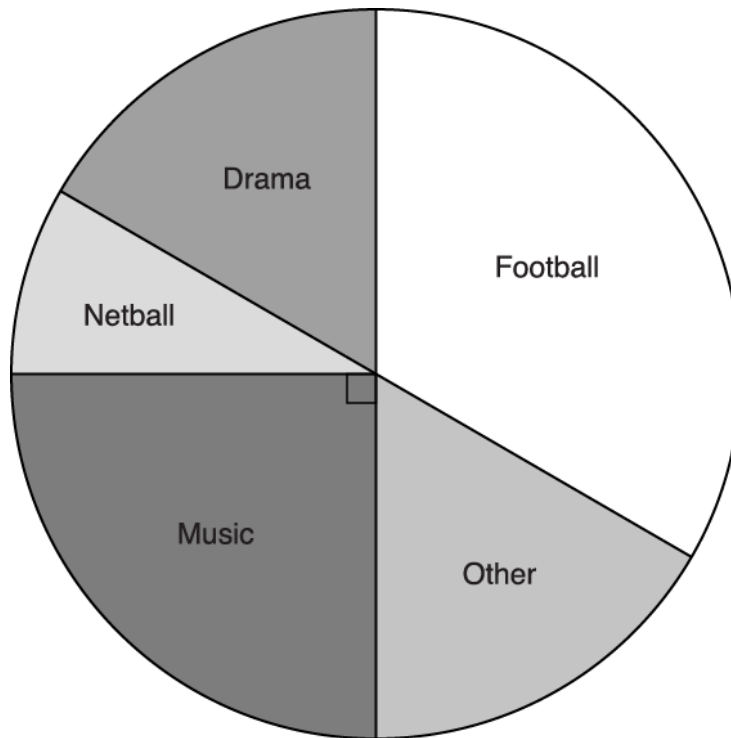


(e). How many people did not answer?

----- [2]

21(a) 48 students were asked which is their favourite leisure activity.

The results are recorded in this pie chart.



How many students said Music?

----- [2]

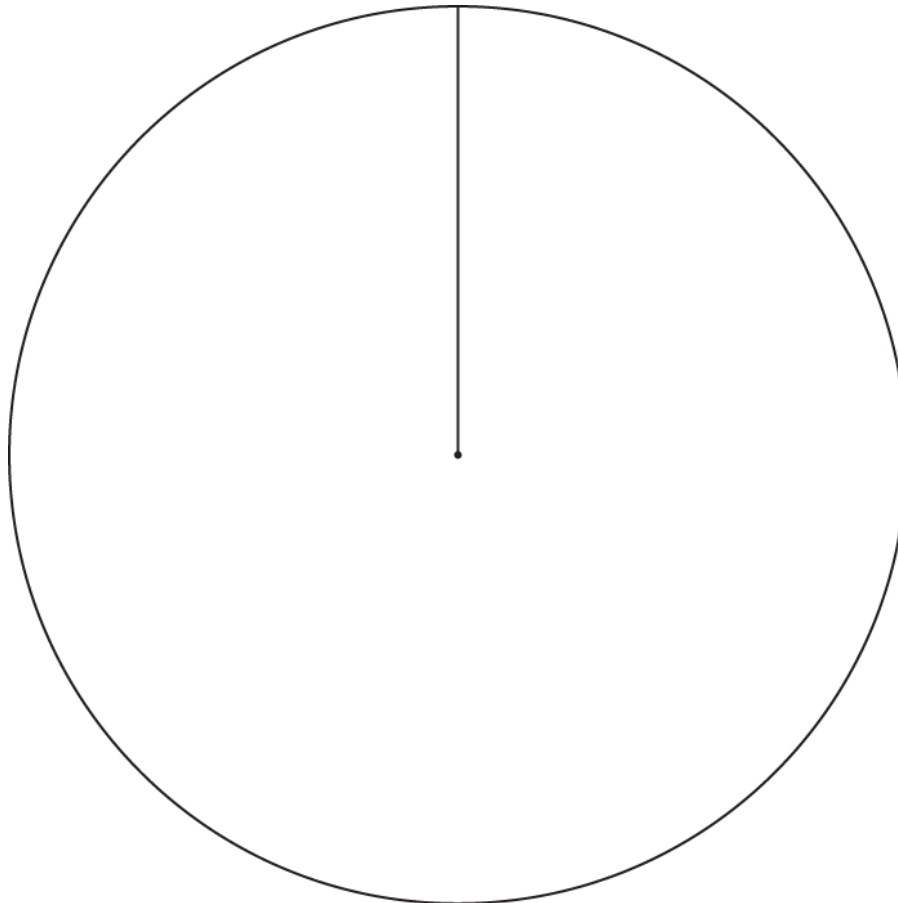
(b). How many students said Drama?

----- [2]

22. In 2013, Eastport Council had a budget of 90 million pounds.  
The table shows how the council spent its budget, in millions of pounds.

Education	45
Social Services	21
Environmental Services	15
Other Services	9

Draw and label a pie chart to represent this data in the circle below.



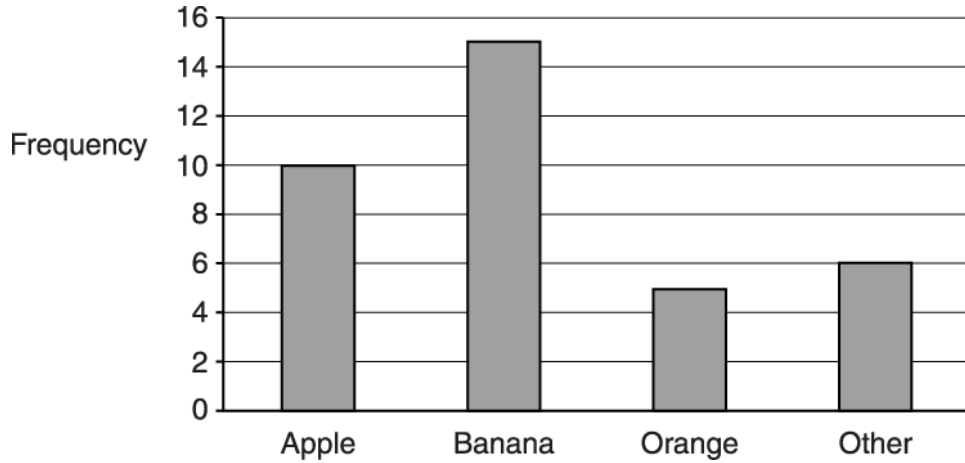
[4]



23. Teifi asks some pupils in her school the following question.

What is your favourite fruit?

She records her results in this bar chart.



(i) How many pupils replied orange?

(i) ..... [1]

(ii) Which is the most popular fruit of the pupils?

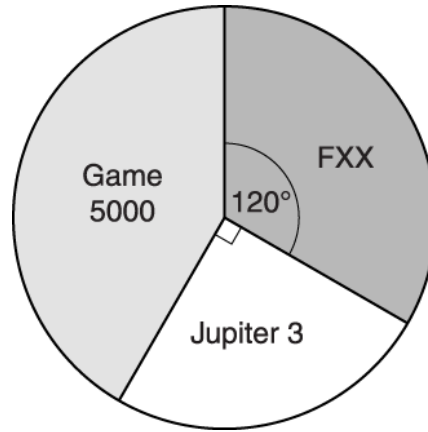
(ii) ..... [1]

(iii) How many pupils did Teifi ask altogether?

(iii) ..... [2]



24. This pie chart shows the number of games consoles owned by some students.



There are nine Jupiter 3 consoles.

How many Game 5000 consoles are there?

----- [3]



25(a) Jamilla records the favourite sweet of 40 children.

Sweet	Number of children
Chocolate	7
Jelly	13
Toffee	
Mint	2
Caramel	12

Complete her table.

[1]



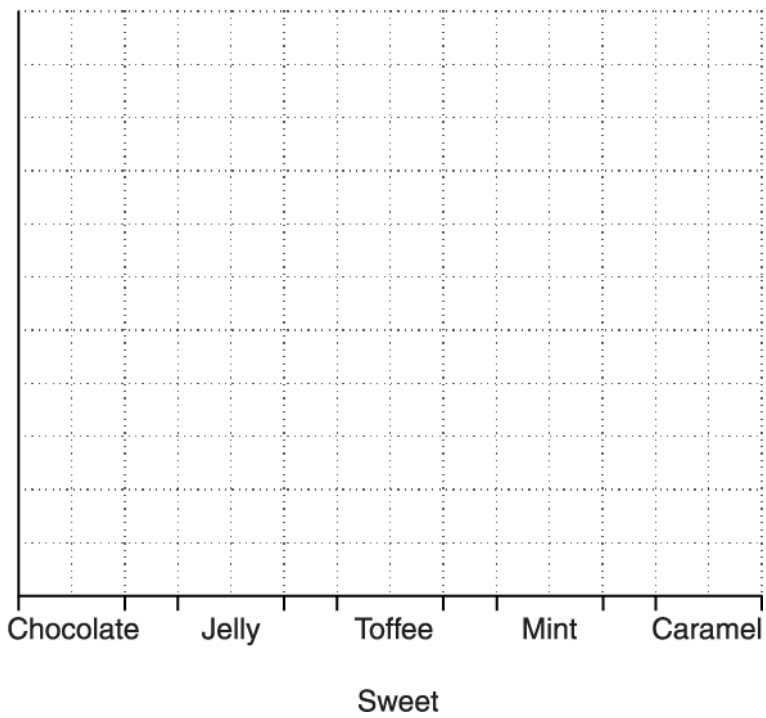
(b). Which sweet is the mode?

[1]



(c). Draw a bar chart to represent this data.

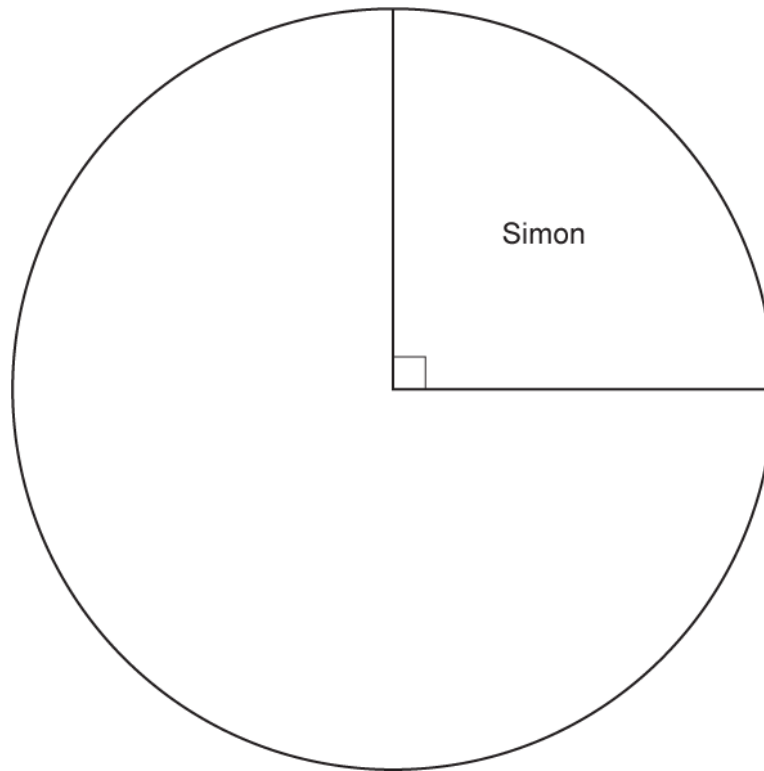
Number of children



[3]

26(a) Jorge recorded the scorers of 120 goals.

He started to draw a pie chart to show the results.



How many goals did Simon score?

----- [1]



(b). The table shows the **other** players who scored goals.

Name of scorer	Number of goals	Angle of sector
Wayne	48	144°
Harry	5	
Obi		72°
Antony		

(i) Complete the table. [3]

(ii) Complete the pie chart. [2]

**END OF QUESTION PAPER**

Question			Answer/Indicative content	Marks	Part marks and guidance										
1	a	i	<table border="1"> <tr> <td></td> <td>13</td> <td></td> </tr> <tr> <td></td> <td></td> <td>19</td> </tr> <tr> <td></td> <td>71</td> <td>61</td> </tr> </table>		13				19		71	61	2	<p><b>B1</b> for 2 entries correct</p> <p><b>Examiner's Comments</b></p> <p>Was invariably correct.</p>	
	13														
		19													
	71	61													
		ii	8	1	<p><b>Examiner's Comments</b></p> <p>As was although 30 was a common wrong answer here, presumably from using the numbers in the "Totals" column rather than the "Abbey" column.</p>										
	b		<p>Heights of all bars correct</p> <p>Equal widths by eye</p> <p>Correctly labelled bars</p>	<p>1</p> <p>1</p> <p>1</p>	<p>Accept eg shading with key After 0 + 0 + 0, <b>SC1</b> for eg vertical lines with correct heights and labels</p> <p><b>Examiner's Comments</b></p> <p>There were few frequency polygons and vertical line diagrams. However, that did not stop some candidates spoiling their bar charts by having unequal bar widths and/or uneven gaps between bars.</p> <p>Tolerance <math>\pm 1</math> mm</p>										
			<b>Total</b>	<b>5</b>											
2				3	<p><b>B1</b> for 13 in 'intersection'</p> <p><b>B1</b> for (16 – <i>their</i> '13') in 'Cat'</p> <p><b>B1</b> for sum of 8 + <i>their</i> three numbers = 30</p>										
			<b>Total</b>	<b>3</b>											
3	a		100	1											
	b		10	1											

Question		Answer/Indicative content	Marks	Part marks and guidance	
	c	One and a quarter boxes drawn	3	M2 for 50 or M1 for 310 or M1 FT from subtraction	
		<b>Total</b>	<b>5</b>		
4		Pie chart drawn with angles of 78°, 180°, 60°, 42°  Correct labelling	4  1	B1 for at least three of 13, 30, 10, 7 <b>seen</b> And B2 for two sectors correct Or B1 for one sector correct	
		<b>Total</b>	<b>5</b>		
5		Vertical axis is not consistent The line does not represent the days when he doesn't use the internet	2	B1 for each valid comment	
		<b>Total</b>	<b>2</b>		

Question			Answer/Indicative content	Marks	Part marks and guidance
6			$\frac{90}{360}$ oe	1	<p>Must be a fraction</p> <p><b>Examiner's Comments</b></p> <p>Candidates were usually very good at identifying 90° and a large number gave the correct fraction (usually simplified). Many did not give their answer in fraction form and some seemed to want to use the fraction and actually work out the number of people it represented. This often led to an answer of 36 having evaluated a quarter of 144. Others gave the fraction as 90/144.</p>
			<b>Total</b>	<b>1</b>	

Question			Answer/Indicative content	Marks	Part marks and guidance
7		i	14	1	<p>Allow 13</p> <p><b><u>Examiner's Comments</u></b></p> <p>This allowed candidates to demonstrate their chart reading abilities and some tolerance was allowed when reading values. Part (i) was answered well with only a few giving the incorrect value of 15.</p>
		ii	10	1	<p>Allow 9 – 11</p> <p><b><u>Examiner's Comments</u></b></p> <p>Part (ii) was also answered well with a small number giving a total for the men or the women rather than both.</p>

Question			Answer/Indicative content	Marks	Part marks and guidance	
		iii	74	2	M1 for 37/50 soi	<p>Allow 72 – 78 for 2 marks Allow 36/50 or 38/50 or 39/50 for M1 soi</p> <p><b><u>Examiner's Comments</u></b></p> <p>The increased difficulty level in part (iii) meant few marks were awarded. Those who gave a correct fraction usually converted this to a percentage. Many answered 16, 16/50 or 32% having read from the "25 to less than 40" bar only. Others correctly added the two bars but either did not write the corresponding fraction or did not use 50 for the total number of women. 37% was a common wrong answer from candidates not considering there were 50 women surveyed.</p>
		iv	Any correct statement	1	such as 'more men got higher wages than women'	Mark to candidates advantage, ignore
		iv	Data used to support their statement	1	such as '52% of men earned more than £40 000 compared with 26% of women'	incorrect statements unless contradictory.

Question			Answer/Indicative content	Marks	Part marks and guidance
		iv			<p><b><u>Examiner's Comments</u></b></p> <p>Difficulties in interpreting the graph meant that many struggled to compare the wages in (iv). A lot of candidates seemed to think that the bar heights in each group were showing actual wages, rather than the number of men / women with earnings in that range.</p> <p>Many candidates were able to state that 'men earned more than women' fewer supported this with figures from the graph. When data was used to support their argument it was not always appreciated that they needed to compare like with like. For example data for women in one interval was sometimes compared with data for men in a different interval.</p>
			<b>Total</b>	<b>6</b>	

Question			Answer/Indicative content	Marks	Part marks and guidance													
8		i	<table border="1"> <tr> <td>38</td> <td>12</td> <td>50</td> <td>100</td> </tr> <tr> <td>56</td> <td>49</td> <td>45</td> <td>150</td> </tr> <tr> <td>94</td> <td>61</td> <td>95</td> <td>250</td> </tr> </table>	38	12	50	100	56	49	45	150	94	61	95	250	2	All four values correct <b>B1</b> for two or three values correct	<p><b>Examiner's Comments</b></p> <p>Most candidates demonstrated clear understanding of 2-way tables either providing a fully correct grid or gaining 1 mark for a partial correct solution, usually the values of 50 and 94.</p>
38	12	50	100															
56	49	45	150															
94	61	95	250															
		ii	2 : 3 or 1 : 1.5 or $\frac{2}{3} : 1$	2	<p>M1 for 100 : 150 or better seen</p> <p>OR</p> <p>SC1 for</p> <p>3 : 2 or 1.5 : 1 or <math>1 : \frac{2}{3}</math></p>	<p>For 2 marks or SC1 do not ISW For M1 accept any equivalent, including fractions and decimals to 3sf or better</p> <p><b>Examiner's Comments</b></p> <p>In (ii) about two thirds of candidates gave a correct ratio, often left as 100:150 or partially simplified to 50:75. The order was mostly correct with only a very few giving ratios of 3:2 or similar.</p>												
		iii	$\frac{9}{50}$ final answer	2	<p>M1 for <math>\frac{45}{250}</math> fraction seen</p> <p>OR SC1 for <i>their</i> fraction seen written in simplest form</p>	<p>Accept eg <math>\frac{4.5}{25}</math> as an equivalent</p> <p>Both simplified and unsimplified fractions seen</p>												



Question			Answer/Indicative content	Marks	Part marks and guidance	
		iii				<p><b>Examiner's Comments</b></p> <p>Few candidates were able to use the values in the table to arrive at a correct fraction, however a number were able to simplify their own fraction successfully. 45 often obtained for the numerator was seen with incorrect denominators of 150 or 95.</p>
			<b>Total</b>	<b>6</b>		
9			60	3	<p>M2 for <math>(150 \div 360) \times 144</math>  M1 for <math>(150 \div 360)</math> or 2.5</p>	<p>Accept equivalent methods</p> <p><b>Examiner's Comments</b></p> <p>This part introduced a variety of different methods many of which could score M1 for a first step in a correct calculation. There often appeared to be confusion about how to proceed with the results of this calculation and many failed to gain any further credit. The calculation <math>360 \div 150 \times 144</math> appeared as a common error. The concept of the required answer being a fraction of 144 was not often fully realised and many examples of incorrect mixing of degrees and people were seen. The <math>90^\circ</math> angle was often equated with 36 people without further progress being made. A correct answer sometimes resulted from totally incorrect working and, as such, scored no marks.</p>
			<b>Total</b>	<b>3</b>		

Question		Answer/Indicative content	Marks	Part marks and guidance	
10		[0].15 or $\frac{15}{100}$ oe	2	M1 for 1 – 0.38 – 0.47 oe	<p>Do not accept just 15</p> <p><b>Examiner's Comments</b></p> <p>A high access question with a good majority of correct answers. Very few showed calculation of 1 – 0.85 even when the correct answer was given. Most candidates scored 2 or 0 but those who gained the method mark usually failed to add 0.38 and 0.47 correctly. There were a few students who used percentages then did not use the percentage sign.</p>
		<b>Total</b>	<b>2</b>		

Question		Answer/Indicative content	Marks	Part marks and guidance	
11	a	41.04 oe	2	<p><b>B1</b> for 5.13 Or</p> <p><b>M1</b> for (5.13 or 5.03 or 4.98) × 8 oe Soi 40.24 or 39.84</p> <p><u>Examiner's Comments</u></p> <p>Most candidates gained at least 1 mark. The error was often to look up the wrong value from the table but many also lost marks because of an inability to multiply, for instance £5.13 by 8. Most used listing to answer the multiplication.</p>	May be by repeated addition
	b	1.33 or 133p	3	<p>Accept 133 p but not 133 or 1.33p</p> <p><b>M2</b> for 6.31 – 4.98 oe</p> <p>or</p> <p><b>B1</b> for 6.31 oe or 4.98 oe seen</p> <p><u>Examiner's Comments</u></p> <p>Most candidates gained at least 1 mark. Many candidates incorrectly used £6.19 rather than £6.31 in their calculation. Again, subtraction was poorly done.</p>	May be in pence
		<b>Total</b>	<b>5</b>		

Question			Answer/Indicative content	Marks	Part marks and guidance	
12		i	0.18 oe	2	M1 for $1 - (0.4 + 0.17 + 0.25)$ soi by answer 0.54	<p>In (i), (ii) : ignore qualifying words : ignore any conversion attempts : -1 once for poor notation</p> <p style="text-align: center;"><u>0.42</u></p> <p>e.g. <math>\frac{1}{1}</math> ratio etc</p> <p><b>Examiner's Comments</b></p> <p>The majority of candidates knew the probabilities had to add to 1 and could find the missing value.</p>
		ii	0.42 oe	2	M1 for $0.25 + 0.17$ oe	<p><b>Examiner's Comments</b></p> <p>There were many correct answers. A small number of candidates had an answer of 0.17, failing to include 0 in their total for less than 2.</p>
		iii	255	2	M1 for $0.17 \times 1500$ oe	<p>Ignore rounding after correct answer</p> <p><b>Examiner's Comments</b></p> <p>There were many correct answers in (iii). Most candidates successfully used their calculator to solve the problem. A few used a non-calculator method which often led to errors.</p>
			<b>Total</b>	<b>6</b>		

Question			Answer/Indicative content	Marks	Part marks and guidance	
13		i	13, 5, 9, 2, 4	1	<b>Examiner's Comments</b> The table was usually completed accurately.	
		ii	Bars the correct height	1 FT		
		ii	bars same width, equal gaps and colours labelled (e.g. R B G O)	1	<b>Examiner's Comments</b> The corresponding bar chart was usually correctly drawn.	
			<b>Total</b>	<b>3</b>		
14	a		2006, 116	2	<b>B1</b> each <b>Examiner's Comments</b> Good attempts were made at this question.	
	b		25	2	<b>M1</b> for 86 and / or 61 <b>Examiner's Comments</b> Good attempts were made at this question.	
			<b>Total</b>	<b>4</b>		

Question		Answer/Indicative content	Marks	Part marks and guidance	
15		Pie chart with all sectors correct: J 60°, A 120°, V 96°, S 84°, tolerance 2° and correct labels	3	<p><b>M2</b> for a 4-sector chart with 2 sectors within tolerance Or <b>M1</b> for 60, 120, 96 and 84 seen or for a pie chart with 1 correct angle (even if not 4 sectors)</p> <p>Accept abbreviations for labels</p> <p><b>Examiner's Comments</b></p> <p>While there were many fully correct pie charts, there were also many where the candidates appeared to have just guessed the sizes of the angles. It was rare to see the angles actually being calculated.</p>	<p>Use the scoris protractor to check the angles: for unruled lines, check the angle where a line crosses / would cross the circumference</p> <p>Condone 5, 10, 8, 7 for labels</p>
		<b>Total</b>	<b>3</b>		
16		Bar height 23 drawn for 2011	1	<p>Must attempt to go between 22 and 24 lines</p> <p><b>Examiner's Comments</b></p> <p>Good attempts were made at this question.</p>	
		<b>Total</b>	<b>1</b>		

Question		Answer/Indicative content	Marks	Part marks and guidance	
17	a	120 plotted correctly	1	tol < 1 mm  <b>Examiner's Comments</b>  Good answers were seen from most candidates to all three parts of this question.	
	b	310	1	<b>Examiner's Comments</b>  Good answers were seen from most candidates to all three parts of this question.	
	c	Paul by £10	3	<b>nfww</b> M1 for Paul 170 + 280 + 90 + 120 or 660 and M1 for Sumita 310 + 230 + 40 + 70 or 650 <b>alt method</b> M1 for S 140 more on travel oe soi and M1 for P 50 + 50 + 50 more oe soi or 150 more [on others] oe soi  <b>Examiner's Comments</b>  In part (c), candidates sometimes made addition errors but were able to score part marks, often 2 out of 3, by showing their working.	at least 3 of 4 correct  at least 3 of 4 correct  at least 2 of 3 correct  If answer is wrong or missing and not working then check graph in (a)
		<b>Total</b>	<b>5</b>		

Question		Answer/Indicative content	Marks	Part marks and guidance	
18	a	5 points correct	2	B1 for 2, 3 or 4 points correct	±1 small square Use overlay Ignore any joining or extra points
	b	2002 to 2007	1		
	c	[Values are] rounded	1	Accept "[correct] to the nearest 1000" for "rounded"	Ignore comments on average
		[Could have] increased by ×	1	<p><math>0 &lt; x &lt; 1000</math></p> <p>May give any two different values from 1500 to 2500</p> <p><b>If 0 scored SC1</b> for they could rise and fall back oe or there could be a small change</p> <p><b>Examiner's Comments</b></p> <p>This question, where QWC marks were available, was reasonably answered. The points were difficult to plot but generally they were quite well positioned. In part (b) the correct period was often chosen although some candidates identified 10 year periods. Part (c) was not well answered although many did identify that the data was rounded to the nearest thousand. Few used figures correctly to support their answers. Some candidates were awarded a mark for saying that small changes would not be seen on the graph or that the prices could rise and fall back during the period. Some scored no marks for saying that the graph did show a tiny rise.</p>	<p>Need a quantitative reason Condone 1000</p> <p><b>Exemplar Response</b> They could have increased between 1952 and 1957 and then decreased back to 2 (SC1) The increase in price might not have been big enough to show up on this graph's scale (SC1) The prices are given to the nearest thousand, so they could have increased but just not over the £2500 mark as then it would be £3000 to the nearest thousand (1 1) Because prices are given to the nearest thousand so by saying two it can be between 1500 and 2499 (1 1) It is difficult to see where exactly the points are because the y scale is too small (0) It is right because the price was 2000 each and it did not increase, price was constant (0) Price in 1952 is only about £2000. The change may be as small as £200 but that is a 10% increase (0 1) Because it is an average and not an exact amount (0) They increase by</p>



Question			Answer/Indicative content	Marks	Part marks and guidance
					<p>thousands but a house might have raised by hundreds (0 1)</p> <p>It may have increased because although the prices are both £2000, 1952 could have been closer £2000 and 1957 could have been nearer £3000 (0 Too vague)</p> <p>Because an average is not always accurate at 1952 the price was 2 however in 1957 it's around 2.5 as there is a curve in the graph (0)</p> <p>Because from 1952–1957 it only shows the average, some houses may have increased (0)</p> <p>It could have increased by a different number instead of thousands (0)</p> <p>Because it is rounded to the nearest thousand so you don't know (1 0)</p> <p>Because it is rounded to thousands of pounds, so it may just not be a major increase (1 0)</p> <p>We know it was 2 in 1952 and 2 in 1957, but any time in between those times it could have been different (SC1)</p> <p>As the average house price goes up by £4000 (0)</p> <p>The price is in thousands (to the nearest), so 1952 may have been £1500 to 57's £2500 (1 1)</p> <p>They may of rose by a small amount, the scale is too big to see (SC1)</p>
			<b>Total</b>	<b>5</b>	

Question		Answer/Indicative content	Marks	Part marks and guidance	
19	a	6 correct points plotted	2	<p><b>B1</b> for at least 3 correct</p> <p><u>Examiner's Comments</u></p> <p>This question, that was common to Higher and Foundation, was well responded to. Candidates were generally able to read and use the scale well and so scored marks for correct plotting.</p>	<p>Tolerance 2 mm</p> <p>Ignore any connecting lines</p>
	b	<p>Correct response 1</p> <p>Correct response 2</p>	<p>1</p> <p>1</p>	<p>Allow 1 for each distinct comment to a maximum of 2</p> <p>Thurs sales generally increasing Sat sales usually more than Thurs Sat sales fall then rise From week 5 the trend in sales is upwards Sat week 4 very low or anomaly oe As the amount of weeks increase the difference between sales decreases</p> <p><u>Examiner's Comments</u></p> <p>They did, however, lose marks for making assertions such as, "Saturday is higher than Thursday" without saying that this was only "generally" so. Marks were lost for carelessly describing trends. Only a few made comments to the effect that "He had a lot of data" or that "It showed trends well".</p>	<p>Picking out individual points scores 0 eg '88 ice creams were sold on Sat week 1'</p> <p>Inverse statements credited only once eg Sat good then Thurs not so good</p> <p>Comments should apply to the whole data set.</p> <p>General comments should say 'usually' or 'generally' if they are not always true.</p> <p>He usually sells more on Saturdays (1) The no. sold on a Sat decrease then start to increase (1) After about 6 weeks he sells more on average (1) Week 1 had the biggest range of sales (1) The data becomes more consistent at the end (1)</p> <p>It keeps going up and down (0) Not always She doesn't sell much on Thurs (0) Compared to what? The number sold on Thurs always increases (0) Not always He sells more on Saturdays</p>

Question			Answer/Indicative content	Marks	Part marks and guidance
					(0) Not always He sells more on Sat week 1 than Sun week 1 (0) Doesn't apply to all the data (and not Sunday) As the weeks went on he sold more and more each week (0) Not true He is <b>starting</b> to sell more ice creams (0) When?  There is an anomaly in his data on Week 4 (1) It's fluctuating each Sat & Thurs except Week 4 (1) On Thurs week 4 more sold than on Sat (1) There is a positive correlation (0) Irrelevant
			<b>Total</b>	<b>4</b>	

Question			Answer/Indicative content	Marks	Part marks and guidance	
20	a		15	1	<p><b>Examiner's Comments</b></p> <p>This question was answered very well with most if not all students getting full marks.</p>	
	b		bar of height 9, width 2 in correct position	1	<p><b>Examiner's Comments</b></p> <p>On the whole, this was answered well. On the rare occasion students scored 0 the bar was outside tolerance, generally being slightly too tall rather than too short. Even more rarely the width of the bar was one square as opposed to two. However, many candidates drew the bar freehand.</p>	8.75 to 9.25 by eye Width of 2 squares bar sides must be drawn
	c		Adventure	1	<p><b>Examiner's Comments</b></p> <p>The majority of candidates answered 'adventure' but some confused least with most and the answer of 'puzzle' was occasionally seen.</p>	
	d		8	1	<p><b>Examiner's Comments</b></p> <p>Again another well answered question, on the very odd occasion an answer of 28 was given where the candidate added the frequency of the bars as opposed to subtracting.</p>	

Question		Answer/Indicative content	Marks	Part marks and guidance	
	e	2	2	<p>M1 for <math>60 - (6 + 10 + 9 + 15 + 18)</math> or B1 for 58</p> <p><b>Examiner's Comments</b></p> <p>Whilst a majority of candidates scored 2 marks, there were some who gave the answer of 58 and had forgotten to subtract from 60. Candidates should be encouraged to write their sum in a vertical list as this usually leads to fewer addition errors. In some cases candidates clearly had attempted to sum the required numbers but obtained the incorrect total resulting in an incorrect final solution. Had they shown evidence of working, in most of these cases they would have achieved the method mark. These candidates need reminding that methods must be shown regardless of the difficulty of the numerical calculations.</p>	check graph
		<b>Total</b>	<b>6</b>		

Question			Answer/Indicative content	Marks	Part marks and guidance	
21	a		12	2	<p>M1 for <math>48 \div 4</math> oe or one quarter oe soi</p> <p><b>Examiner's Comments</b></p> <p>Many candidates appreciated that to find the required number of students you divided the total number of students by 4 and obtained the correct response.</p>	90/360 not good enough for M1
	b		8	2	<p>M1 for 60[°] soi or 2/3 their quarter</p> <p><b>Examiner's Comments</b></p> <p>There were a few students who gave good responses, demonstrating a sound understanding of how a pie chart works. Some did not realise that they needed to measure the angle and use proportion, for which the arithmetic was quite straightforward. A few attempted to divide the circle into parts without measuring the angle but this approach lacked accuracy and resulted in answers such as 9 students.</p>	60 may be on the diagram
			<b>Total</b>	<b>4</b>		

Question		Answer/Indicative content	Marks	Part marks and guidance	
22		Correct Pie Chart with sector angles 180°, 84°, 60°, 36° ( $\pm 2^\circ$ )	3	3 or 4 angles correct <b>M2</b> for 2 sectors correct Or <b>M1</b> for 1 sector correct or 180, 84, 60, 36 all seen	Ignore labelling when measuring sectors
		Correct labelling	1	Correctly labelling <i>their</i> pie chart with <b>four</b> sectors, may use a key  <b>Examiner's Comments</b>  Most candidates understand the principle of a pie chart and only a few used the raw data as angles giving a circle with only a quarter shaded in, for which no credit was given. Some of the angles were not accurate but most, of course, realised that there needed to be an angle of 180° for education. Labelling was generally good. There were lots of fully correct solutions appropriately presented.  Some sectors were drawn freehand, rather than with a ruler. Candidates must realise that appearance and accuracy are important when presenting data.	Labelling must be consistent with the original data, E>SS>ES>OS Condone abbreviations
		<b>Total</b>	<b>4</b>		

Question			Answer/Indicative content	Marks	Part marks and guidance	
23		i	5	1		
		ii	Banana	1		
		iii	36	2	M1 for adding <i>their</i> frequencies (four sensible figures, two of which must be correct) of the four fruits	
		iii			<b>Examiner's Comments</b>  The responses to this question were very good with nearly all candidates obtaining the correct answers to the questions on bar charts and pictograms. A very small number made errors in calculating the total number of pupils in part (iii), but most showed some working and were able to obtain the method mark.	
			<b>Total</b>	<b>4</b>		
24			15	3	M1 for 10° represents 1 person <b>soi</b> AND M1 for 360 – (120 + 90) or 150 seen.	for example 30° represents 3 people scores <b>M1</b>
			<b>Total</b>	<b>3</b>		



Question		Answer/Indicative content	Marks	Part marks and guidance	
25	a	6	1		
	b	Jelly	1	FT toffee $\geq 13$	Condone Jelly with 13
	c	Linear scale for frequencies starting from 0  Fully correct bar chart 7, 13, 6, 2, 12	1  2FT	FT <i>their</i> value for toffee in the table B1 for <i>their</i> 4 correct heights or bars of equal widths and gaps  Examiner's Comments  This question was generally done well with few errors in parts (a) and (b). In part (c) most candidates appeared to understand what a linear scale was but some marked the spaces not the lines. The majority of candidates who scored 3 marks had used the linear scale best suited to the space provided, increments of 2, those who used increments of 3 or 5 found it difficult to accurately mark the heights of the bars. Candidates should be encouraged to use a ruler.	0 need not be marked if no scale FT implied consistent linear scale  Do not condone extensions to grid. Heights must be in correct half of square. Do not follow through incorrect scale for heights Condone freehand
		Total	5		

Question		Answer/Indicative content	Marks	Part marks and guidance					
26	a	30	1	<p><b>Examiner's Comments</b>  Part (a) was well answered. In (b)(i) fewer correct responses were seen, though the majority correctly calculated the sector angle of 15° (row 2) and/or 24 goals (row 3). Many candidates did not include Simon's result when calculating the values. In (b)(ii) some candidates with a correctly completed table in (i) seemed to have difficulty drawing the pie chart, yet several scored 1 mark for correctly drawing and labelling one sector. Marks were commonly lost in giving some angles out of tolerance through poor use of a protractor and failing to fully label the pie chart.</p>					
	b	i	15	1					
			24	1					
			13      39	1					
		ii	fully labelled pie chart with at least 3 sectors correctly drawn	2	<table border="0"> <tr> <td>B1 for 1 correct sector correctly labelled or pie chart with at least 3 sectors correctly drawn with incorrect or no labels</td> <td>Wayne 144 Harry 15 Obi 72 Antony 39</td> </tr> <tr> <td></td> <td>Allow <math>\pm 2^\circ</math></td> </tr> </table>	B1 for 1 correct sector correctly labelled or pie chart with at least 3 sectors correctly drawn with incorrect or no labels	Wayne 144 Harry 15 Obi 72 Antony 39		Allow $\pm 2^\circ$
B1 for 1 correct sector correctly labelled or pie chart with at least 3 sectors correctly drawn with incorrect or no labels	Wayne 144 Harry 15 Obi 72 Antony 39								
	Allow $\pm 2^\circ$								

Question			Answer/Indicative content	Marks	Part marks and guidance
			Total	6	