Chhetri Academy

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GCSE MATHS

Statistics

Edexcel 1MA1 | Subtopic collection Topic 56

Charts, diagrams and time series

Foundation tier

Past paper question booklet

229	2010-2025	Foundation
question groups	available papers	tier

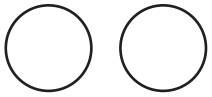
Before you begin

1. Show working and use units where appropriate.
2. Use extra paper if you need more space.
3. Print at actual size (100%) for measurement questions.

Name _____ **Date** _____

Whole questions are retained for context; some parts cover other points. Legacy sources are labelled.

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

Azeem	
Brad	
Chris	
Dean	

Key
 represents 4 goals

(a) Write down the number of goals scored by Brad.

.....
(1)

(b) Write down the number of goals scored by Chris.

.....
(1)

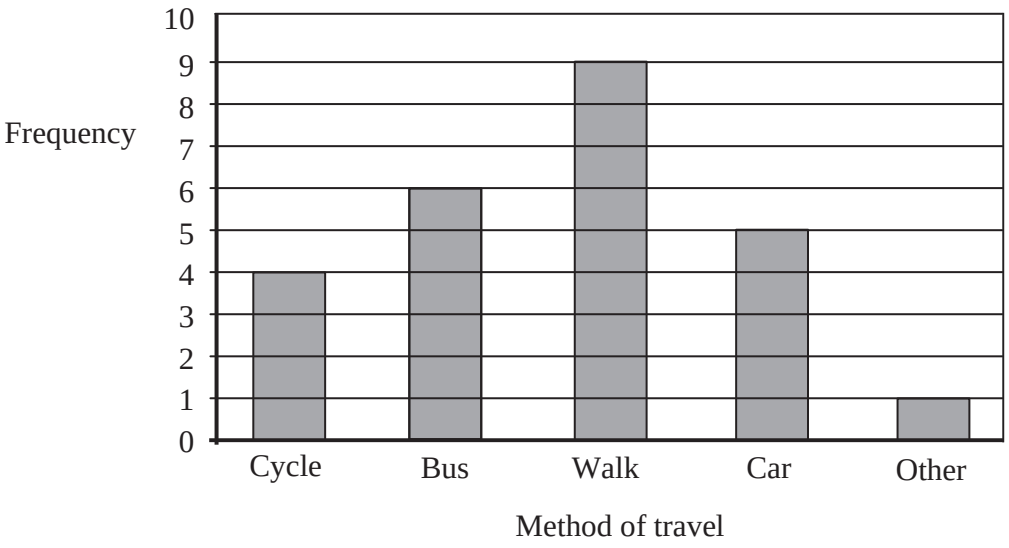
Dean scored 6 goals.

(c) Show this information on the pictogram.

(1)

(Total for Question 1 is 3 marks)

5 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.

.....

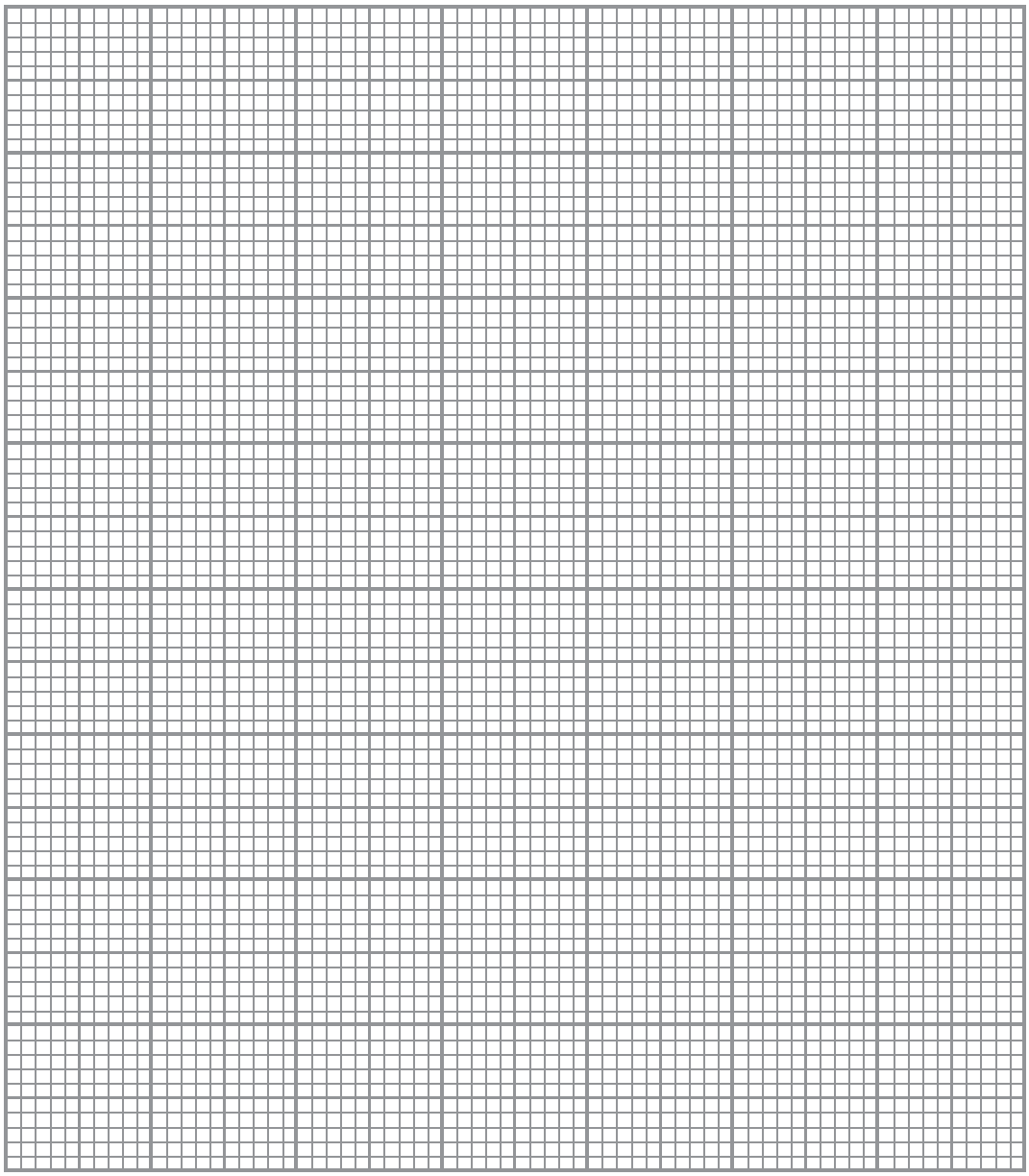
(2)

(Total for Question 5 is 4 marks)

***7** 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 for Question 7 is 4 marks)

9 Ouzma wants to find out the method of transport people use to travel to a shopping centre.

Design a suitable data collection sheet she could use to collect this information.

(Total for Question 9 is 3 marks)

10 The table gives information about the number of goals scored by a football team in each match last season.

Number of goals	Frequency
0	4
1	5
2	4
3	7
4	4

(a) Write down the modal number of goals scored.

.....

(1)

(b) Work out the total number of goals scored by the team last season.

.....

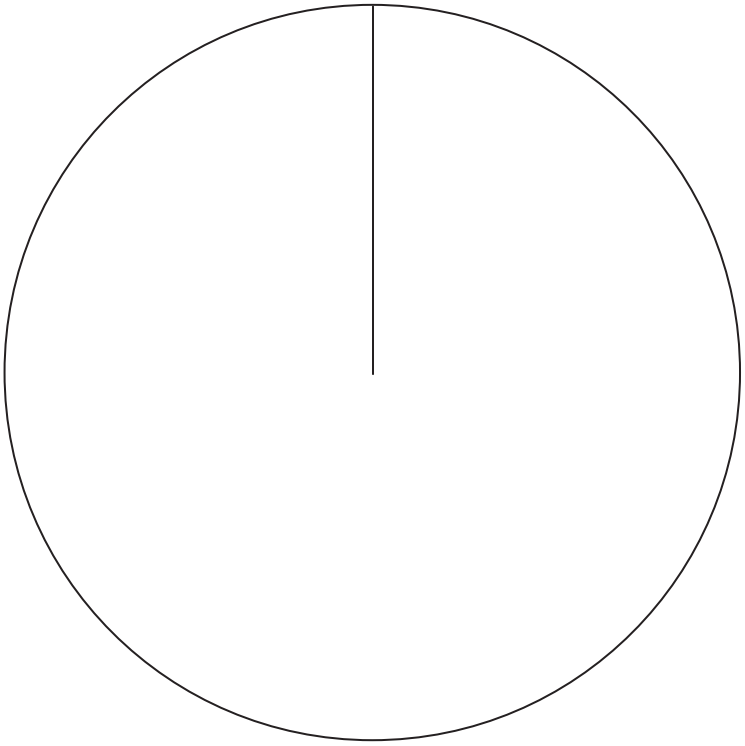
(2)

The table below gives information about the results of the matches played by the football team.

Result	Frequency
Won	10
Drew	6
Lost	8

(c) Draw an accurate pie chart to show this information.

(3)



(Total for Question 10 is 6 marks)

12 Zoe recorded the heart rate of each of 15 people.
She showed her results in a stem and leaf diagram.

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

Key:
5|8 means 58 beats per minute

(a) Find the median heart rate.

..... beats per minute
(1)

(b) Work out the range of the heart rates.

..... beats per minute
(2)

Zoe then asked the 15 people to walk up some stairs.
Zoe recorded the heart rates again.

She used the results to work out the median and the range.

Median	78
Range	37

(c) Compare the heart rates of the people before they walked up the stairs with their heart rates after they walked up the stairs.

.....

.....

.....

.....

(2)

(Total for Question 12 is 5 marks)

13 120 children went on a school activities day.
Some children went bowling.
Some children went to the cinema.
The rest of the children went skating.

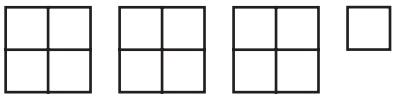
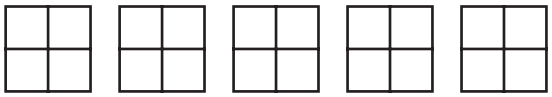
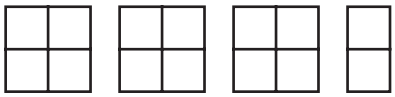
66 of these children were girls.
28 of the 66 girls went bowling.
36 children went to the cinema.
20 of the children who went to the cinema were girls.
15 boys went skating.

Work out the number of children who went bowling.

.....

(Total for Question 13 is 4 marks)

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

Monday	
Tuesday	
Wednesday	
Thursday	
Friday	

Key:
 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.

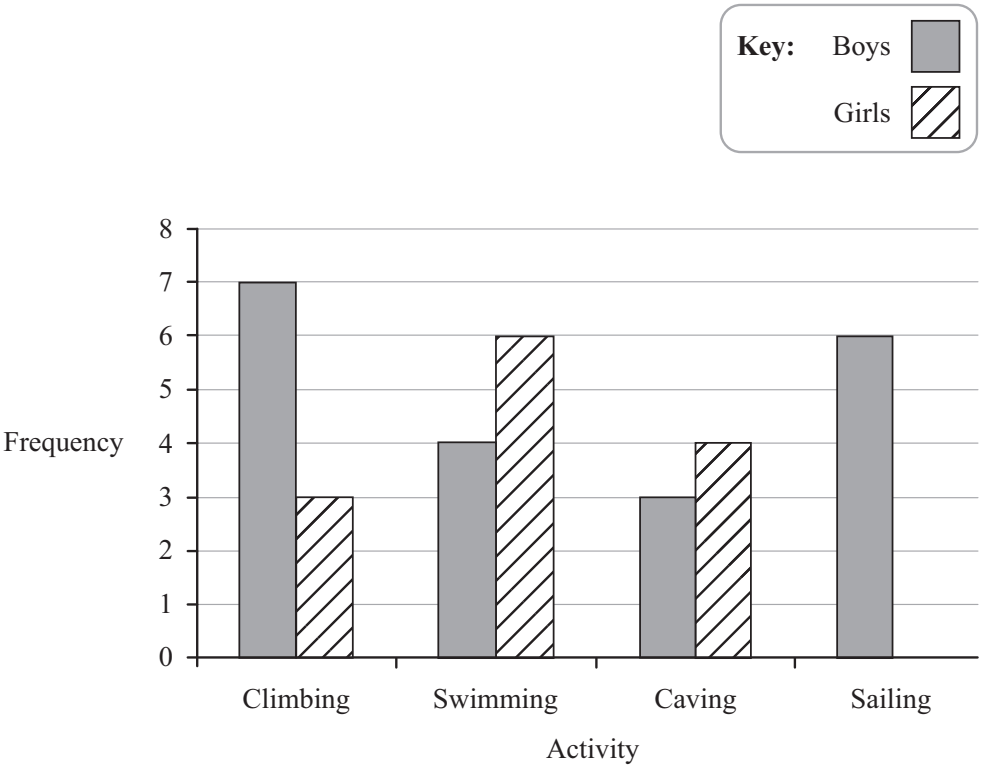
(c) Use this information to complete the pictogram.

(2)

(Total for Question 1 is 4 marks)

3 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 for Question 3 is 4 marks)

6 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 for Question 6 is 5 marks)

10 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)

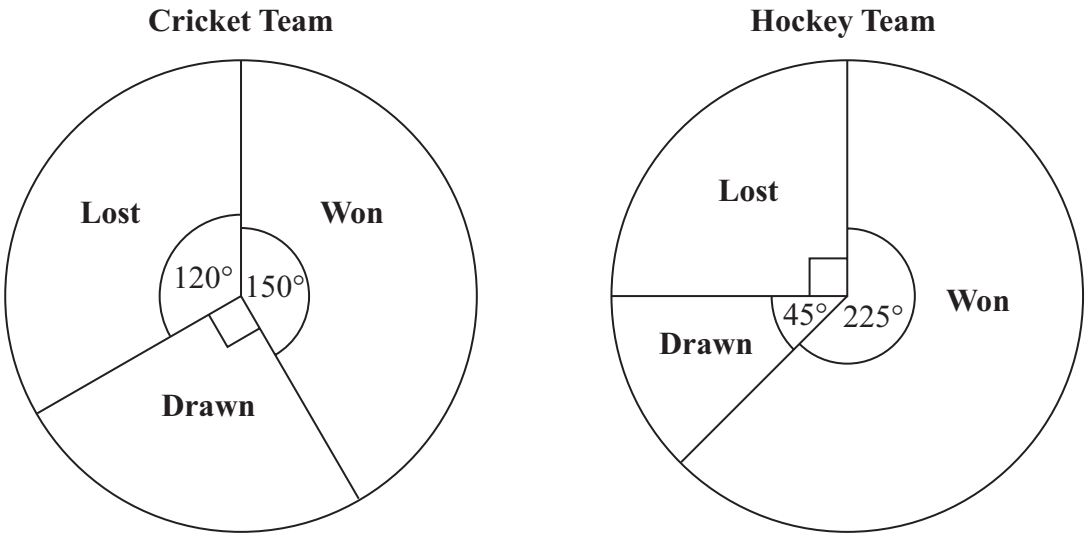
(c) Work out the range of the ages.

.....

(2)

(Total for Question 10 is 4 marks)

11 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 for Question 11 is 3 marks)

12 A teacher asked 30 students if they had a school lunch or a packed lunch or if they went home for lunch.

17 of the students were boys.
4 of the boys had a packed lunch.
7 girls had a school lunch.
3 of the 5 students who went home were boys.

Work out the number of students who had a packed lunch.

.....

(Total for Question 12 is 4 marks)

1 Here is the value of each of 20 coins.

50p	10p	£1	20p	£1
20p	£1	20p	50p	10p
50p	20p	20p	£1	20p
£1	£1	20p	20p	£1

(a) Complete the table.

Value of coin	Tally	Frequency
10p		
20p		
50p		
£1		

(3)

(b) Work out the total value of the 20 coins.

£ .....

(2)

(Total for Question 1 is 5 marks)

2 The table shows information about 5 cameras.

Camera	Specification		
	Cost (£)	Weight (grams)	Resolution (megapixels)
A	134	467	10
B	280	186	12
C	119	152	10
D	280	206	12
E	299	515	12

(a) Which of these cameras costs the most?

.....

(1)

Two of these cameras cost under £200

(b) Which of these two cameras weighs the most?

.....

(1)

The pictogram shows the number of cameras sold in a shop in week 1, in week 2, in week 3 and in week 4.

week 1	▭ ▭ ▯
week 2	▭ ▭
week 3	▭ ▭ ▭ ▯
week 4	▭ ▭ ▭
week 5	

Key: ▭ represents 8 cameras

(c) How many cameras were sold in week 2?

.....

(1)

(d) How many cameras were sold in week 3?

.....

(1)

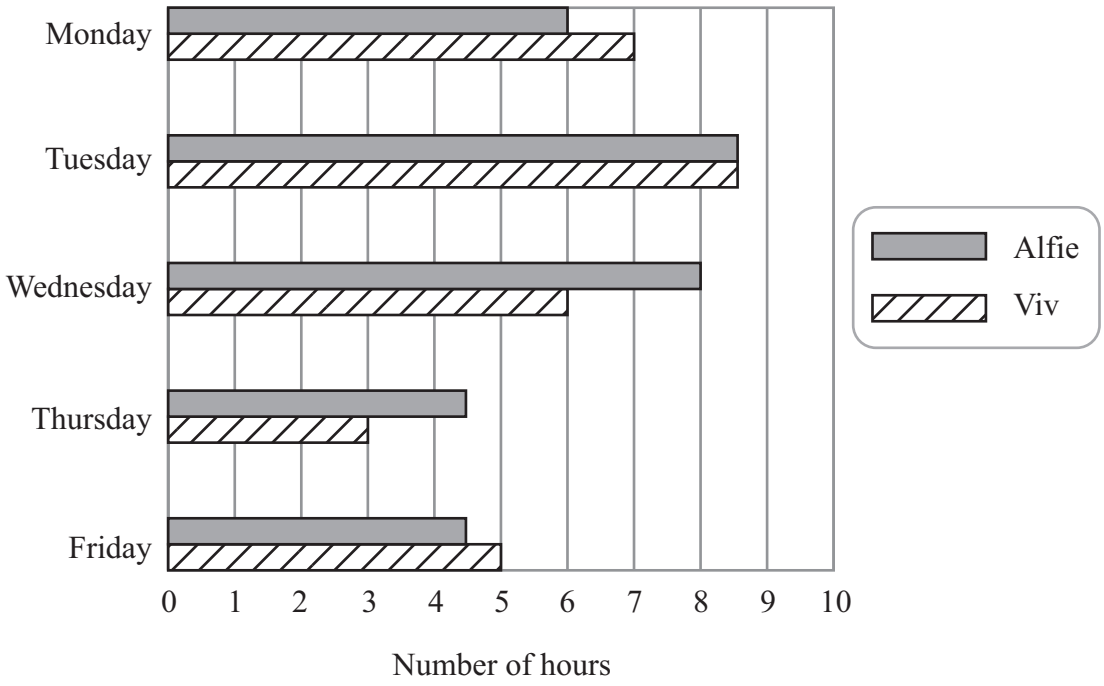
12 cameras were sold in week 5

(e) Show this on the pictogram.

(1)

(Total for Question 2 is 5 marks)

3 The dual bar chart shows information about the numbers of hours Viv and Alfie worked on each day from Monday to Friday last week.



Viv worked more hours than Alfie on **two** of these days.

(a) Write down these two days.

.....

and .....

(2)

Alfie worked more hours, in total, than Viv from Monday to Friday last week.

(b) Work out how many more hours.

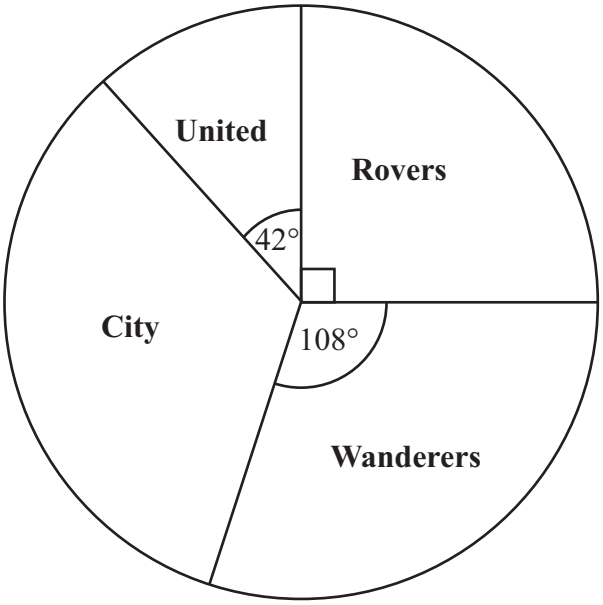
..... hours

(3)

(Total for Question 3 is 5 marks)

6 Alex asked some people to name their favourite football team.

The pie chart shows his results.



(a) What fraction of the people named Rovers as their favourite team?

.....

(1)

20 people named City as their favourite football team.

(b) How many people named Rovers as their favourite team?

.....

(4)

(Total for Question 6 is 5 marks)

8 The two-way table shows some information about how some students travelled to school yesterday.

	Walk	Bus	Cycle	Total
Boys		4	4	13
Girls	2	6	3	11
Total	7	10	7	24

One of these students is picked at random.

Work out the probability that this student will be a boy who walked to school yesterday.

.....

(Total for Question 8 is 3 marks)

11 There are 25 students in a class.
12 of the students are girls.

Here are the heights, in cm, of the 12 girls.

160 173 148 154 152 164 179 164 162 174 168 170

(a) Show this information in an ordered stem and leaf diagram.

14	
15	
16	
17	

(3)

There are 13 boys in the class.

Here are the heights, in cm, of the 13 boys.

157 159 162 166 168 169 170 173 174 176 176 181 184

* (b) Compare the heights of the boys with the heights of the girls.

(3)

(Total for Question 11 is 6 marks)

1 Jay recorded the colour of each car going past his house one morning.
The results are shown below.

blue	red	silver	silver	silver
red	silver	blue	silver	blue
silver	blue	red	red	silver
black	silver	red	black	red

(a) Complete the table for Jay's results.

Colour	Tally	Frequency
blue		
red		
silver		
black		

(2)

(b) Which colour of car did Jay record most often?

.....

(1)

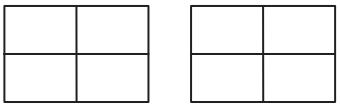
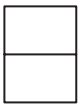
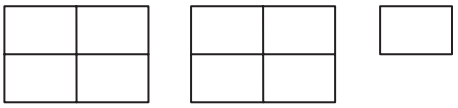
(Total for Question 1 is 3 marks)

2 The pictogram shows the number of laptops sold in a shop on Monday, on Tuesday and on Wednesday.

Key:



represents 8 laptops

Monday	
Tuesday	
Wednesday	
Thursday	
Friday	

(a) How many laptops were sold on Wednesday?

.....

(1)

On Thursday 2 laptops were sold.
On Friday 24 laptops were sold.

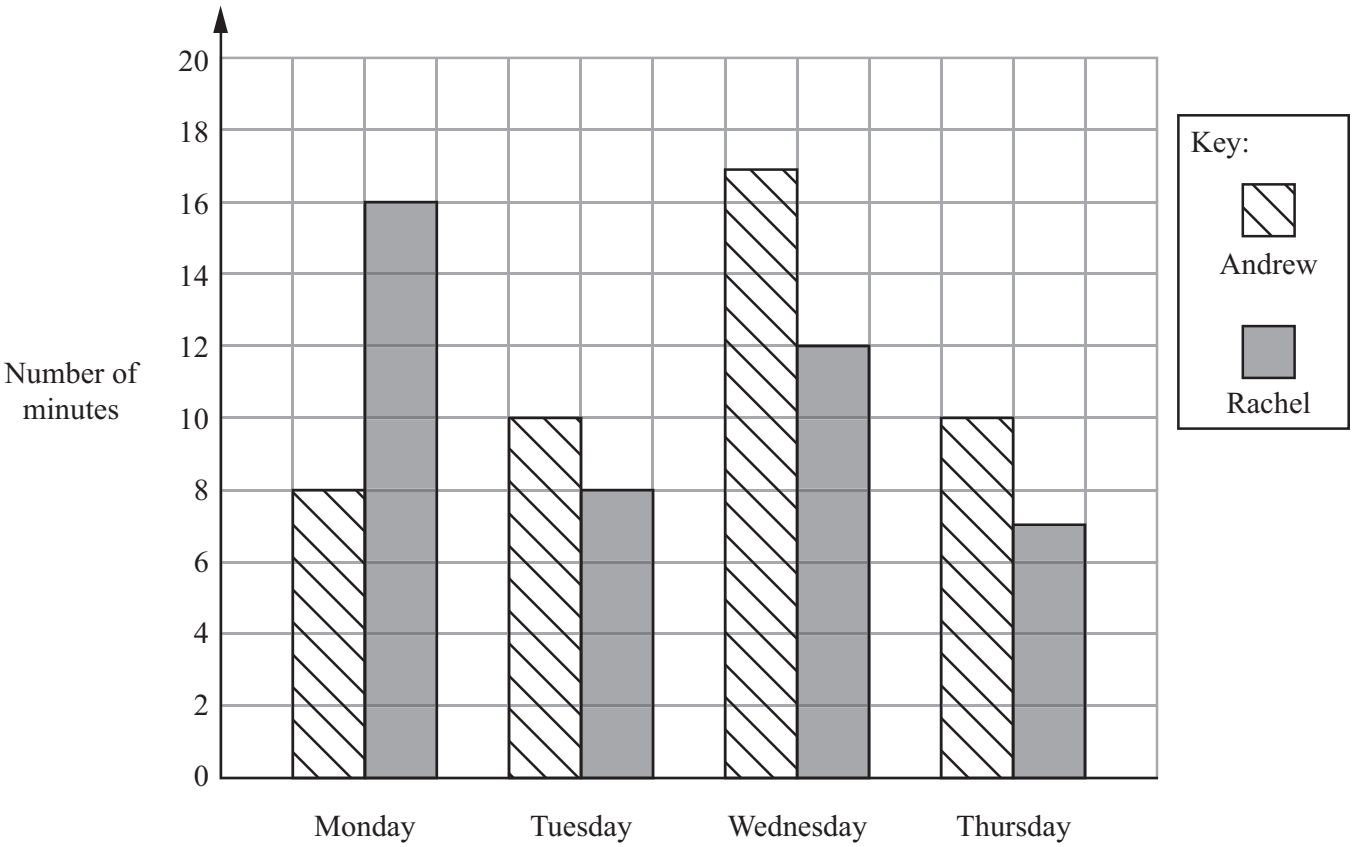
(b) Show this information on the pictogram.

(2)

(Total for Question 2 is 3 marks)

5 Andrew and Rachel recorded the total number of minutes they each spent sending text messages on Monday, on Tuesday, on Wednesday and on Thursday last week.

The dual bar chart shows this information.



(a) How many minutes did Rachel spend sending text messages on Thursday?

..... minutes
(1)

On one day, Rachel spent 5 minutes less than Andrew sending text messages.

(b) Which day was this?

.....
(1)

Andrew spent more minutes, in total, than Rachel in sending text messages on these four days.

(c) Work out how many more minutes.

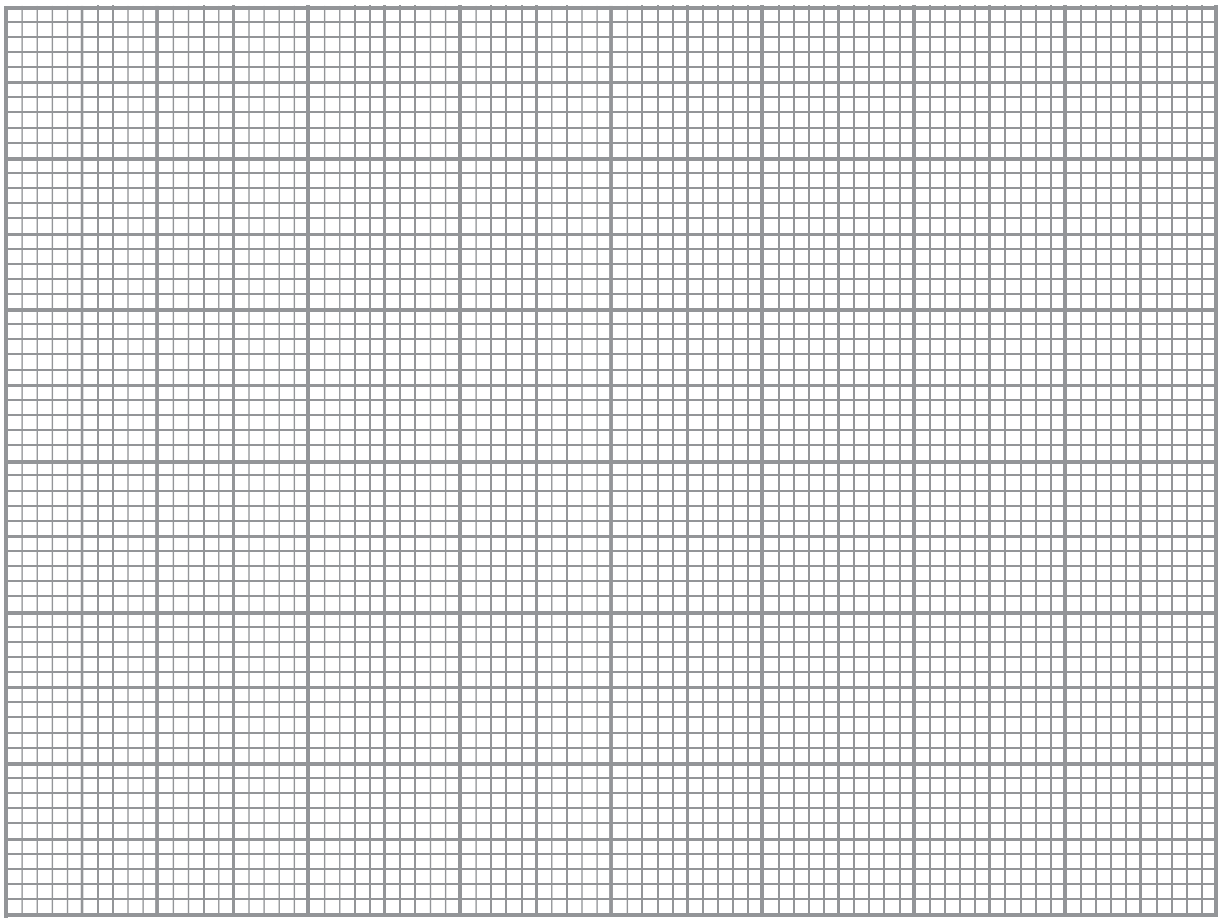
..... minutes
(3)

(Total for Question 5 is 5 marks)

7 The table shows information about some students' favourite sports.

	Football	Squash	Swimming	Tennis	Badminton
Boys	10	5	6	4	3
Girls	3	9	8	5	7

On the grid, draw a suitable diagram or chart for this information.



(Total for Question 7 is 4 marks)

9 Charlie wants to find out which type of transport people use to travel to an airport.

(a) Design a suitable table for a data collection sheet she could use to collect this information.

(3)

One afternoon Charlie stands by the road to the airport to collect her information.
This method of sampling will **not** give her reliable information.

(b) Write down one reason why.

.....

.....

.....

.....

(1)

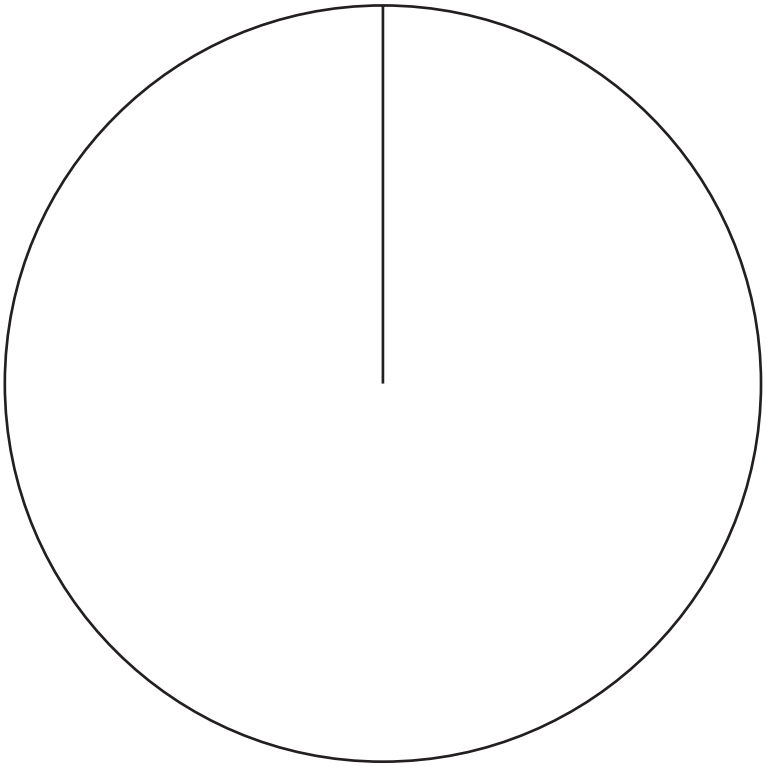
(Total for Question 9 is 4 marks)

11 A group of Year 10 students was asked to choose a new subject to study.

The table shows information about the choices.

Subject	Number of students	
construction	40	
hairdressing	56	
tourism	24	

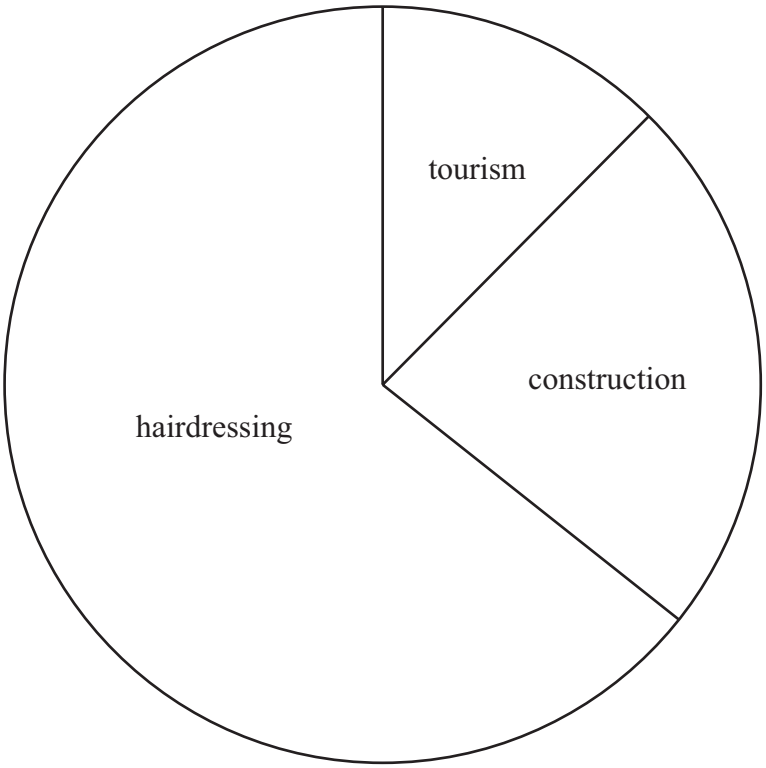
(a) Draw an accurate pie chart to show this information.



(3)

A group of Year 11 students was also asked to choose a new subject to study.

This pie chart shows information about their choices.



Danny says

"The pie charts show that hairdressing was chosen by more Year 11 students than by Year 10 students."

(b) Is Danny correct? .....

You must explain your answer.

.....

.....

.....

.....

(1)

(Total for Question 11 is 4 marks)

1 Here is a mileage table.
It shows the distances, in miles, between four cities.

Swansea			
42	Cardiff		
81	44	Bristol	
188	153	120	London

(a) What is the distance from Swansea to Cardiff?

..... miles
(1)

(b) What is the distance from Bristol to Swansea?

..... miles
(1)

(Total for Question 1 is 2 marks)

2 Alfie recorded the numbers of vehicles passing his house one day.

The tally chart shows this information.

Type of vehicle	Tally
Bicycle	𝍸 |||
Bus	||
Car	𝍸 𝍸 |||
Lorry	𝍸 |
Motorbike	|||
Van	𝍸 ||

(a) How many cars did Alfie record?

.....

(1)

(b) Alfie recorded one type of vehicle only twice.
Which type?

.....

(1)

(c) Work out the total number of vehicles Alfie recorded.

.....

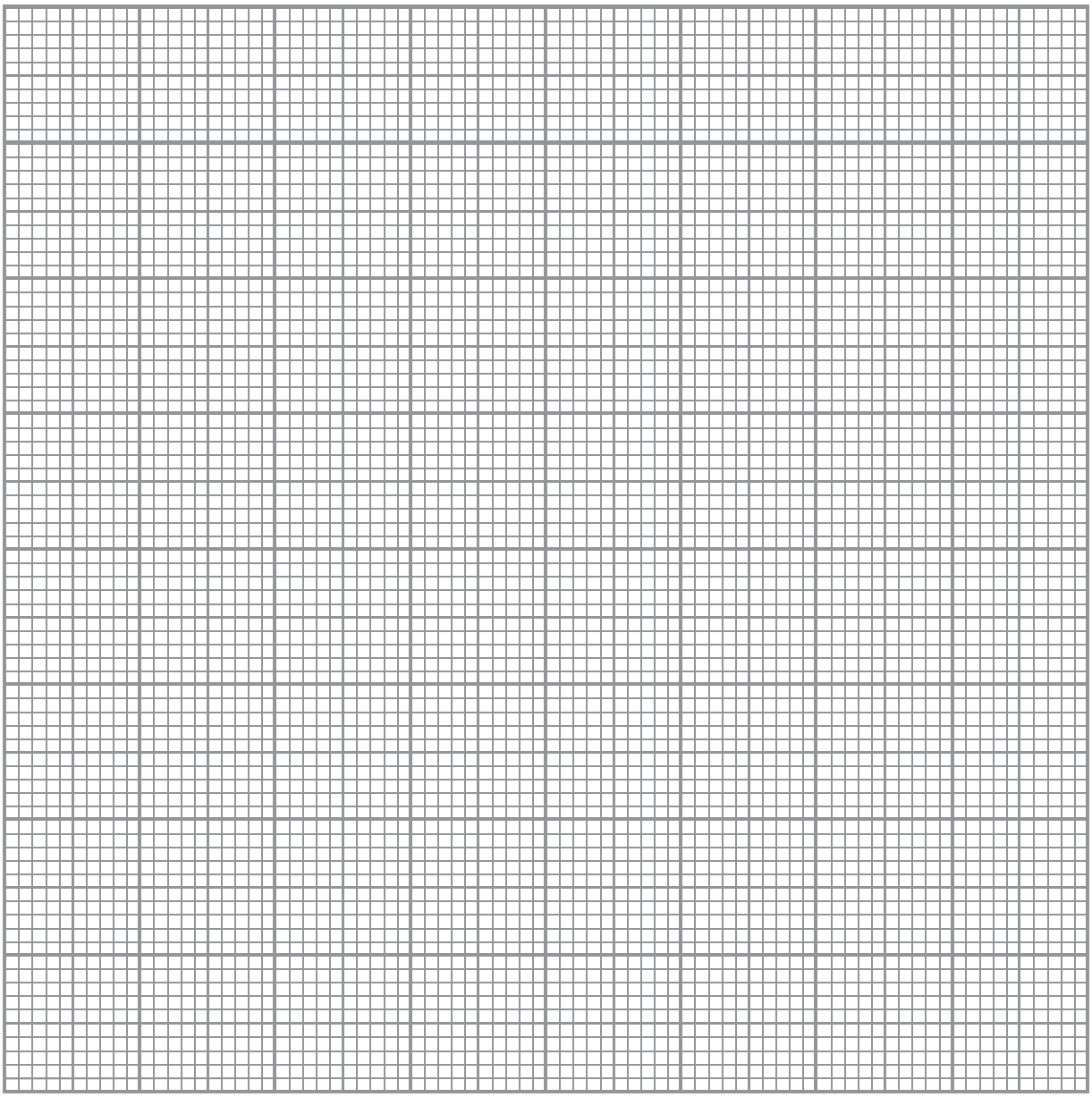
(2)

(Total for Question 2 is 4 marks)

***3** The table shows the numbers of texts Alexa and Ryan sent on each of 5 days one week.

	Monday	Tuesday	Wednesday	Thursday	Friday
Alexa	3	4	2	5	6
Ryan	6	2	5	4	3

Show this information in a suitable diagram.



(Total for Question 3 is 4 marks)

10 The two-way table gives some information about the drinks sold by a cafe on a Saturday and on a Sunday.

	Tea	Coffee	Squash	Total
Saturday	45		37	140
Sunday		47		
Total			87	299

(a) Work out the total number of drinks sold on Sunday.

.....

(1)

(b) Work out the total number of coffees sold on Saturday and Sunday.

.....

(2)

Rob and Mari each buy a drink at the cafe.
The cafe only sells tea, coffee and squash.

(c) Write down all the possible combinations they can choose.

.....

.....

(2)

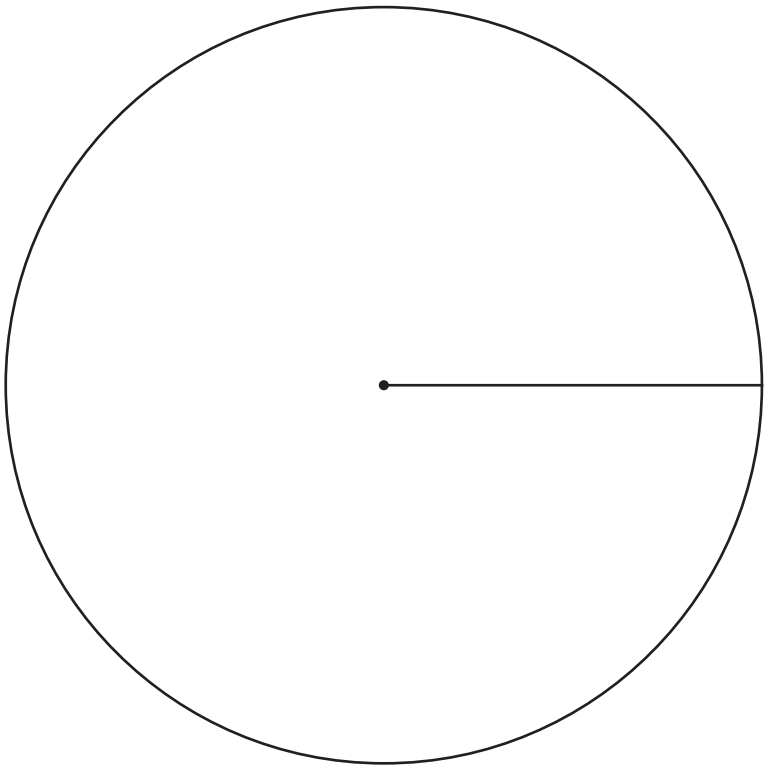
(Total for Question 10 is 5 marks)

11 Mike asked 60 students to name their favourite fruit.

Here are his results.

Favourite Fruit	Frequency
Apple	18
Banana	23
Orange	9
Pear	10

Draw an accurate pie chart for his results.

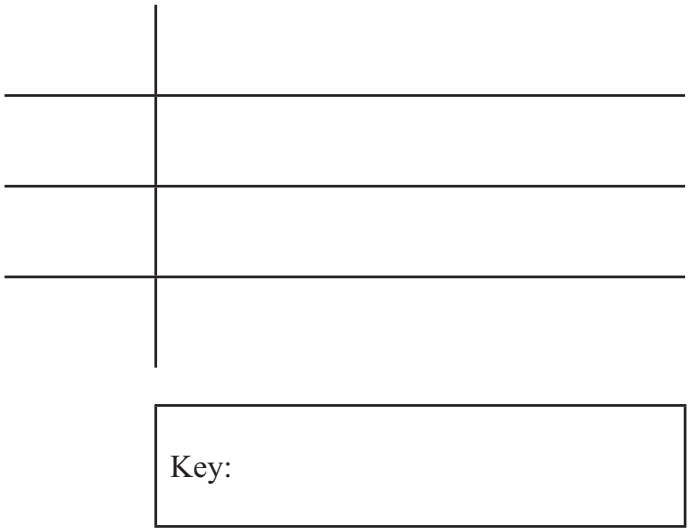


(Total for Question 11 is 4 marks)

14 Here are the heights, in cm, of 20 sunflower plants.

73	84	78	96	98	84	101	93	71	104
81	92	95	103	100	96	87	91	88	96

(a) Draw an ordered stem and leaf diagram for these heights.



Key:

(3)

(b) Work out the range.

..... cm

(1)

(c) Find the median height.

..... cm

(1)

(Total for Question 14 is 5 marks)

3 Helen carried out a survey to find out the fruit her friends like best.

Here are her results.

apples	oranges	peaches	bananas	pineapples
bananas	bananas	oranges	apples	peaches
bananas	oranges	pineapples	oranges	bananas
peaches	apples	bananas	apples	bananas

(a) Complete the table for Helen's results.

Fruit	Tally	Frequency
apples		
bananas		
oranges		
peaches		
pineapples		

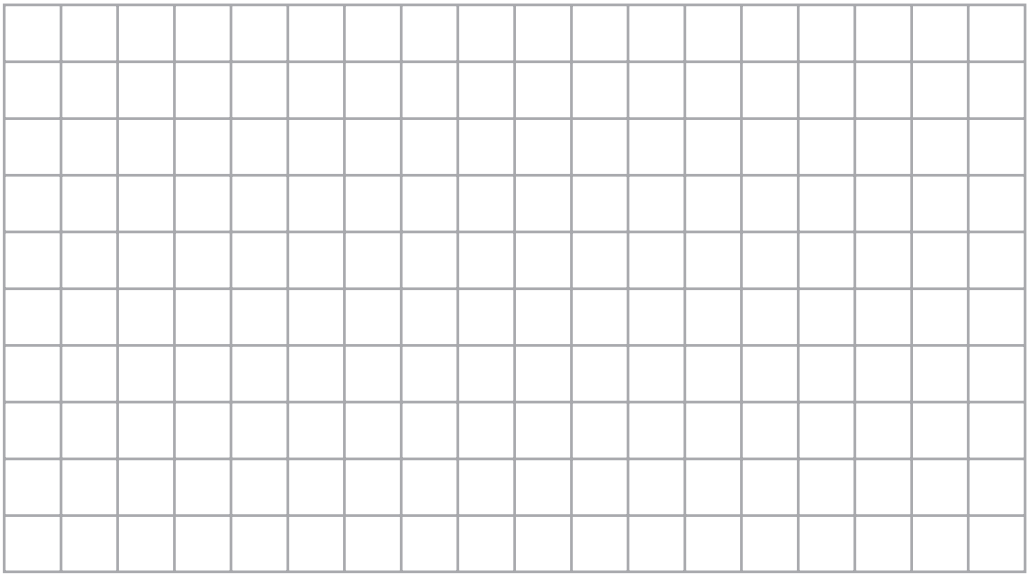
(2)

(b) Write down the number of Helen's friends who like bananas best.

.....

(1)

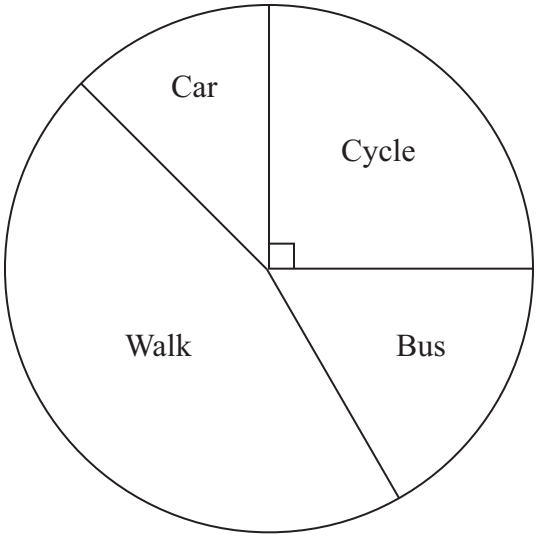
(c) On the grid, draw a suitable chart or diagram to show Helen's results.



(3)

(Total for Question 3 is 6 marks)

8 Harry asked each student in his class how they travelled to school that day.
He used the results to draw this pie chart.



(a) How did most of the students travel to school?

.....

(1)

Harry asked a total of 24 students.

(b) Work out the number of students who cycled to school.

.....

(2)

(Total for Question 8 is 3 marks)

15 The table shows the minimum distance and the maximum distance people should sit from different sized TV screens when watching TV.

TV screen size (inches)	Minimum distance (feet)	Maximum distance (feet)
28	3.5	7
30	3.75	7.5
32	4	8
36	4.5	9
38	4.75	9.5
40	5	10
42	5.25	10.5

James has a TV with a screen size of 32 inches.
He is going to watch his TV.

(a) What is the minimum distance James should sit from the screen?

..... feet
(1)

Sheraz has a TV with a screen size of 38 inches.
He is going to watch his TV.

(b) Work out the difference between the minimum distance and the maximum distance Sheraz should sit from the screen.

..... feet
(2)

You can use this rule to work out the maximum distance to sit from a TV screen.

Maximum distance in feet = screen size in inches ÷ 4

Clare has a TV with a screen size of 24 inches.
She is going to watch her TV.

(c) Use the rule to work out the maximum distance Clare should sit from the screen.

..... feet
(1)

Richard should sit a maximum distance of 12 feet from his screen.

(d) Work out the screen size of Richard's TV.

..... inches
(2)

(Total for Question 15 is 6 marks)

20 The stem and leaf diagram shows some information about the speeds of 25 cars.

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

Key:

2 | 9 means 29 miles per hour

(a) How many of the 25 cars had a speed of more than 50 miles per hour?

.....

(1)

(b) Find the median speed.

..... miles per hour

(1)

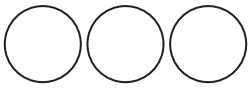
(c) Work out the range of the speeds.

..... miles per hour

(2)

(Total for Question 20 is 4 marks)

3 The pictogram shows the number of DVDs sold in a shop on Monday, on Tuesday and on Wednesday last week.

Monday	
Tuesday	
Wednesday	
Thursday	
Friday	

Key: 

represents 8 DVDs

(a) Write down the number of DVDs sold on Monday.

.....

(1)

(b) Write down the number of DVDs sold on Wednesday.

.....

(1)

16 DVDs were sold on Thursday.
28 DVDs were sold on Friday.

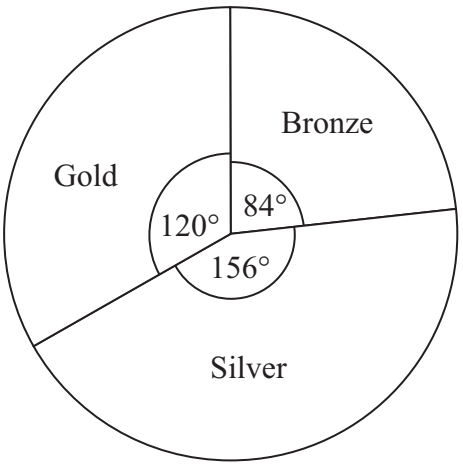
(c) Use this information to complete the pictogram.

(2)

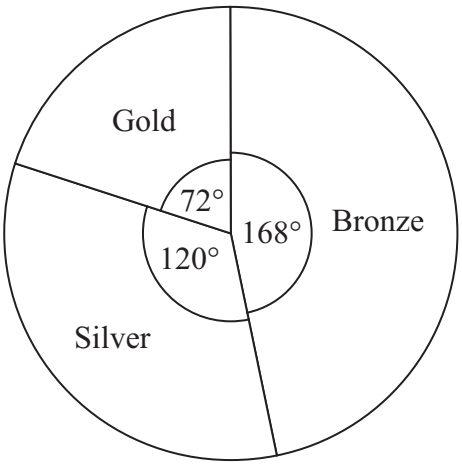
(Total for Question 3 is 4 marks)

17 The pie charts show some information about the numbers of medals won by Germany and by the Russian Federation in the 2010 Winter Olympics.

Medals won by Germany



Medals won by the Russian Federation



Germany won 7 bronze medals.

(a) How many gold medals did Germany win?

.....

(2)

(b) Graham says,

'The pie charts show that Germany won more gold medals than the Russian Federation'.

Is Graham right? .....

You must explain your answer.

.....

.....

(1)

(Total for Question 17 is 3 marks)

1 The table shows some information about 7 children.

Name	Age (in years)	Eye colour	Pet
Amos	7	Blue	Cat
Tania	8	Green	Rabbit
Gareth	6	Brown	Dog
Carl	7	Green	Cat
Charlie	9	Brown	Hamster
Talil	8	Green	Fish
Mary	.....	.....	.....

Mary is 5 years old.
She has blue eyes and a pet dog.

(a) Use this information to complete the table.

(1)

(b) How many of these children have brown eyes?

.....

(1)

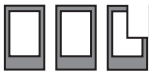
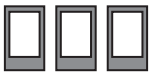
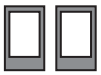
(c) Write down the pet of the youngest child who has green eyes.

.....

(1)

(Total for Question 1 is 3 marks)

2 The pictogram shows information about the number of text messages Stephanie sent on each of 4 days last week.

Thursday	
Friday	
Saturday	
Sunday	

Key:
 represents 12 text messages

(a) Write down the number of text messages Stephanie sent on Sunday.

.....
(1)

Stephanie sent more text messages on Saturday than on Friday.

(b) How many more?

.....
(2)

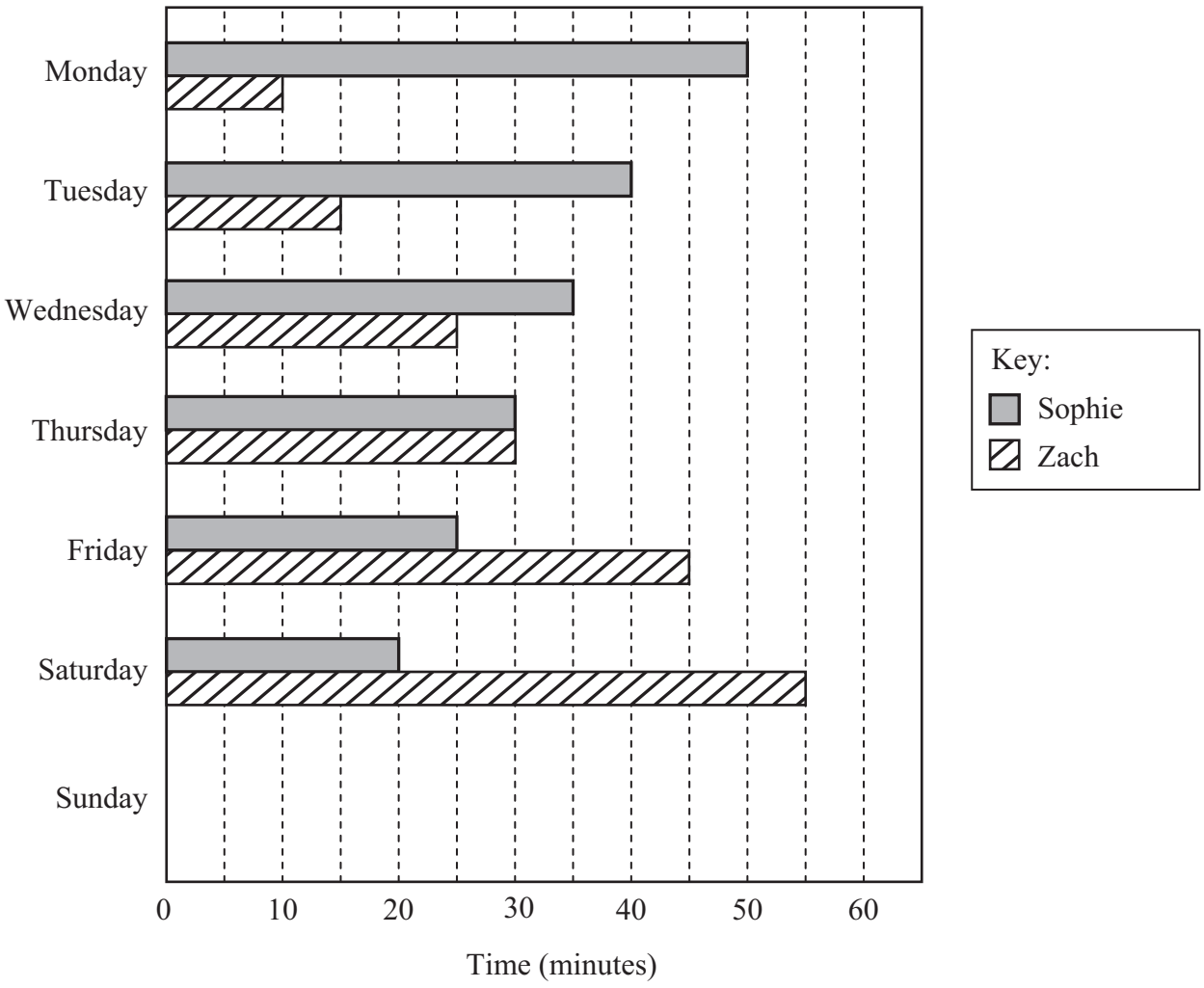
It costs Stephanie 8p to send a text message.

(c) Work out the total cost of the text messages she sent on Thursday.

£ .....
(3)

(Total for Question 2 is 6 marks)

5 The dual bar chart shows information about the amount of time Sophie and Zach spent on the Internet on each of 6 days last week.



On one of these days, Sophie and Zach spent the same amount of time on the Internet.

(a) Which day?

.....

(1)

(b) Write down the amount of time that Zach spent on the Internet on Friday.

..... minutes

(1)

On Sunday,
Sophie spent 15 minutes on the Internet,
Zach spent 60 minutes on the Internet.

(c) Complete the dual bar chart.

(2)

(d) Using the information in the dual bar chart, compare the amounts of time Sophie spent on the Internet last week to the amounts of time Zach spent on the Internet last week.

.....

.....

.....

(1)

(Total for Question 5 is 5 marks)

8 Hestia rolls a dice 24 times.
Here are the scores.

1	2	3	6	4	5	2	1
3	5	6	2	1	2	6	4
2	3	2	4	3	4	3	2

(a) Complete the frequency table.

Score	Tally	Frequency
1		
2		
3		
4		
5		
6		

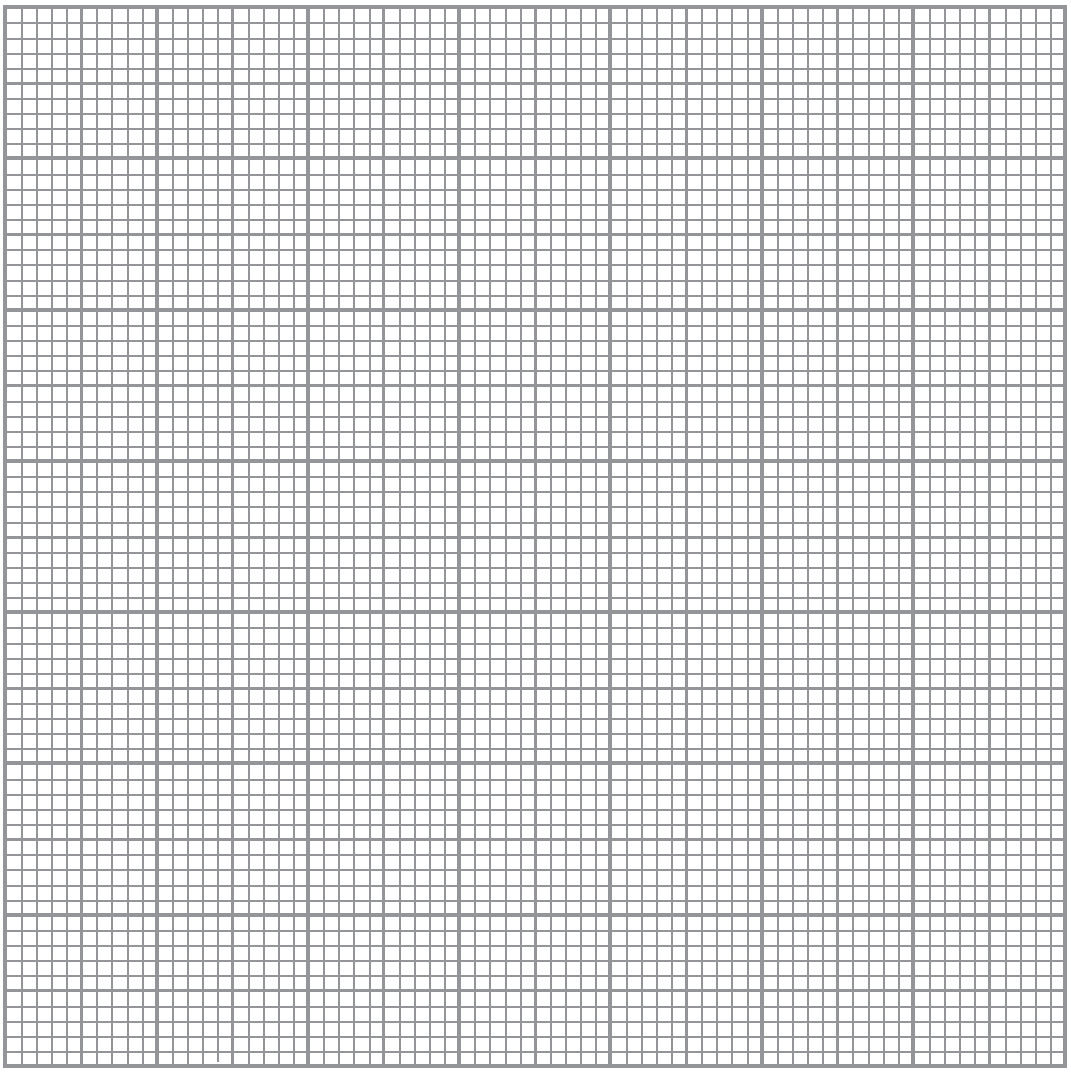
(2)

(b) Write down the mode of the scores.

.....

(1)

(c) Hestia wants to show this information in a suitable diagram or chart.
On the grid, draw a suitable diagram or chart.



(3)

(Total for Question 8 is 6 marks)

Question 42

9 The two-way table shows information about the numbers of students on a school trip.

	Year 8	Year 9	Year 10	Total
Girls	15		12	44
Boys		22		
Total			28	100

Complete the two-way table.

(Total for Question 9 is 3 marks)

14 Jamal plays 15 games of ten-pin bowling.

Here are his scores.

72	59	75	66	79
75	66	63	89	76
65	79	77	71	83

(a) Draw an ordered stem and leaf diagram to show Jamal's scores.

(3)

Gill plays 15 games of ten-pin bowling.

The table gives some information about her scores.

Highest score	95
Lowest score	75
Mean score	80

*(b) Compare the distribution of Jamal's scores and the distribution of Gill's scores.

(5)

(Total for Question 14 is 8 marks)

5 The pictogram shows the number of tins of dog food sold in a shop on Monday, on Tuesday and on Wednesday last week.

Monday	○ ○ ○
Tuesday	○ ○ ○ ○ ◗
Wednesday	○ ○ ◗
Thursday	
Friday	

Key: ○ represents 10 tins

On Thursday, 60 tins of dog food were sold in the shop.
On Friday, 35 tins of dog food were sold in the shop.

(a) Use this information to complete the pictogram.

(2)

More tins of dog food were sold on Tuesday than on Monday.

(b) How many more tins?

.....

(2)

(Total for Question 5 is 4 marks)

18 Yan recorded the ages, in years, of a sample of people at a fairground.

He drew this stem and leaf diagram for his results.

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

Key:

1 | 5 represents 15 years of age

(a) Write down the number of people in the sample.

.....

(1)

(b) Write down the mode.

.....years

(1)

(c) Work out the range.

.....years

(2)

(Total for Question 18 is 4 marks)

21 Felicity asked 100 students how they came to school one day.
Each student walked or came by bicycle or came by car.

49 of the 100 students are girls.
10 of the girls came by car.
16 boys walked.
21 of the 41 students who came by bicycle are boys.

Work out the total number of students who walked to school.

.....

(Total for Question 21 is 4 marks)

2 Here is a list of the dried fruit 24 people liked best.

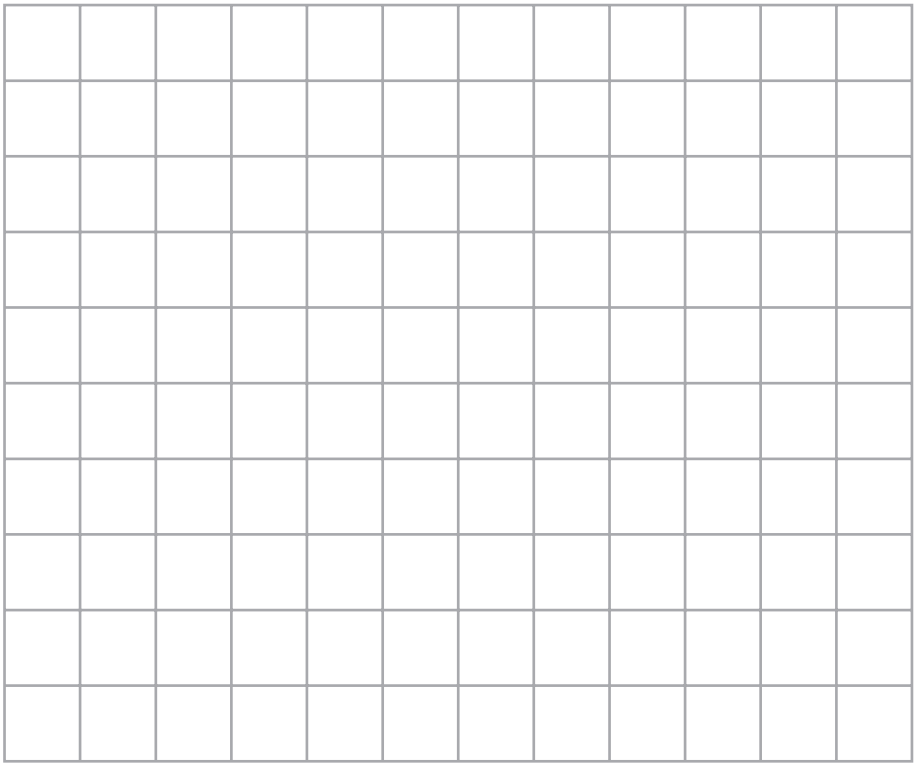
currants	sultanas	currants	raisins	sultanas	prunes
prunes	currants	sultanas	prunes	raisins	raisins
raisins	currants	currants	prunes	sultanas	sultanas
raisins	raisins	sultanas	sultanas	prunes	sultanas

(a) Complete the table for the information in the list.

Dried Fruit	Tally	Frequency
currants		
prunes		
raisins		
sultanas		

(2)

(b) Draw a suitable diagram to show this information in the table.
Use the space below or the grid opposite.



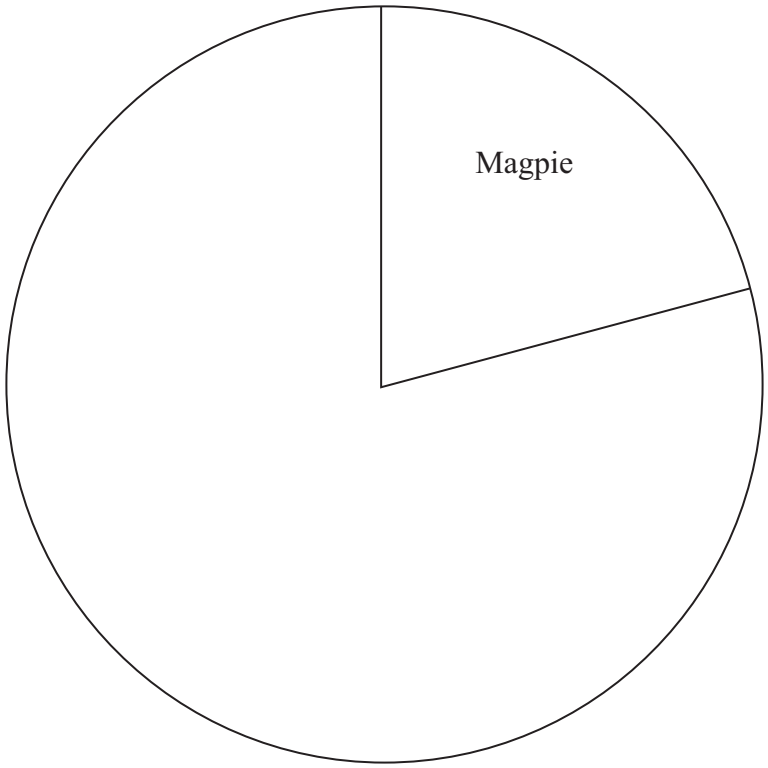
(3)

(Total for Question 2 is 5 marks)

17 The table gives some information about the birds Paula sees in her garden one day.

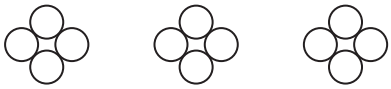
Bird	Frequency
Magpie	15
Thrush	10
Starling	20
Sparrow	27

Complete the accurate pie chart.



(Total for Question 17 is 3 marks)

2 This pictogram gives information about the numbers of bunches of roses Graham sold on Monday, on Tuesday and on Wednesday.

Monday	
Tuesday	
Wednesday	
Thursday	

Key:

 represents 8 bunches of roses

(a) Write down the number of bunches of roses Graham sold on Monday.

.....

(1)

(b) Write down the number of bunches of roses Graham sold on Tuesday.

.....

(1)

On Thursday Graham sold 6 more bunches of roses than he sold on Wednesday.

(c) Complete the pictogram for Thursday.

(2)

(Total for Question 2 is 4 marks)

Question 50

4 Jessie wants to find out the colours of some cars in a car park.

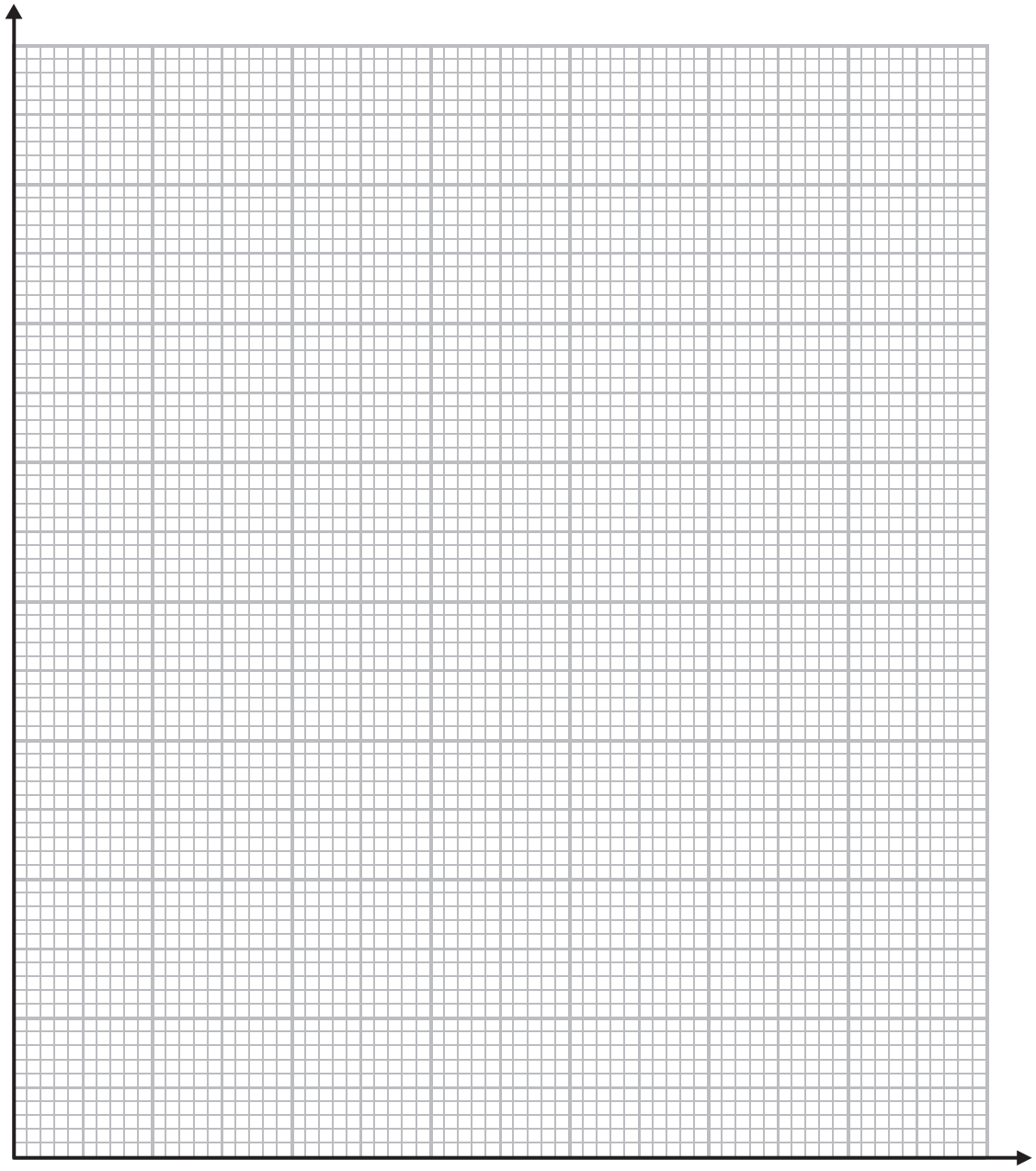
Design a suitable table for a data collection sheet she could use.

(Total for Question 4 is 3 marks)

12 The table shows information about the favourite sport of some students.

Favourite sport	Men	Women
Hockey	3	6
Tennis	8	14
Football	15	7
Golf	9	1

On the grid, draw a suitable diagram to show this information.



(Total for Question 12 is 4 marks)

13 A chess club has two teams.

Last year the two teams played a total of 54 matches.

The two-way table shows some information about their results.

	Win	**Draw**	**Lose**	**Total**
Team A			3	
Team B	18		9	31
Total		14		54

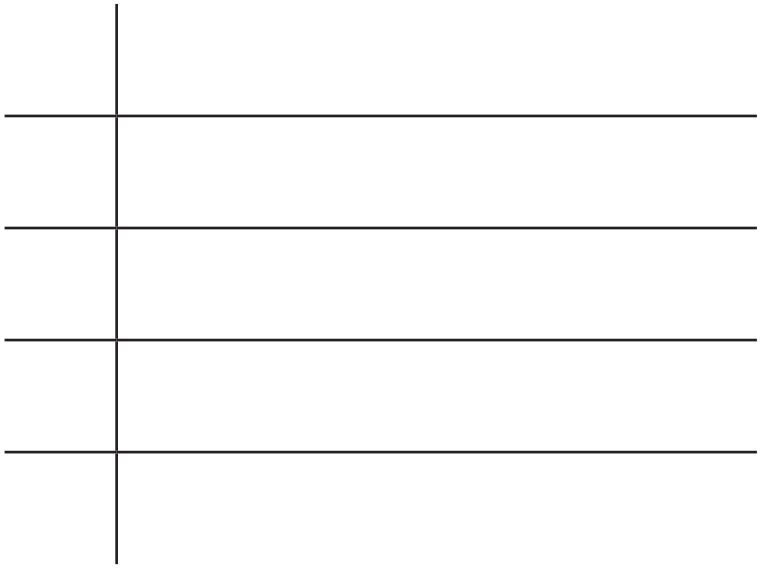
Complete the two-way table.

(Total for Question 13 is 3 marks)

16 The list below shows the weight, in grams, of 15 baskets of strawberries.

193	200	207	211	198
189	218	195	206	189
223	190	207	205	212

Show this information in an ordered stem and leaf diagram.
You must include a key.

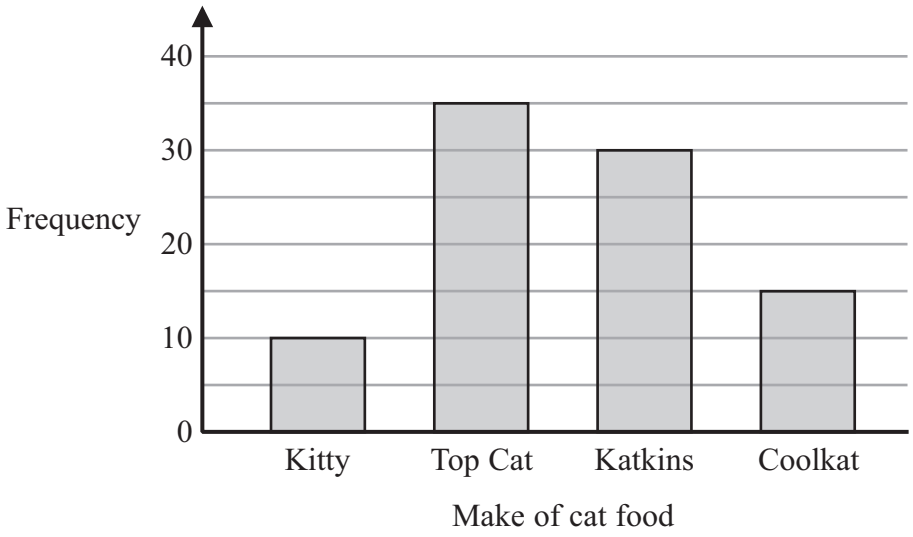


Key:

(Total for Question 16 is 3 marks)

18 A survey was carried out for a magazine.
90 cat owners were asked to write down the make of cat food their cats liked best.

The bar chart shows information about the results.



This statement was in the magazine.

'1 out of 6 cats like Coolkat best'.

(a) Is the statement right?
You must explain your answer.

.....

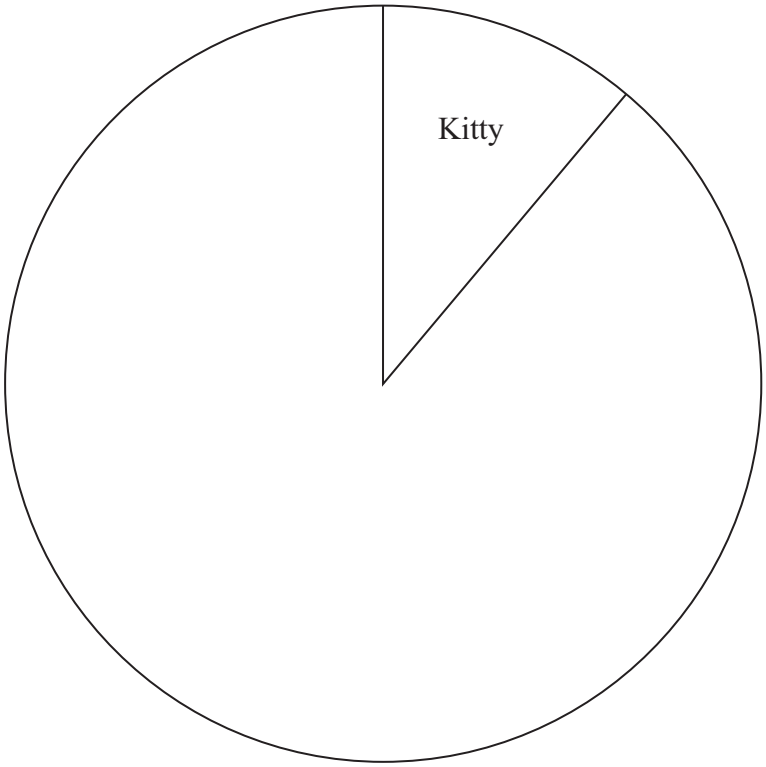
.....

.....

(1)

The information in the bar chart is going to be shown in a pie chart.

(b) Use the information in the bar chart to complete the pie chart.

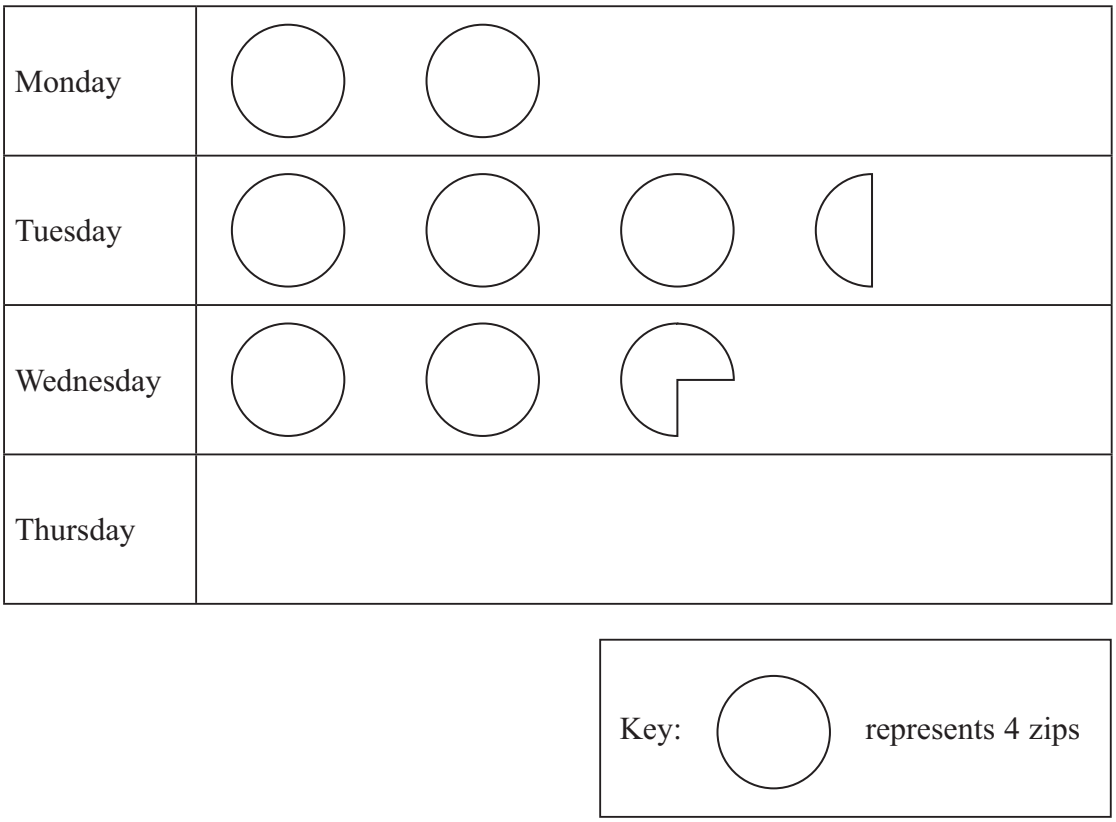


(3)

(Total for Question 18 is 4 marks)

Question 55

1 The pictogram shows the numbers of zips sold in a shop on Monday, on Tuesday and on Wednesday.



(a) Write down the number of zips sold on Monday.

.....

(1)

(b) Write down the number of zips sold on Wednesday.

.....

(1)

9 zips were sold on Thursday.

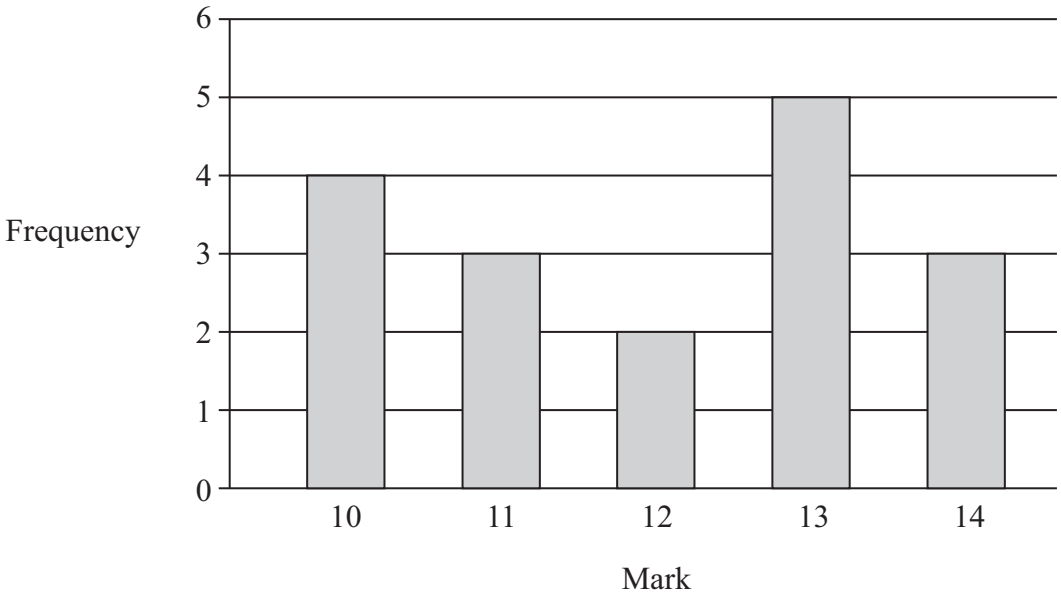
(c) Complete the pictogram.

(1)

(Total for Question 1 is 3 marks)

7 Mrs Smith gave her students a history test.

The bar chart shows information about the students' marks.



(a) Write down the number of students who got 10 marks.

.....

(1)

(b) Write down the mode.

.....

(1)

(c) Which two marks have the same frequency?

..... and .....

(1)

(d) Work out the range.

.....

(2)

(e) How many students did the test?

.....

(2)

(Total for Question 7 is 7 marks)

Question 57

17 Zuber wants to find out the colours of cars in a car park.

Design a suitable table for a data collection sheet he could use.

(Total for Question 17 is 3 marks)

1 Connor asks 20 people how they usually travel to their judo club.

Here are his results.

walk	bus	walk	bike	car	bus	bus	car	walk	bus
car	bus	bus	car	bike	walk	bike	car	bus	car

(a) Complete the frequency table.

Method of travel	Tally	Frequency
car		
bus		
walk		
bike		

(2)

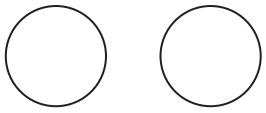
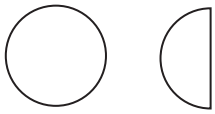
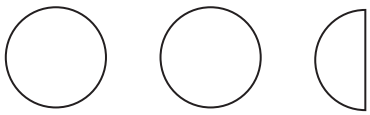
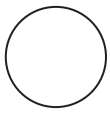
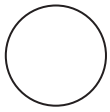
(b) Write down the mode.

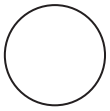
.....

(1)

(Total for Question 1 is 3 marks)

4 The pictogram shows the number of goals a hockey team scored in each of their first 5 matches.

Match 1	
Match 2	
Match 3	
Match 4	
Match 5	
Match 6	
Match 7	

Key:  represents 2 goals

(a) Write down the number of goals scored in Match 1

.....

(1)

(b) Write down the number of goals scored in Match 3

.....

(1)

6 goals were scored in Match 6
1 goal was scored in Match 7

(c) Show this information on the pictogram.

(2)

(Total for Question 4 is 4 marks)

16 There are 40 children in a ski club.
Each child has one pair of skis.

The skis are

twin tipped skis
or downhill skis
or slalom skis.

There are 23 boys in the ski club.
7 of the boys have twin tipped skis.
8 of the girls have downhill skis.
5 of the 9 children with slalom skis are girls.

Work out the number of children with twin tipped skis.

.....

(Total for Question 16 is 4 marks)

4 The table shows some information about the amounts of time, in minutes, that Dave and Nick spent using their mobile phones on four days last week.

	Time (minutes)	
	Dave	**Nick**
Thursday	7	6
Friday	6	11
Saturday	17	12
Sunday	28	35

Nick spent less than 10 minutes using his mobile phone on one of these four days.

(a) Which day?

.....

(1)

On Sunday Nick spent more time using his mobile phone than Dave.

(b) How much more time?

..... minutes

(1)

*(c) Work out who spent the greater total amount of time using his mobile phone.
You must show all your working.

(3)

(Total for Question 4 is 5 marks)

8 Here are the test marks for the students in Mrs Potter's maths class.

28	36	25	43	18	39	30
36	27	31	33	14	22	36
23	12	38	36	40	45	27

(a) Complete the frequency table for these marks.

Mark	Tally	Frequency
10 – 19		
20 – 29		
30 – 39		
40 – 49		

(3)

(b) Work out the number of these students getting less than 20 marks.

.....

(1)

(Total for Question 8 is 4 marks)

13 The table shows the temperature every four hours one day in December.

Time	Temperature
2 am	6 °C
6 am	−4 °C
10 am	−2 °C
2 pm	8 °C
6 pm	5 °C
10 pm	−1 °C

(a) Write down the time with the lowest temperature.

.....

(1)

(b) Work out the difference between the temperature at 2 pm and the temperature at 6 pm.

..... °C

(1)

Between 10 pm and midnight the temperature goes down 5 °C.

(c) Work out the temperature at midnight.

..... °C

(2)

(Total for Question 13 is 4 marks)

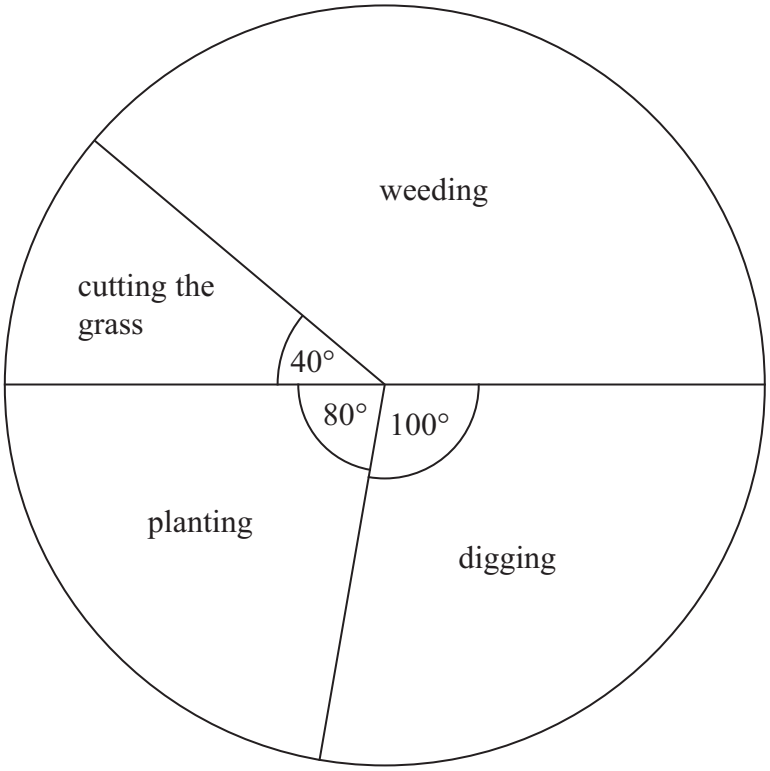
15 The two-way table shows some information about the numbers of boys, girls and teachers at three schools.

	School A	School B	School C	Total
Boys	85	29	54	
Girls		31	47	171
Teachers	13	5		
Total	191			366

Complete the two-way table.

(Total for Question 15 is 3 marks)

19 The pie chart shows some information about the time Gill spent working in her garden one month.



(a) What fraction of the time did Gill spend cutting the grass?

.....

(1)

Gill spent 7 hours weeding.

(b) How much time did Gill spend planting?

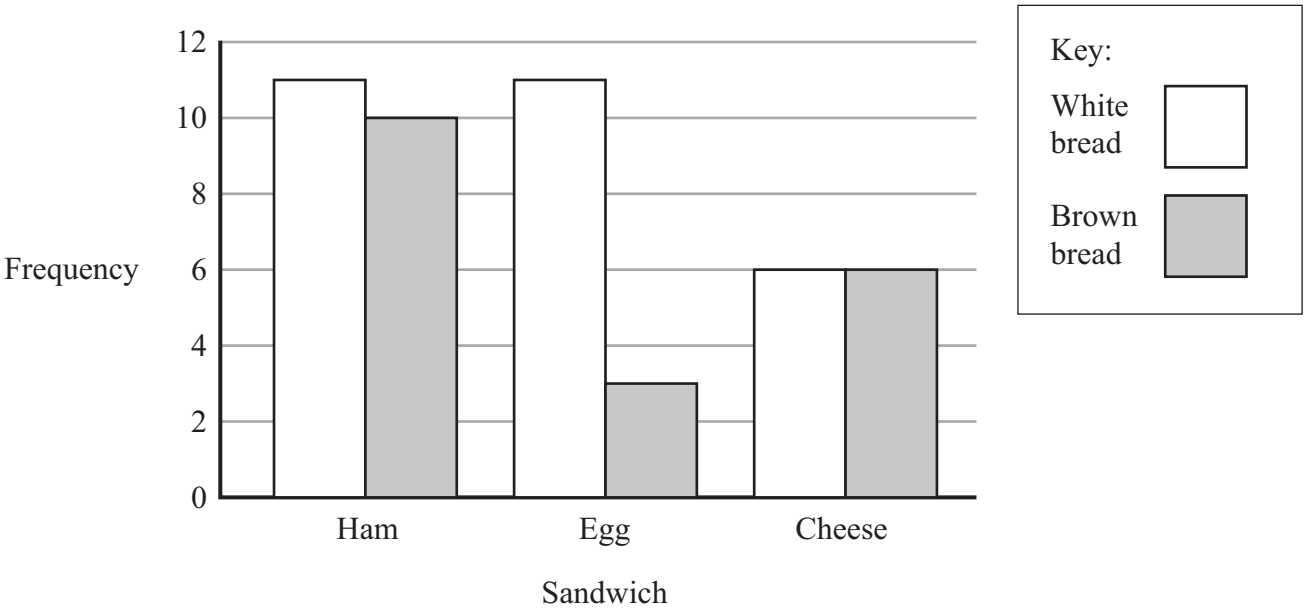
..... hours

(3)

(Total for Question 19 is 4 marks)

2 Ann works in a sandwich shop.

The dual bar chart shows information about the sandwiches sold.



(a) Write down the total number of cheese sandwiches sold.

.....

(1)

More white bread sandwiches were sold than brown bread sandwiches.

(b) Work out how many more white bread sandwiches.

.....

(2)

(Total for Question 2 is 3 marks)

24 There are 40 people at a meeting.
Each person travelled to the meeting either by car or by train.

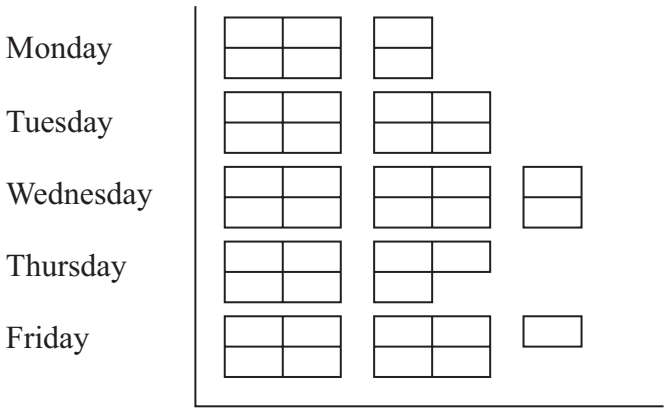
13 of the people are male.
10 females travelled by train.
8 males travelled by car.

Work out the total number of people who travelled by car.

.....

(Total for Question 24 is 3 marks)

5 Here is a pictogram.
It shows the number of boxes of chocolates Mr Fenn sold last week from Monday to Friday.



Represents 20 boxes of chocolates sold

What fraction of the total number of these boxes of chocolates did Mr Fenn sell on Tuesday?

.....

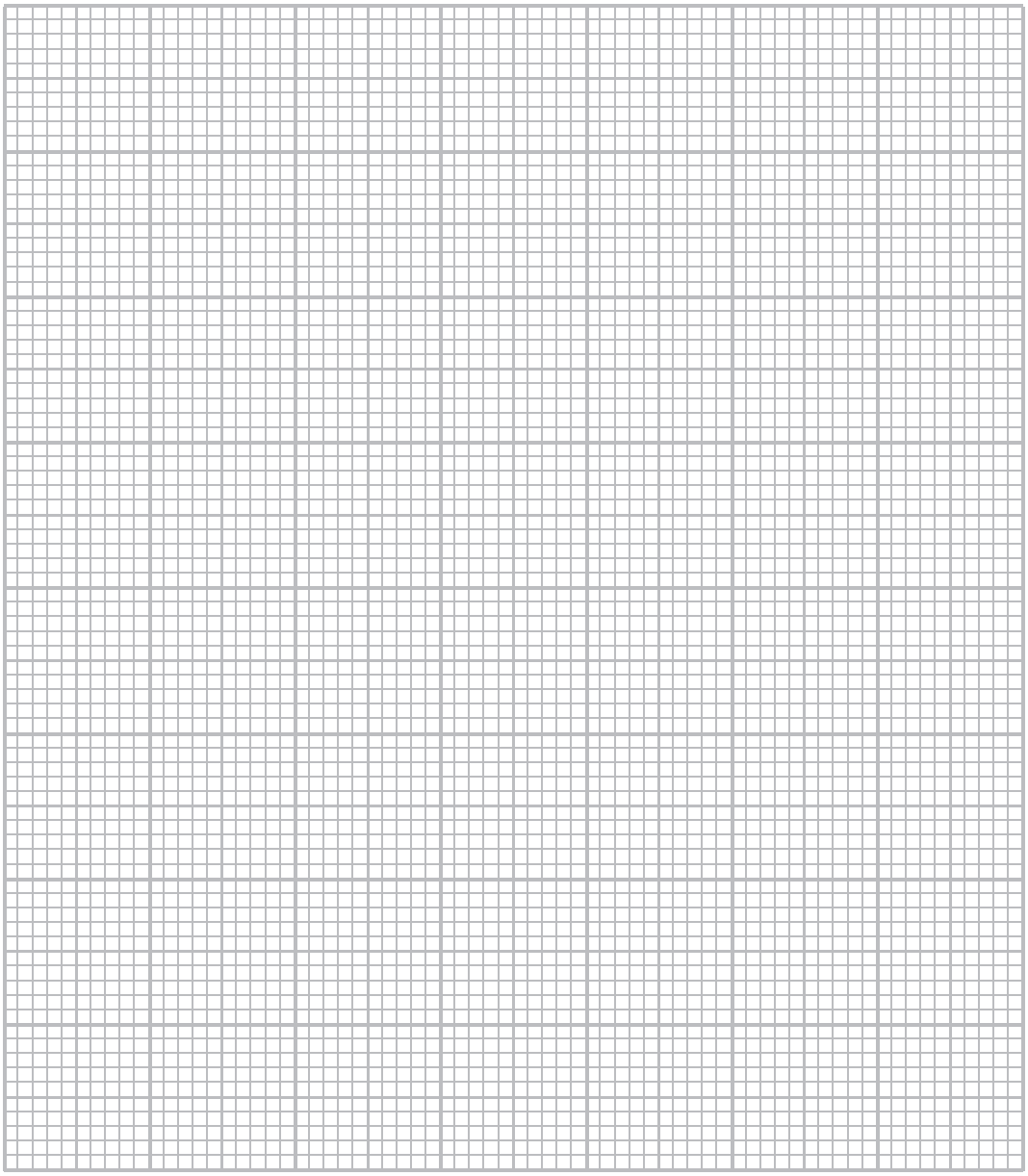
(Total for Question 5 is 3 marks)

***10** Kitty and George sell cars.

The table shows the numbers of cars sold by Kitty and by George in the first four months of 2013

	January	February	March	April
Kitty	2	5	13	10
George	4	7	9	10

Show this information in a suitable diagram.



(Total for Question 10 is 4 marks)

Question 70

15 Here is a list of all the coins in Amira's purse.

£1	5p	20p	1p
20p	1p	10p	£1
20p	10p	£1	20p
10p	20p	20p	5p

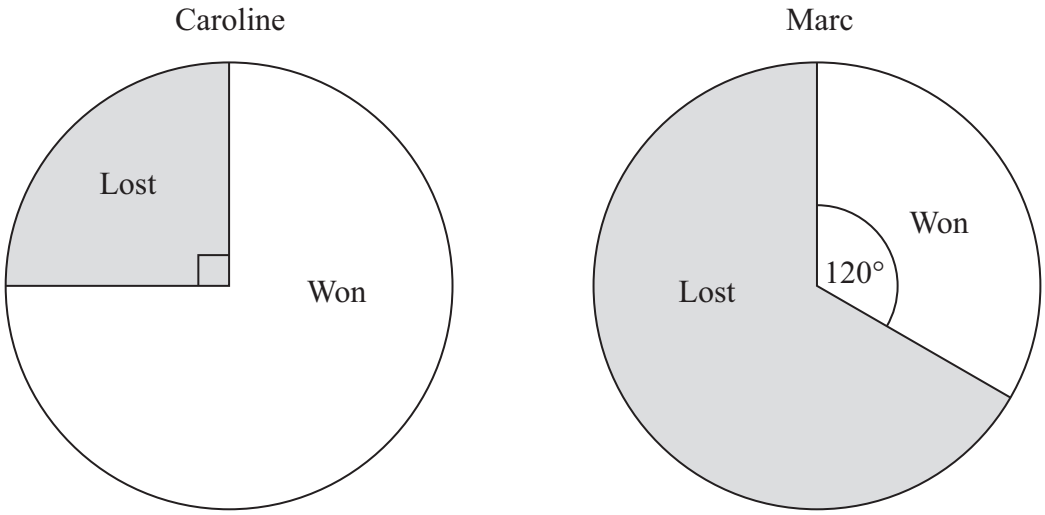
Complete the table for this information.

Coin	Tally	Frequency
£1		
50p		
20p		
10p		
5p		
2p		
1p		

(Total for Question 15 is 2 marks)

18 Caroline and Marc are in a darts team.

The pie charts show information about the number of games Caroline and Marc each won last year.
They also show information about the number of games Caroline and Marc each lost last year.



Caroline played 52 games.
Marc played 150 games.

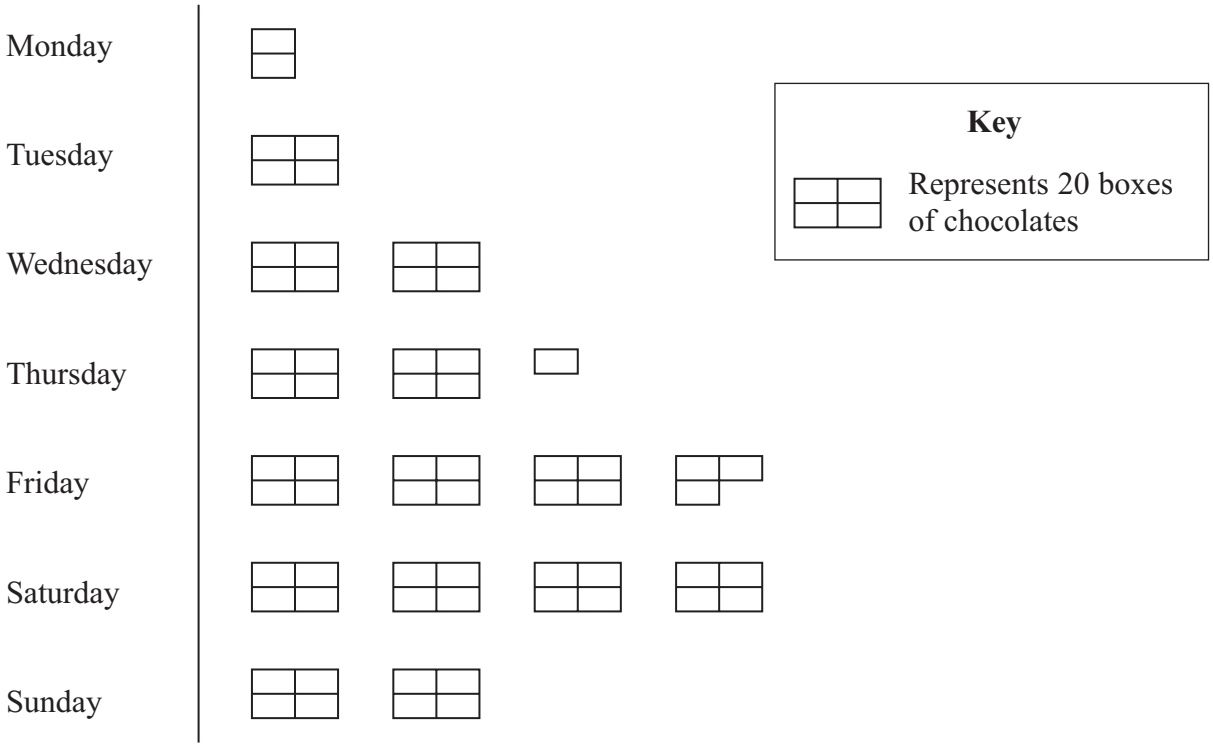
Marc won more games than Caroline.

How many more?

.....

(Total for Question 18 is 3 marks)

4 Here is a pictogram.
It shows the number of boxes of chocolates sold each day last week in a shop.



(a) Write down the number of boxes of chocolates sold

(i) on Tuesday,

.....

(ii) on Thursday.

.....

(2)

(b) Work out the total number of boxes of chocolates sold last week.

.....

(2)

(Total for Question 4 is 4 marks)

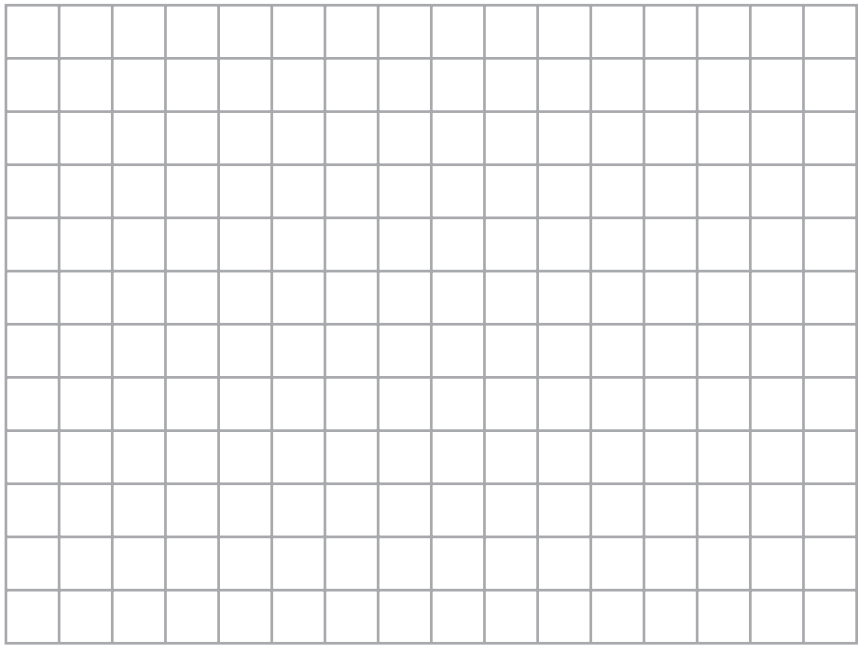
*7 Mrs Jones recorded the number of boys and the number of girls absent from school each day last week.

The table shows this information.

Day	Mon	Tues	Wed	Thur	Fri
Boys	8	8	6	5	2
Girls	4	6	3	5	9

Mrs Jones wants to compare this information.

On the grid draw a suitable diagram or chart.



(Total for Question 7 is 4 marks)

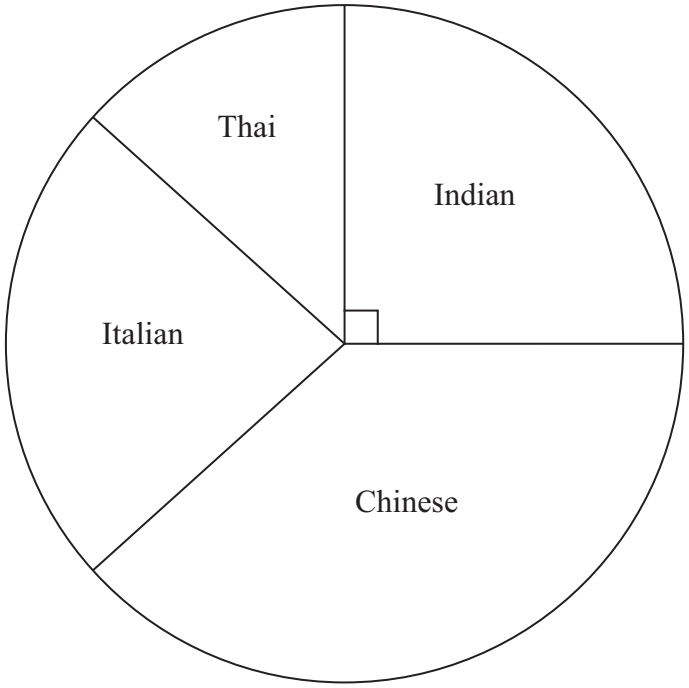
Question 74

11 Rina wants to find the heights of the students in her year group.

Design a suitable table for a data collection sheet that she could use to collect this information.

(Total for Question 11 is 3 marks)

12 The pie chart shows some information about the types of food that 60 people like best.



(a) (i) Measure the angle for Thai.

..... °

(ii) What fraction of the people like Thai food best?

.....

(2)

(b) Work out the number of people who like Chinese food best.

.....

(3)

(Total for Question 12 is 5 marks)

14 The stem and leaf diagram gives the heights, in cm, of some potato plants.

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

Key

2 | 3 represents 23 cm

(a) Write down the greatest height.

..... cm
(1)

(b) Write down the mode.

..... cm
(1)

(c) Find the median.

..... cm
(2)

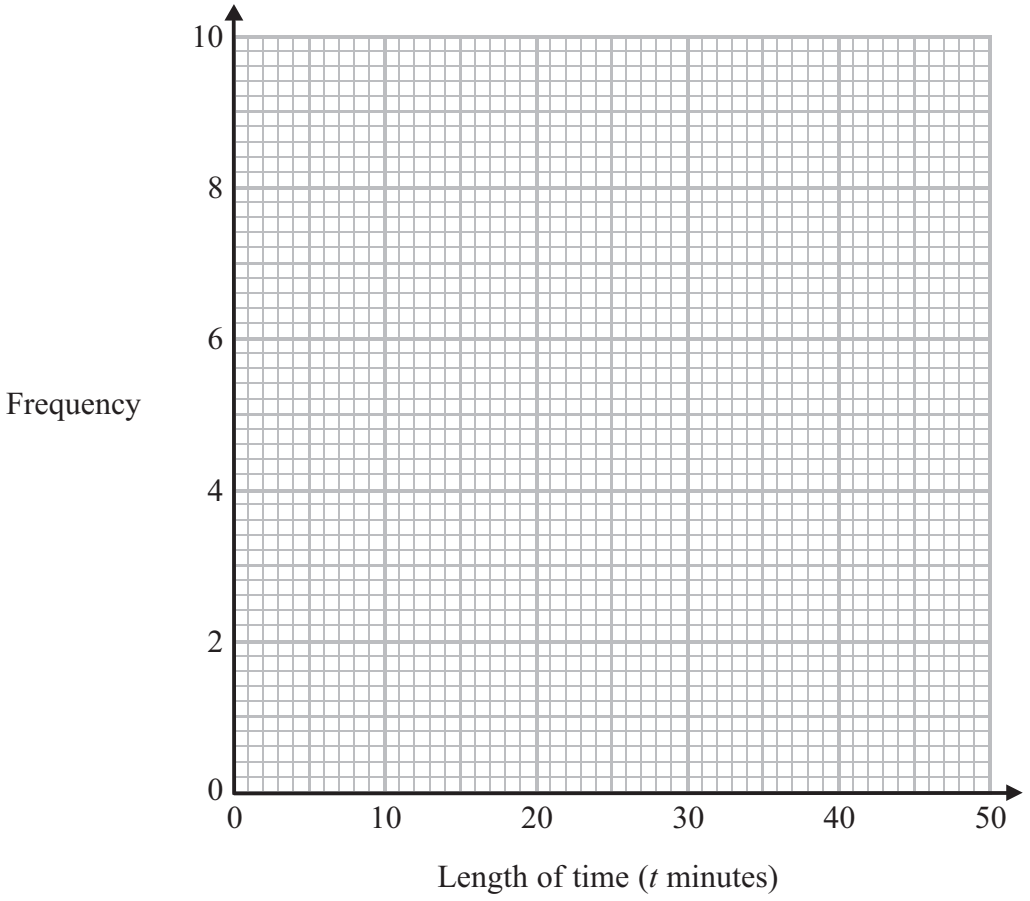
(Total for Question 14 is 4 marks)

16 Helen went on 35 flights in a hot air balloon last year.

The table gives some information about the length of time, t minutes, of each flight.

Length of time (t minutes)	Frequency
$0 < t \leqslant 10$	6
$10 < t \leqslant 20$	9
$20 < t \leqslant 30$	8
$30 < t \leqslant 40$	7
$40 < t \leqslant 50$	5

On the grid below, draw a frequency polygon for this information.



(Total for Question 16 is 2 marks)

17 On an activity day students play one sport.

They play football or hockey or tennis.

120 students are on the activity day.

30 of the students are boys.

12 of the boys and 26 of the girls play hockey.

45 of the students play football.
35 of the 45 students who play football are girls.

Work out the number of girls who play tennis.

.....

(Total for Question 17 is 4 marks)

2 A car hire company wants to know if people are happy with their hire cars.
The company asks different people if they are happy with their hire cars.

The results for Monday, Tuesday, Wednesday and Thursday are shown in the pictogram.

Monday	○
Tuesday	○ ○
Wednesday	○ ○ ◗
Thursday	○ ○ ○
Friday	

Key: ○ 4 happy people

(a) How many people were happy with their hire cars on Tuesday?

.....

(1)

(b) How many people were happy with their hire cars on Wednesday?

.....

(1)

On Friday 7 people are happy with their hire cars.

(c) Complete the pictogram for Friday.

(1)

(Total for Question 2 is 3 marks)

20 Omar is carrying out a survey of the students in his maths group.
He wants to find out the month of each student's birthday.

Design a suitable table for a data collection sheet he could use to collect this information.

(Total for Question 20 is 3 marks)

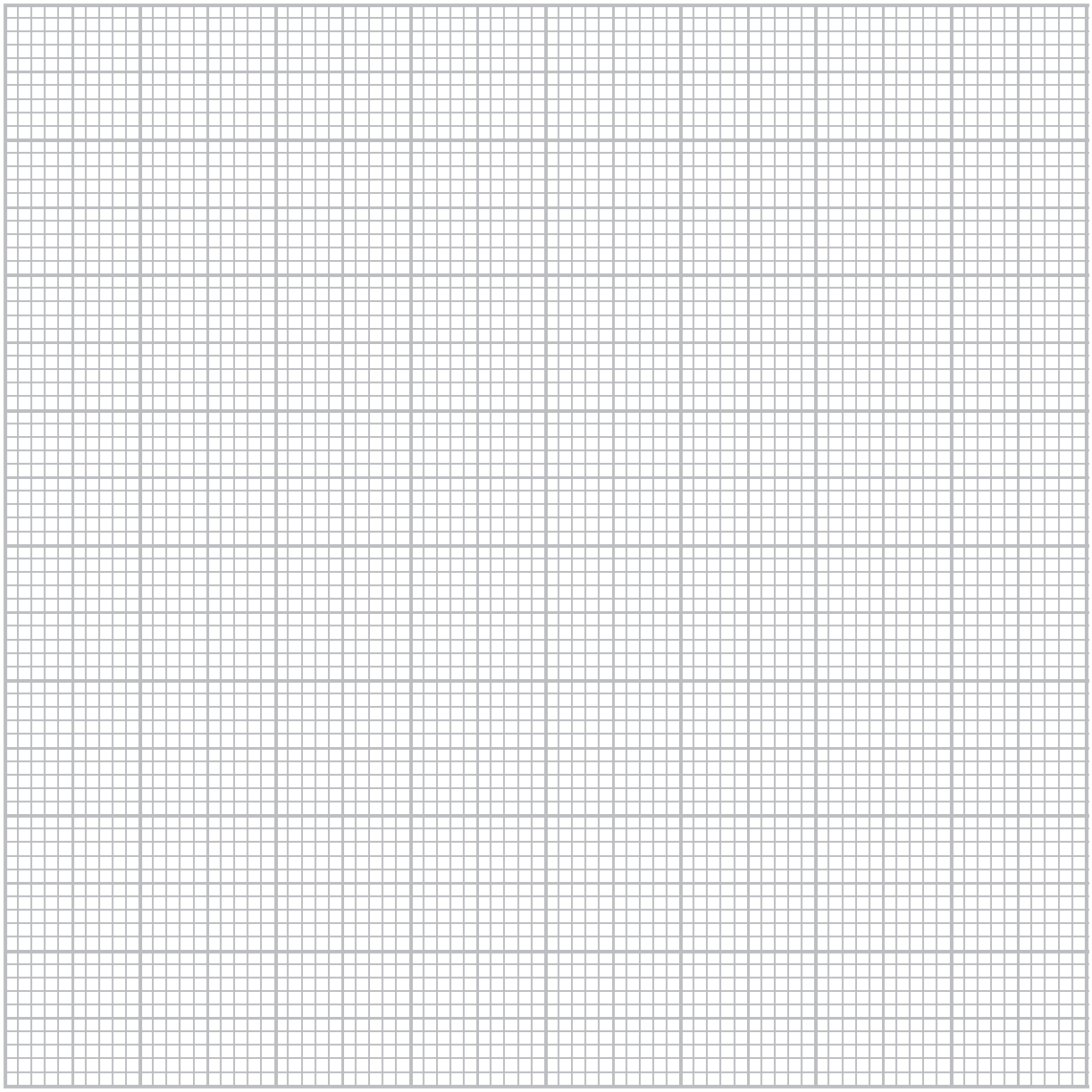
***8** Lev counts the number of bicycles and the number of motorbikes he sees on each of five mornings.

The table shows his results.

	Monday	Tuesday	Wednesday	Thursday	Friday
Bicycles	10	12	12	13	8
Motorbikes	5	4	7	2	6

Lev wants to compare this information.

On the grid, draw a suitable chart or diagram.



(Total for Question 8 is 4 marks)

26 There are 130 adults at a language school.
Each adult studies one of French or Spanish or German.

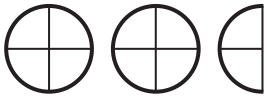
96 of the adults are women.
12 of the women study French.
73 of the adults study Spanish.
55 of the women study Spanish.
9 of the men study German.

How many of the adults study French?

.....

(Total for Question 26 is 4 marks)

1 The pictogram shows the number of cakes sold in a shop on Monday, on Tuesday, on Wednesday and on Thursday one week.

Monday	
Tuesday	
Wednesday	
Thursday	
Friday	

Key:



represents 8 cakes

(a) How many cakes were sold on Thursday?

.....

(1)

(b) Work out the total number of cakes sold on Monday and Tuesday.

.....

(2)

On Friday this week 12 cakes were sold in the shop.

(c) Show this information on the pictogram.

(1)

(Total for Question 1 is 4 marks)

5 Lionel recorded the number of typing errors on each page of a letter.

Here are his results.

2 5 1 1 3 2

(a) Work out the median.

.....

(2)

(b) Work out the range.

.....

(2)

Lionel also recorded the number of errors on each page of a book.

The table gives information about his results.

Number of errors on each page	Tally	Frequency
0	𝍸 𝍸 𝍸 |||	
1	𝍸 𝍸 |	
2	𝍸 ||	
3	|||	
4	|	

(c) Complete the frequency column in the table.

(1)

(d) How many pages are there in the book?

..... pages

(1)

(e) Work out the total number of errors in the book.

..... errors

(2)

(Total for Question 5 is 8 marks)

8 There are only yellow pencils, red pencils, green pencils and blue pencils in a box.

The pie chart gives information about the numbers of pencils of each colour.

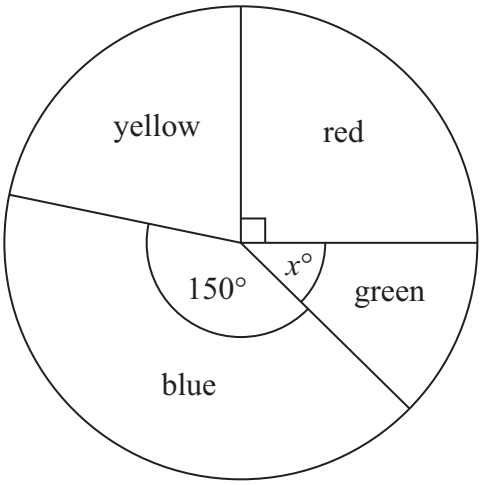


Diagram **NOT** accurately drawn

(a) What fraction of the total number of pencils in the box is red?

.....

(1)

In the pie chart, the angle used for yellow is twice the angle used for green.

(b) Write down an expression, in terms of x, for the angle used for yellow.

.....

(1)

There are 48 pencils in the box.

(c) Work out the number of blue pencils in the box.

.....

(2)

(Total for Question 8 is 4 marks)

10 There are 57 musicians in an orchestra.
Each musician plays a brass instrument or a woodwind instrument or a string instrument.

The incomplete two-way table gives information about the musicians.

	Brass	**Woodwind**	**String**	**Total**
Female	4			
Male		5		27
Total		20	21	57

(a) Complete the table.

(3)

(b) Write down the number of male musicians who play a woodwind instrument.

.....

(1)

(c) Write down the number of female musicians who do **not** play a string instrument.

.....

(1)

(Total for Question 10 is 5 marks)

3 The table shows some information about the numbers of medals won by Great Britain in the 2012 Olympic Games and in the 2012 Paralympic Games.

	Gold	Silver	Bronze
Olympic Games	29	17	19
Paralympic Games	34	43	43

Great Britain won more medals in total in the Paralympic Games than in the Olympic Games.

How many more medals in total?

.....

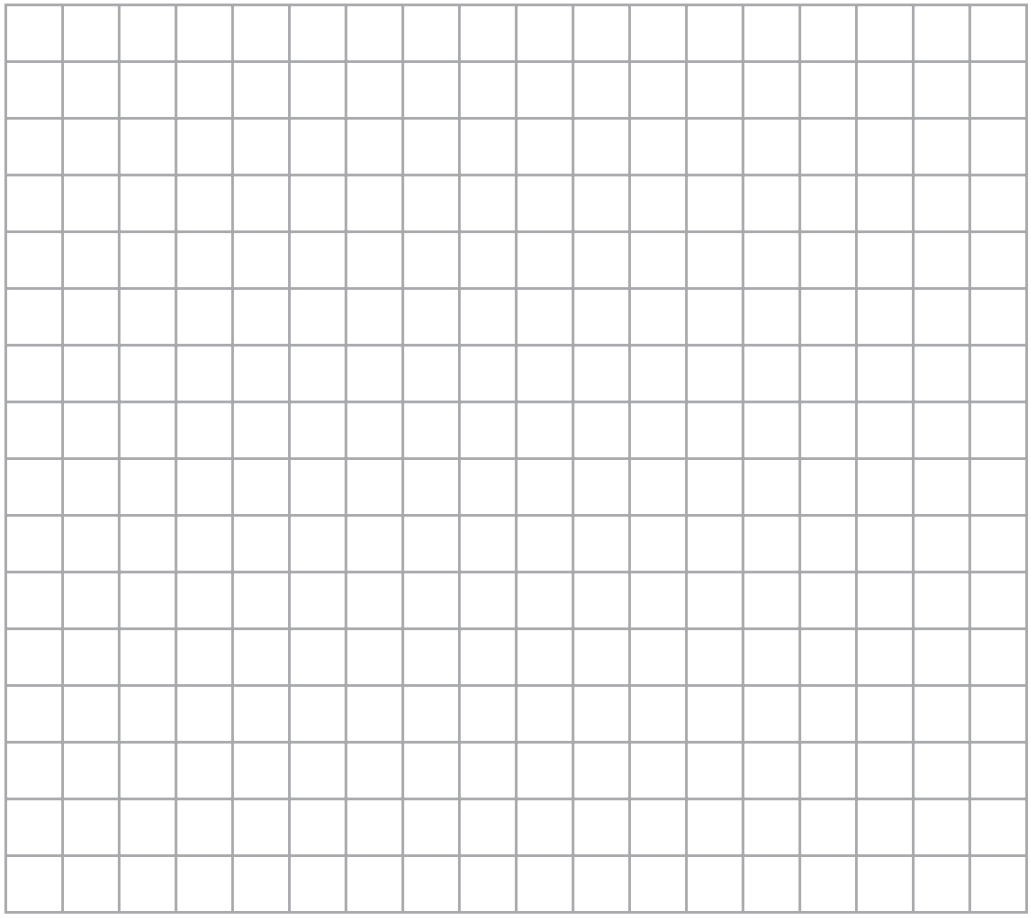
(Total for Question 3 is 3 marks)

***9** The table shows information about the average daily hours of sunshine in Majorca and in Crete for each of five months.

	April	May	June	July	August
Majorca	9	9	11	11	10
Crete	6	8	11	13	12

Simon wants to compare this information.

On the grid, draw a suitable diagram or chart.

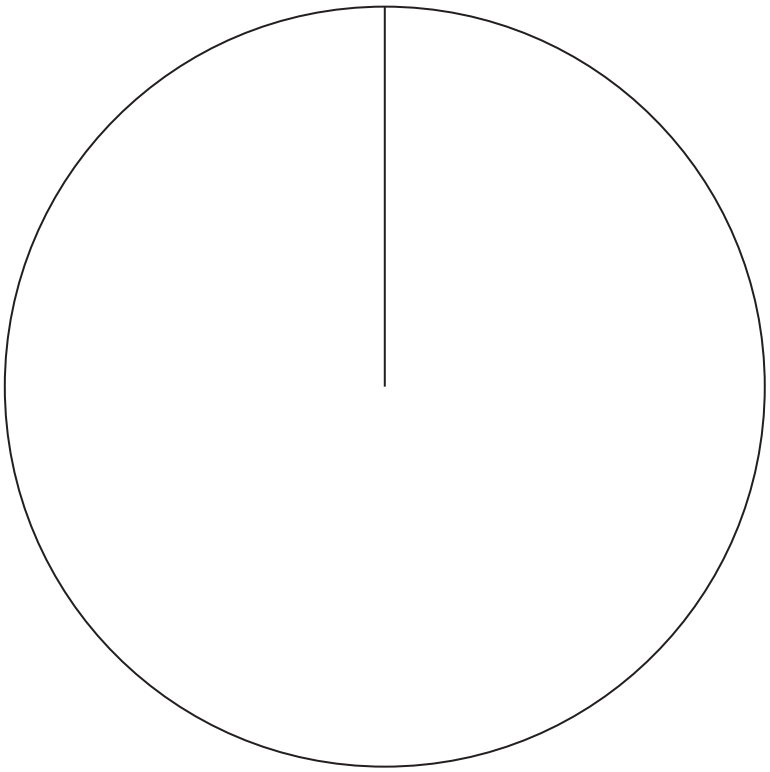


(Total for Question 9 is 4 marks)

17 The table gives information about the results of the matches a football team played.

Result	**Frequency**	
Won	28	
Drawn	12	
Lost	20	

Draw an accurate pie chart to show this information.



(Total for Question 17 is 4 marks)

20 50 people each did one activity at a sports centre.

Some of the people went swimming.
Some of the people played squash.
The rest of the people used the gym.

21 of the people were female.
6 of the 8 people who played squash were male.
18 of the people used the gym.
9 males went swimming.

Work out the number of females who used the gym.

.....

(Total for Question 20 is 4 marks)

1 The table shows some information about 5 students.

Name	Gender	Age	Favourite subject
Ella	Female	16	Science
Liam	Male	15	French
Neil	Male	12	History
Penny	Female	15	Maths
Rashida	Female	14	English

(a) Write down Liam's favourite subject.

.....

(1)

(b) Write down the name of the oldest student.

.....

(1)

(c) Write down the name of the female student who is 15 years old.

.....

(1)

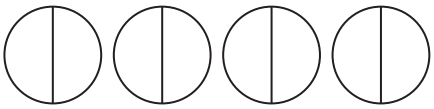
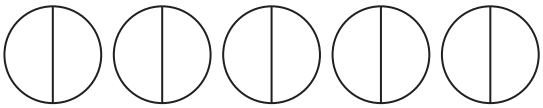
(Total for Question 1 is 3 marks)

19 Martin wants to find out the type of transport people use to get to work.

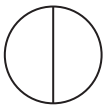
Design a suitable table for a data collection sheet he could use.

(Total for Question 19 is 3 marks)

1 The pictogram shows information about the number of hours of sunshine at a seaside resort on Monday, on Tuesday and on Wednesday one week.

Monday	
Tuesday	
Wednesday	
Thursday	
Friday	

Key:

 represents 2 hours

(a) Write down the number of hours of sunshine on Wednesday.

.....

(1)

(b) Write down the number of hours of sunshine on Tuesday.

.....

(1)

There were 4 hours of sunshine on Thursday.
There were 9 hours of sunshine on Friday.

(c) Use this information to complete the pictogram.

(2)

(Total for Question 1 is 4 marks)

7 Mr Khan asked the 22 students in his class what activity they wanted to do on a school trip.

Here are the results.

bowling	swimming	roller skating	swimming
swimming	bowling	roller skating	roller skating
roller skating	swimming	roller skating	swimming
swimming	cinema	bowling	cinema
cinema	roller skating	swimming	swimming
swimming	bowling		

(a) Complete the frequency table.

Activity	Tally	Frequency
bowling		
swimming		
roller skating		
cinema		

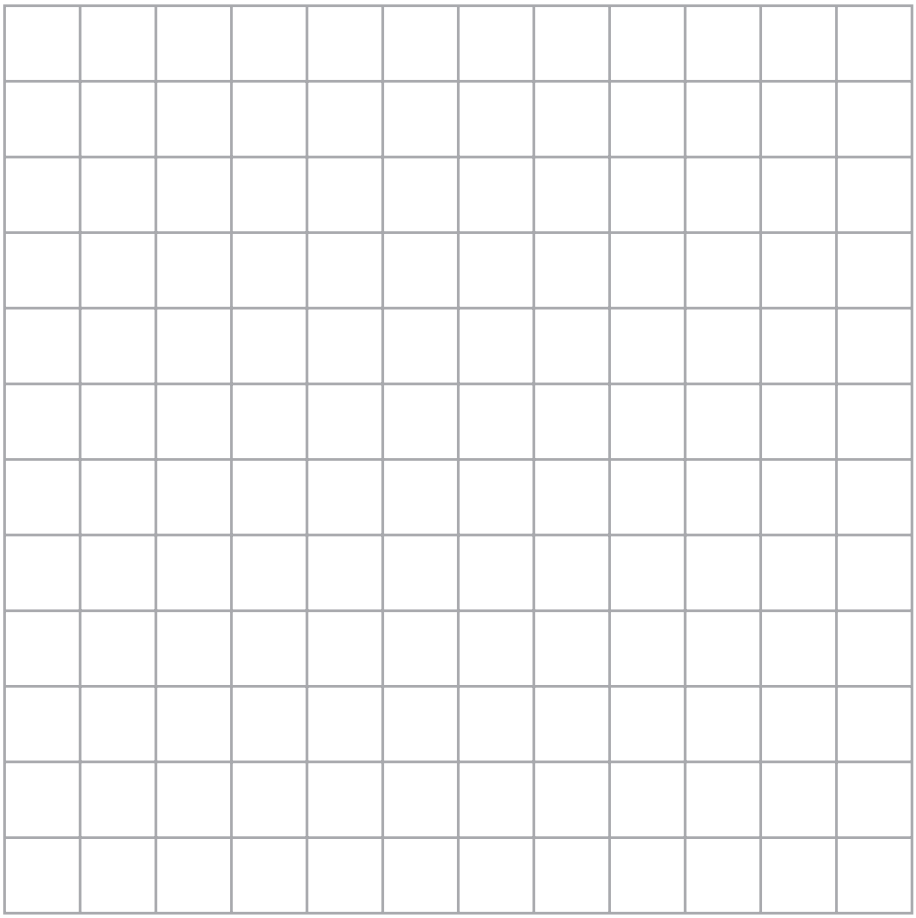
(2)

(b) Write down the mode.

.....

(1)

(c) Show the results of Mr Khan's survey in a suitable diagram.



(3)

(Total for Question 7 is 6 marks)

11 The pie chart shows information about how the students in Year 11 get to school.

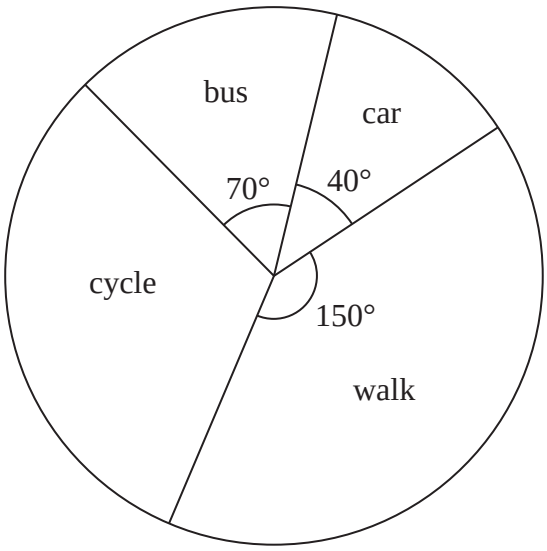


Diagram **NOT** accurately drawn

Mr Morley says, "Less than 10% of students in Year 11 get to school by car".

(a) Is Mr Morley correct?
You must explain your answer.

.....

.....

.....

(2)

50 students in Year 11 cycle to school.

(b) How many students in Year 11 walk to school?

.....

(3)

(Total for Question 11 is 5 marks)

12 There are 72 guests staying in a hotel.
They are French or German or Spanish.

The two-way table shows some information about the guests.

	French	German	Spanish	Total
Female	17		14	40
Male		13		32
Total	29		21	72

(a) Complete the two-way table.

(2)

One of these guests is picked at random.

(b) Write down the probability that the guest is female.

.....

(1)

One of the male guests is picked at random.

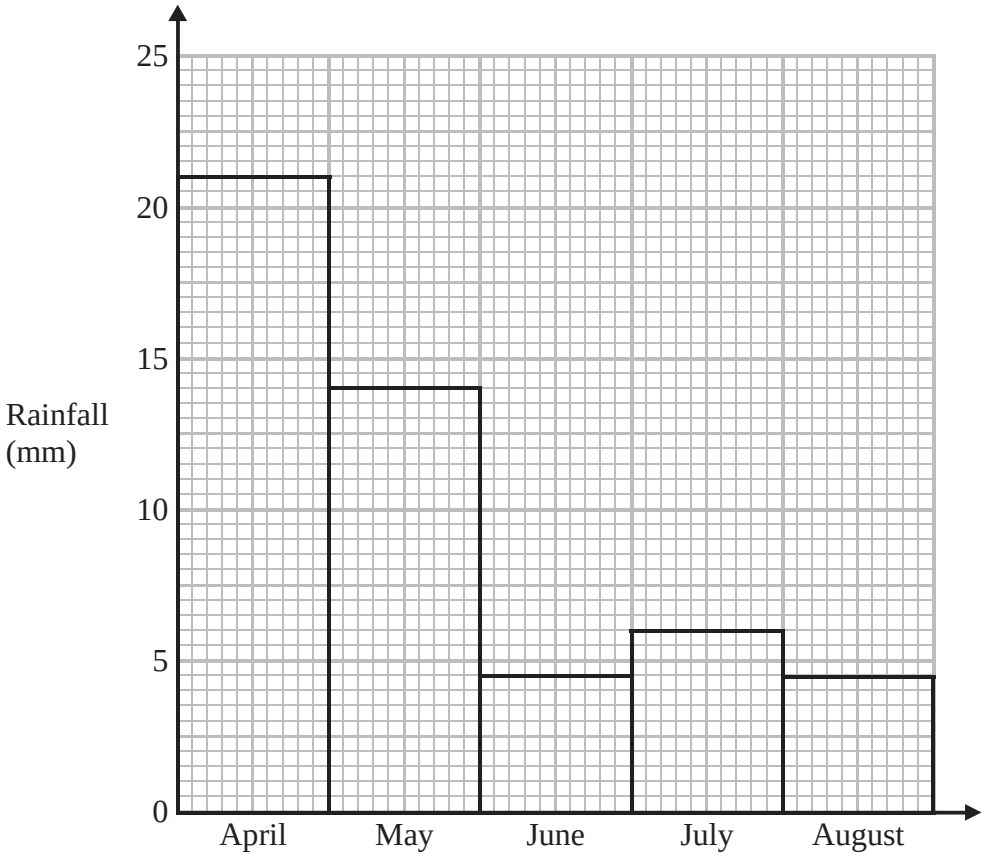
(c) Write down the probability that this male guest is German.

.....

(1)

(Total for Question 12 is 4 marks)

6 The diagram shows information about the total rainfall, in mm, in Fenwick for each of 5 months.



(a) Which month had the highest total rainfall?

.....

(1)

Two months had the same total rainfall.

(b) Which two months?

..... and .....

(1)

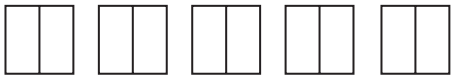
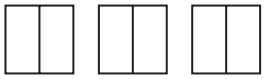
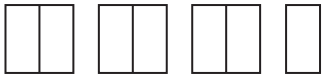
(c) Work out the difference between the total rainfall in May and in July.

..... mm

(2)

(Total for Question 6 is 4 marks)

1 The pictogram shows information about the number of books sold in a shop on Monday, on Tuesday and on Wednesday one week.

Monday	
Tuesday	
Wednesday	
Thursday	
Friday	

Key:



represents 4 books

(a) Write down the number of books sold on Monday.

.....

(1)

(b) Write down the number of books sold on Wednesday.

.....

(1)

8 books were sold on Thursday.
18 books were sold on Friday.

(c) Use this information to complete the pictogram.

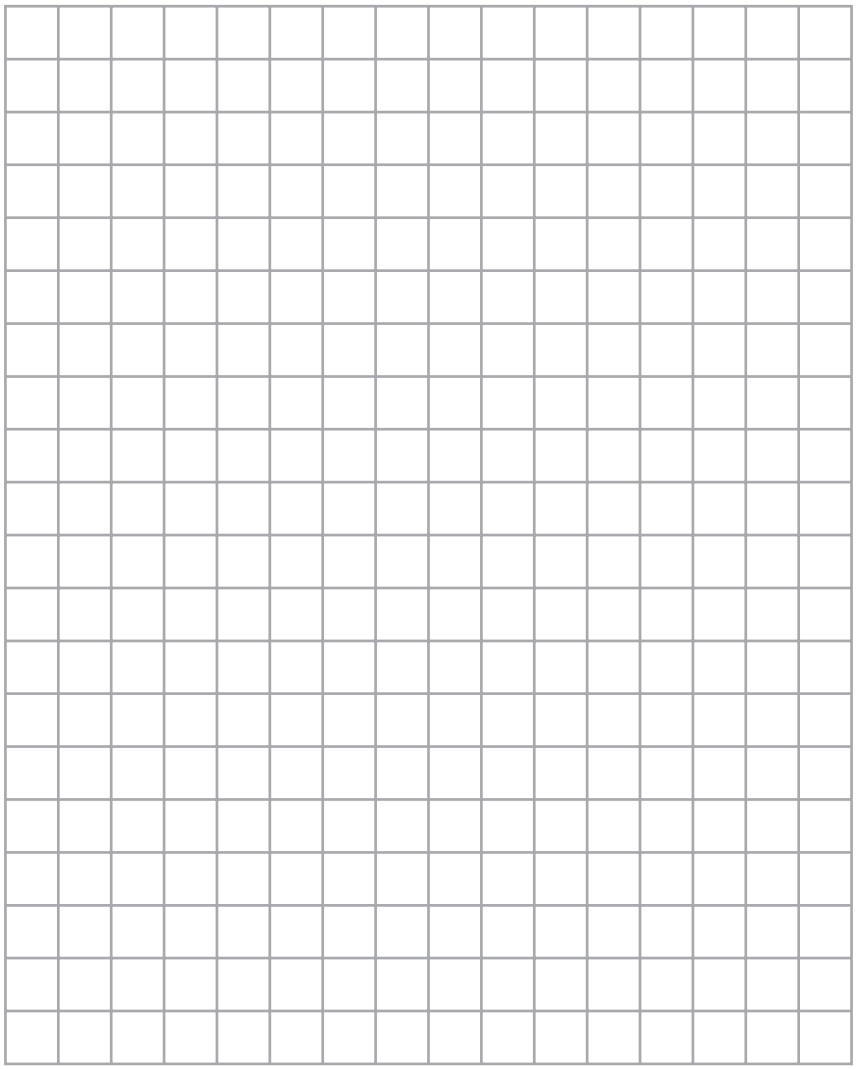
(2)

(Total for Question 1 is 4 marks)

*5 The table shows the minimum temperature and the maximum temperature in a town on each of five days.

	Friday	Saturday	Sunday	Monday	Tuesday
Daily maximum temperature (°C)	18	17	14	14	9
Daily minimum temperature (°C)	12	11	11	8	5

Draw a suitable diagram or chart for this information.



(Total for Question 5 is 4 marks)

12 The two-way table shows some information about how some men and some women travelled to work yesterday.

	Train	Car	Bus	Total
Men	12		6	28
Women		4		
Total			13	50

(a) Work out the total number of women.

.....

(1)

(b) Work out the number of people who travelled to work by train yesterday.

.....

(3)

A man is chosen at random from all these men.

(c) Write down the probability that he travelled to work by train.
Give your answer as a fraction in its simplest form.

.....

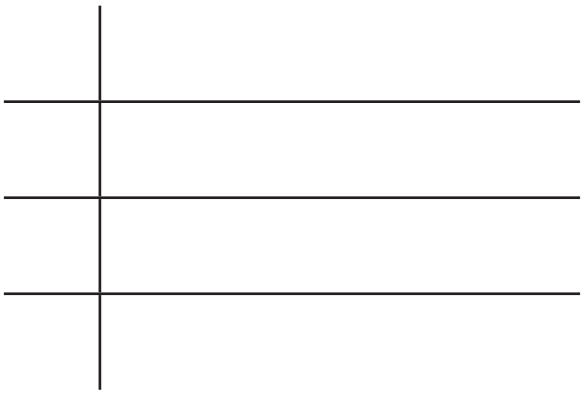
(2)

(Total for Question 12 is 6 marks)

16 Here are the heights, in centimetres, of 15 children.

123	147	135	150	147
129	148	149	125	137
133	138	133	130	151

Show this information in an ordered stem and leaf diagram.



(Total for Question 16 is 3 marks)

4 A shop sells computers.

The table shows the number of laptops and the number of tablets sold in June, in July and in August.

	June	July	August
Laptops	38	55	41
Tablets	54	43	65

The shop sold more tablets than laptops.

How many more tablets?

.....

(Total for Question 4 is 3 marks)

1 The table shows the heights of six mountains.

Mountain	Height (metres)
Diran	7266
Lhotse	8516
K12	7428
Cho Oyu	8188
Jannu	7711
Makalu	8485

(a) Write down the name of the highest of these mountains.

.....

(1)

(b) Write the number **8188** to the nearest hundred.

.....

(1)

(c) Write the number **7428** in words.

.....

(1)

The mountain K3 is eight thousand and fifty one metres high.

(d) Write the number **eight thousand and fifty one** in figures.

.....

(1)

(Total for Question 1 is 4 marks)

2 Liz asks 20 people to name the flavour of chocolate they like best.

Here are her results.

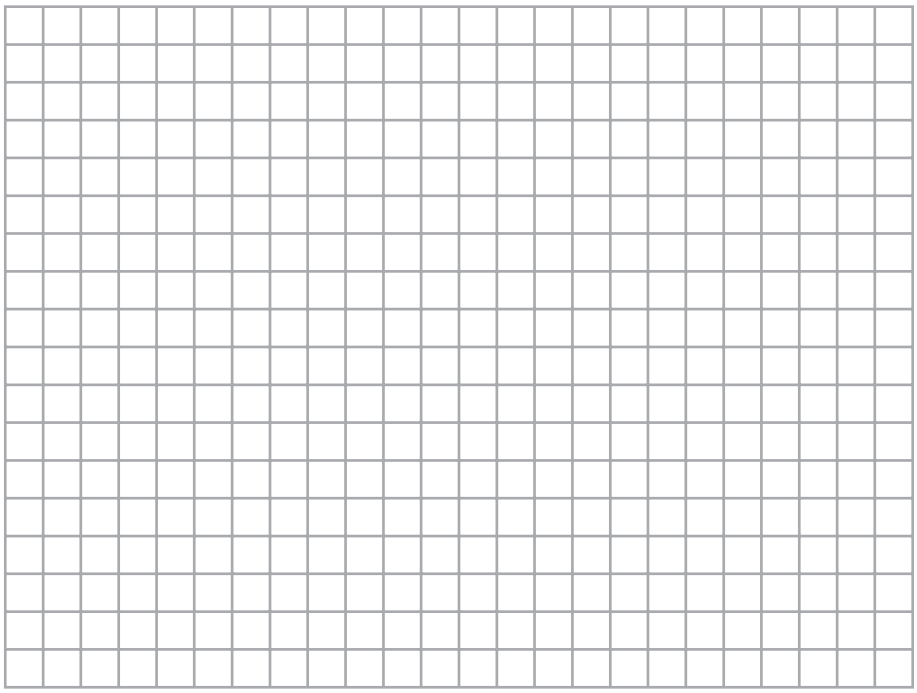
milk	plain	orange	plain	milk
coffee	white	milk	milk	orange
white	coffee	plain	milk	milk
milk	plain	coffee	milk	orange

(a) Complete the frequency table.

Flavour of chocolate	Tally	Frequency
plain		
milk		
coffee		
orange		
white		

(2)

(b) On the grid, draw a suitable chart or diagram to show Liz's results.



(3)

(Total for Question 2 is 5 marks)

15 The stem and leaf diagram gives information about the heights, in cm, of the tomato plants in a garden.

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

Key : 3 | 1 means 31 cm

(a) How many tomato plants are there in the garden?

.....

(1)

(b) Write down the height of the tallest tomato plant.

..... cm

(1)

(c) Work out the range of the heights.

..... cm

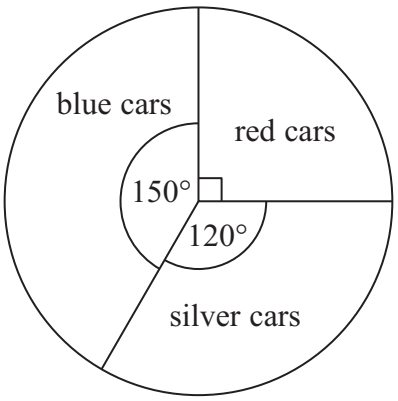
(2)

(Total for Question 15 is 4 marks)

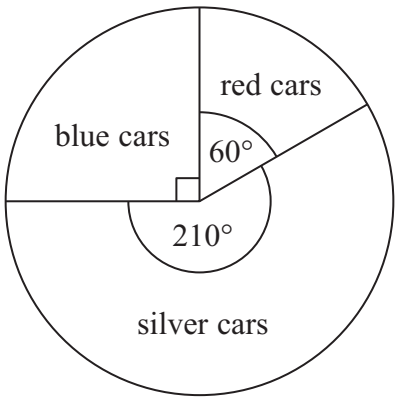
20 There are only silver cars, blue cars and red cars in the car parks at Allerton School and at Bragdon School.

The pie charts show information about the numbers of these cars.

Allerton School



Bragdon School



(a) What fraction of the cars in the car park at Allerton School are blue?
Give your fraction in its simplest form.

.....

(2)

There are 12 red cars in the car park at Bragdon School.

(b) How many silver cars are there in this car park?

.....

(2)

(c) In which car park are there more silver cars?

Tick (✓) one box to show your answer.

☐ Allerton School ☐ Bragdon School ☐ Not enough information

Explain your answer.

.....

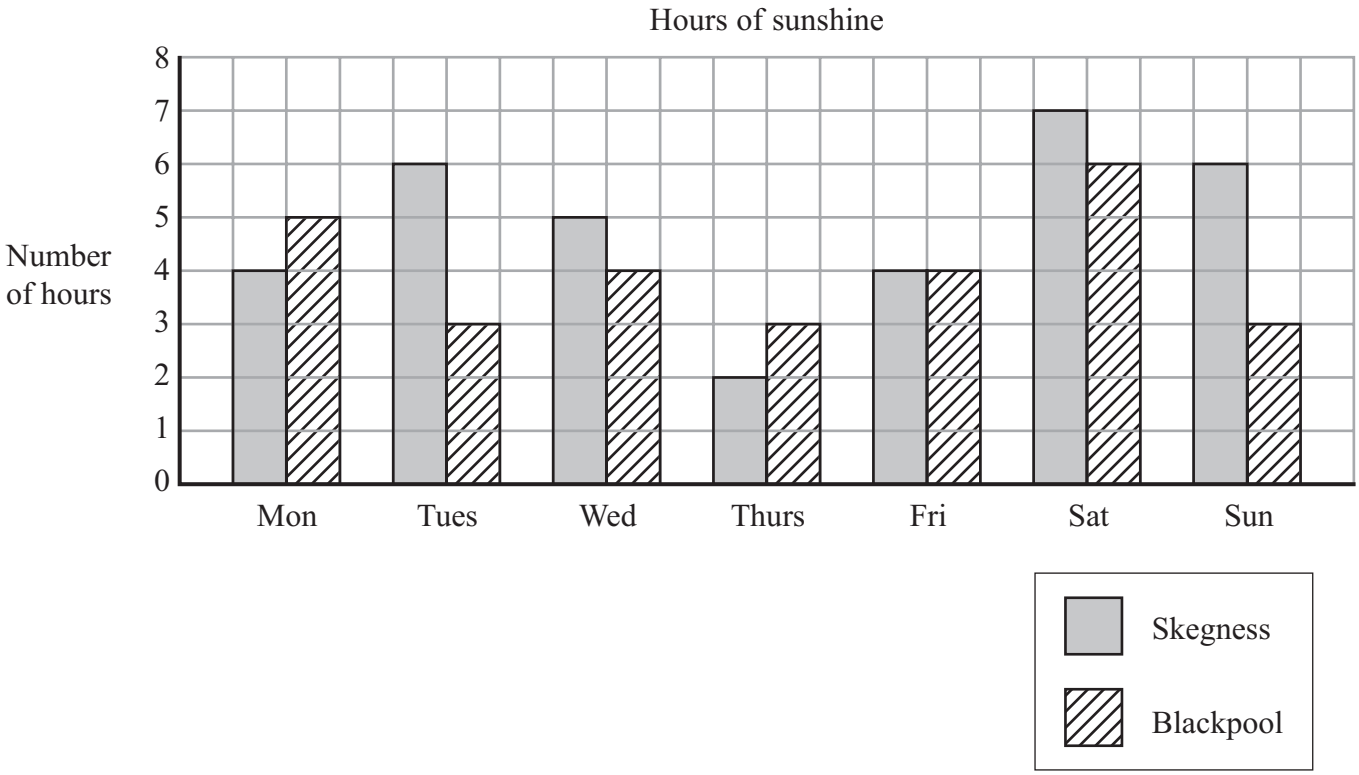
.....

.....

(1)

(Total for Question 20 is 5 marks)

2 The bar chart shows the number of hours of sunshine each day last week in Skegness and in Blackpool.



(a) How many hours of sunshine did Skegness have on Wednesday?

.....hours

(1)

(b) Blackpool had 6 hours of sunshine one day.

Which day?

.....

(1)

(c) In total, Skegness had more hours of sunshine than Blackpool last week.

How many hours more?

.....hours

(2)

(Total for Question 2 is 4 marks)

5 Here is some information about flower bulbs.

Flower bulb	Planting season	Flowering season
alium	autumn	summer
amaryllis	spring	autumn
daffodil	autumn	spring
nerine	autumn	autumn
sternbergia	spring	autumn
tulip	winter	spring

(a) What is the planting season for tulip bulbs?

.....

(1)

(b) Sternbergia has the same planting season as one other flower bulb.

Which flower bulb?

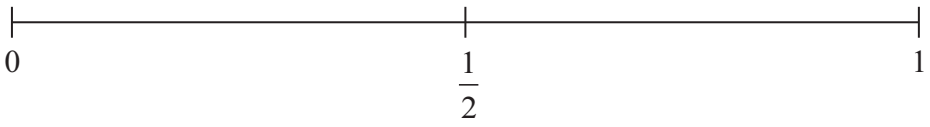
.....

(1)

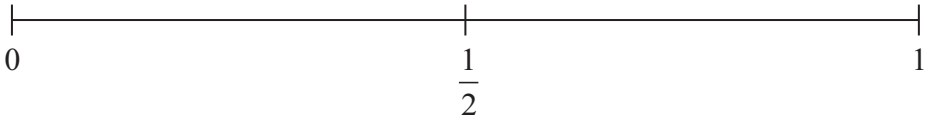
There is one of each of the six flower bulbs in a bag.

Carol takes at random a bulb from the bag.

(c) (i) On the probability scale below, mark with a cross (×) the probability that the bulb has a flowering season in winter.



(ii) On the probability scale below, mark with a cross (×) the probability that the bulb has a flowering season in autumn.



(2)

(Total for Question 5 is 4 marks)

11 Here are parts of two train timetables.

Melton Mowbray to Peterborough				
Melton Mowbray	06 31	06 53	07 34	08 34
Oakham	06 43	07 05	07 45	08 45
Stamford	06 57	07 19	08 01	09 01
Peterborough	07 10	07 33	08 16	09 16

Peterborough to York					
Peterborough	07 05	07 45	07 58	08 15	09 15
Newark	07 37	—	08 30	08 43	09 43
Doncaster	08 09	—	09 00	09 09	10 09
York	08 31	08 50	09 27	09 32	10 32

James lives in Stamford.
He is going to a meeting in York.

James will travel by train from Stamford to Peterborough.
He will then travel by train from Peterborough to York.

It will take James 30 minutes to walk from the station in York to his meeting.

His meeting starts at 10 00

Plan a schedule for his journey to York.

Schedule	Time
Train leaves Stamford	
Train arrives in Peterborough	
Train leaves Peterborough	
Train arrives in York	
James arrives at meeting	

(Total for Question 11 is 3 marks)

17 100 students each chose one activity.
Each student chose bowling or karting or ice skating.

The two-way table shows some information about the activities the students chose.

	Bowling	Karting	Ice skating	Total
Boys		13		47
Girls			34	
Total	26	20		100

(a) Complete the two-way table.

(3)

One of the boys is chosen at random.

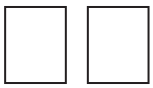
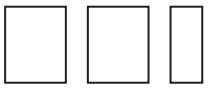
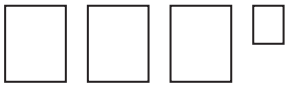
(b) What is the probability that this boy chose karting?

.....

(2)

(Total for Question 17 is 5 marks)

1 Here is a pictogram.
It shows the number of TVs sold in a shop on Thursday, on Friday and on Saturday.

Thursday	
Friday	
Saturday	
Sunday	

Key:  represents 4 TVs

On Sunday the shop sold 6 TVs.

(a) Use this information to complete the pictogram.

(1)

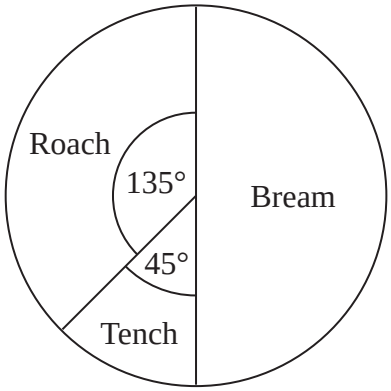
(b) Work out the total number of TVs sold on these four days.

.....

(2)

(Total for Question 1 is 3 marks)

19 The pie chart shows information about the types of fish Simon caught on Saturday.



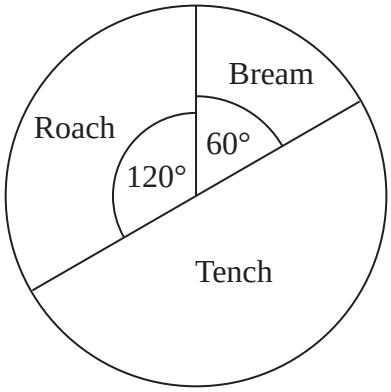
Simon caught 2 tench.

(a) Work out the total number of fish Simon caught.

.....

(2)

This pie chart shows information about the types of fish Asif caught on Saturday.



Debbie says,

"The pie charts show that Simon caught more roach than Asif caught on Saturday."

(b) Is Debbie correct?
Explain your answer.

.....

.....

(1)

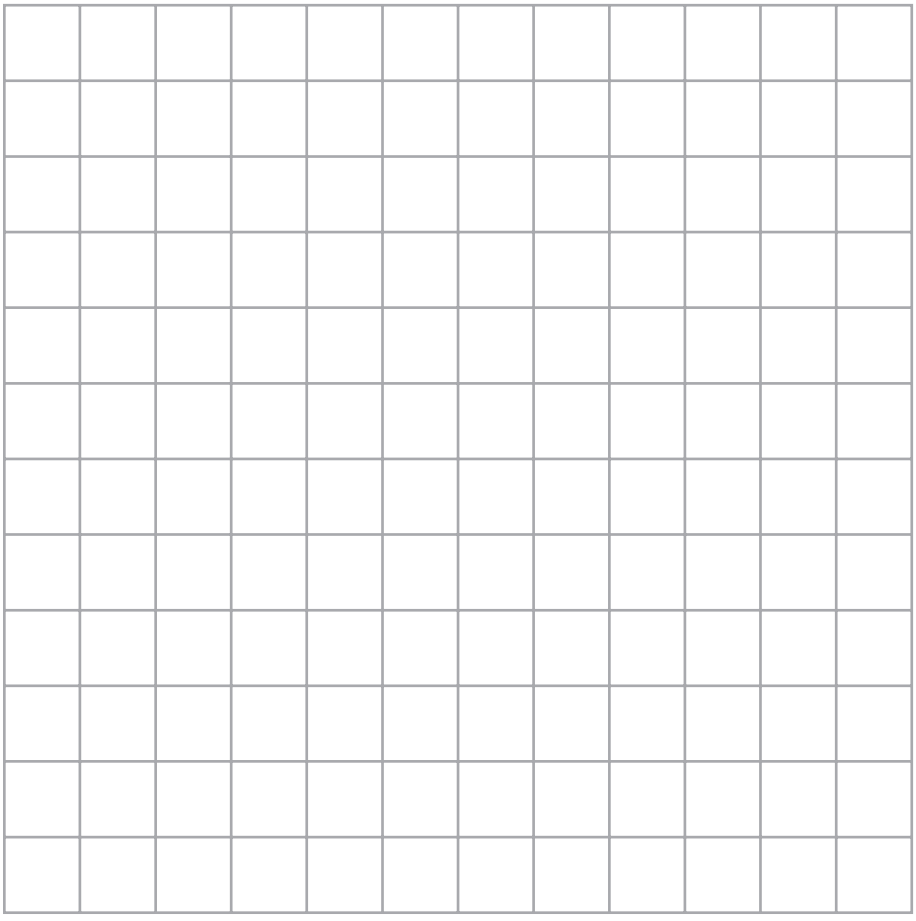
(Total for Question 19 is 3 marks)

***4** Karen carried out a survey to find out the type of pet her friends most wanted to own.

Here are her results.

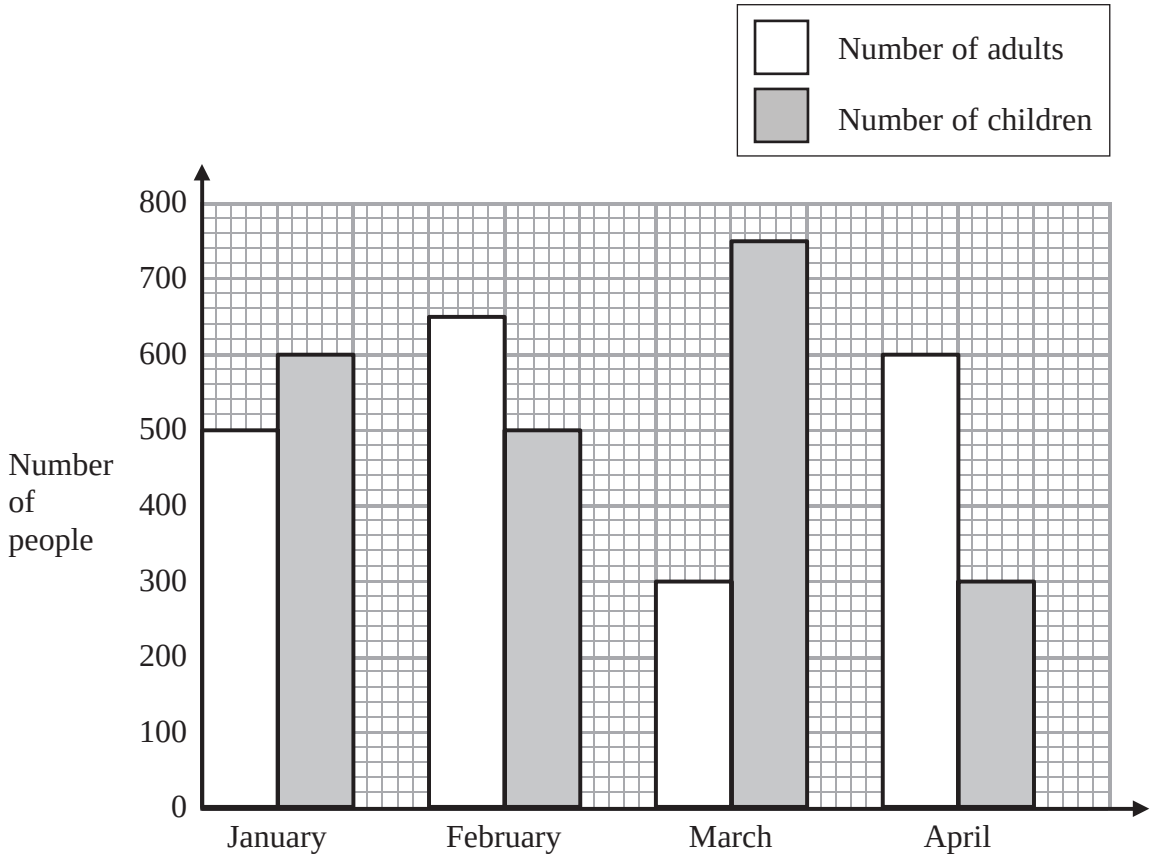
dog	dog	cat	dog	fish
cat	rabbit	dog	rabbit	rabbit
fish	cat	dog	dog	dog
snake	fish	rabbit	cat	cat

Draw a suitable chart or diagram to represent Karen's results.



(Total for Question 4 is 3 marks)

11 The graph shows the number of adults and the number of children going to a museum each month from January to April.



(a) How many adults went to the museum in March?

.....

(1)

More children than adults went to the museum in the 4 months from January to April.

(b) Work out how many more.

.....

(3)

(Total for Question 11 is 4 marks)

Question 115

16 Ralph is carrying out a survey about the colours of cars in a car park.

Design a suitable table for a data collection sheet for Ralph to use.

(Total for Question 16 is 3 marks)

2 Here is a list of the weeds in Hari's garden.

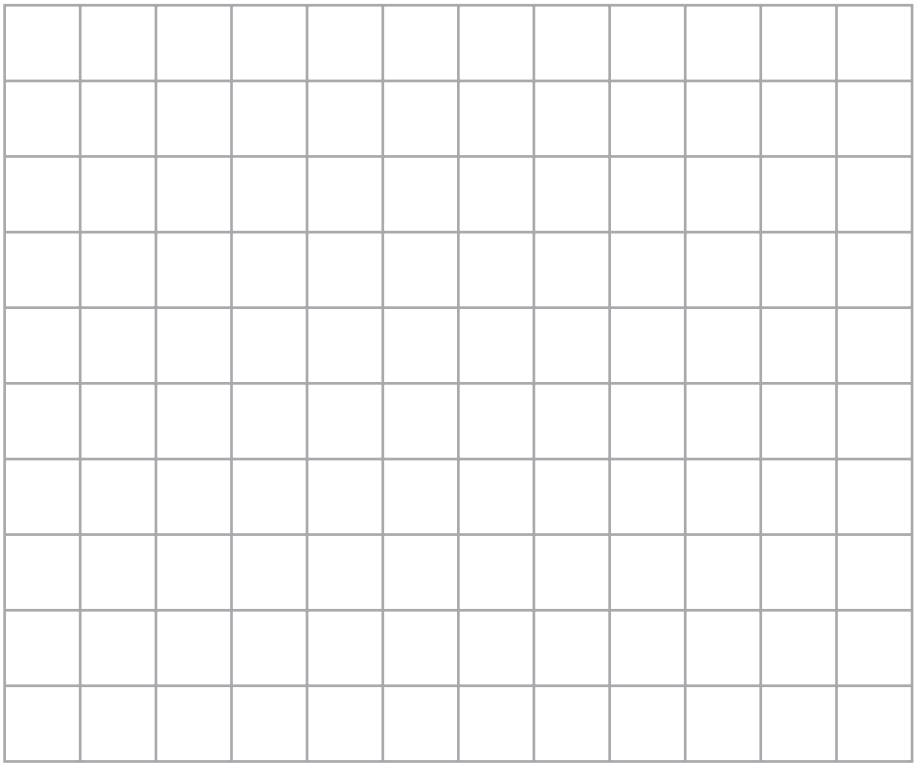
daisy	buttercup	clover	daisy	dandelion
clover	daisy	clover	daisy	dandelion
clover	daisy	daisy	clover	clover
dandelion	dandelion	clover	buttercup	clover

(a) Show this information in a frequency table.

(2)

Type of weed	Tally	Frequency
daisy		
buttercup		
clover		
dandelion		

(b) Draw a suitable chart or diagram to show this information.



(3)

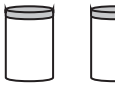
(c) What type of weed is there most of?

.....

(1)

(Total for Question 2 is 6 marks)

6 The pictogram gives information about the number of jars of honey sold in a farm shop in each of three weeks.

week 1	
week 2	
week 3	
week 4	

Key:



represents 10 jars

(a) Write down the number of jars of honey sold in week 1

.....

(1)

(b) Write down the number of jars of honey sold in week 2

.....

(1)

40 jars of honey were sold in week 4

(c) Show this on the pictogram.

(1)

More jars of honey were sold in week 4 than in week 3

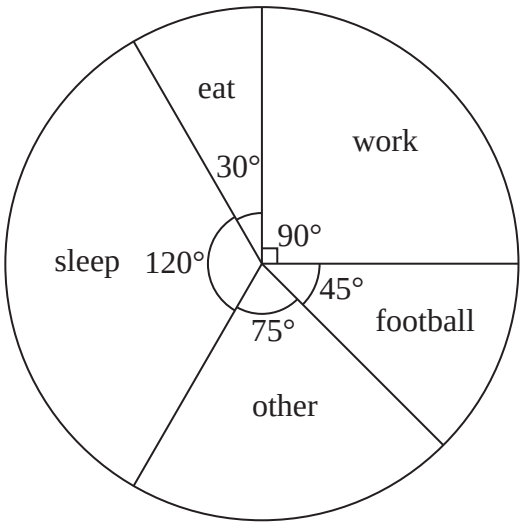
(d) Work out how many more.

.....

(1)

(Total for Question 6 is 4 marks)

7 The pie chart gives information about what Ryan did in 24 hours one Saturday.



(a) What did Ryan do most?

.....

(1)

(b) Write down the fraction of the pie chart that shows when Ryan was working.

.....

(1)

(c) How many hours did Ryan do football?

..... hours

(2)

(Total for Question 7 is 4 marks)

9 Some students went on an activity course.

Each student had to choose one activity from art or drama or music.

There were 41 students.
15 of the students chose music.
30 of the students were girls.

8 of the girls chose art.
No boys chose art.

Equal numbers of boys and girls chose drama.

Complete the two-way table.

	art	drama	music	total
girls				
boys				
total				41

(Total for Question 9 is 3 marks)

1 Here is a pictogram.
It shows the number of goals scored by Ali, by Ben and by Charlie.

Ali	○ ○
Ben	○ ○ ◔
Charlie	○ ◗
Darren	

Key: ○ represents 4 goals

(a) Who scored the least number of goals, Ali or Ben or Charlie?

.....

(1)

(b) Write down the number of goals scored by Ali.

.....

(1)

(c) Write down the number of goals scored by Ben.

.....

(1)

Darren scored 10 goals.

(d) Show this information on the pictogram.

(1)

(Total for Question 1 is 4 marks)

2 There are 25 passengers on a bus.
The bus stops at a station.

13 passengers get off the bus.
20 passengers get on the bus.

The bus is full when there are 58 passengers on it.

(a) How many more passengers can get on the bus so that the bus is full?

.....

(3)

The table shows the number of students on a school bus each day for two weeks.

	Mon	**Tue**	**Wed**	**Thu**	**Fri**
Week 1	12	12	17	10	13
Week 2	16	20	13	12	9

There were more students on the school bus in Week 2 than in Week 1.

(b) How many more students?

.....

(3)

(Total for Question 2 is 6 marks)

22 Milk is sold in $\frac{1}{2}$ pint bottles, in 1 pint bottles and in 2 pint bottles.

One weekend a shop sold 100 bottles of milk.

46 of the bottles were sold on Sunday.
15 of the bottles sold on Sunday were 2 pint bottles.

31 of the bottles sold on Saturday were $\frac{1}{2}$ pint bottles.

22 of the bottles sold were 2 pint bottles.
30 of the bottles sold were 1 pint bottles.

How many 1 pint bottles were sold on Sunday?

.....

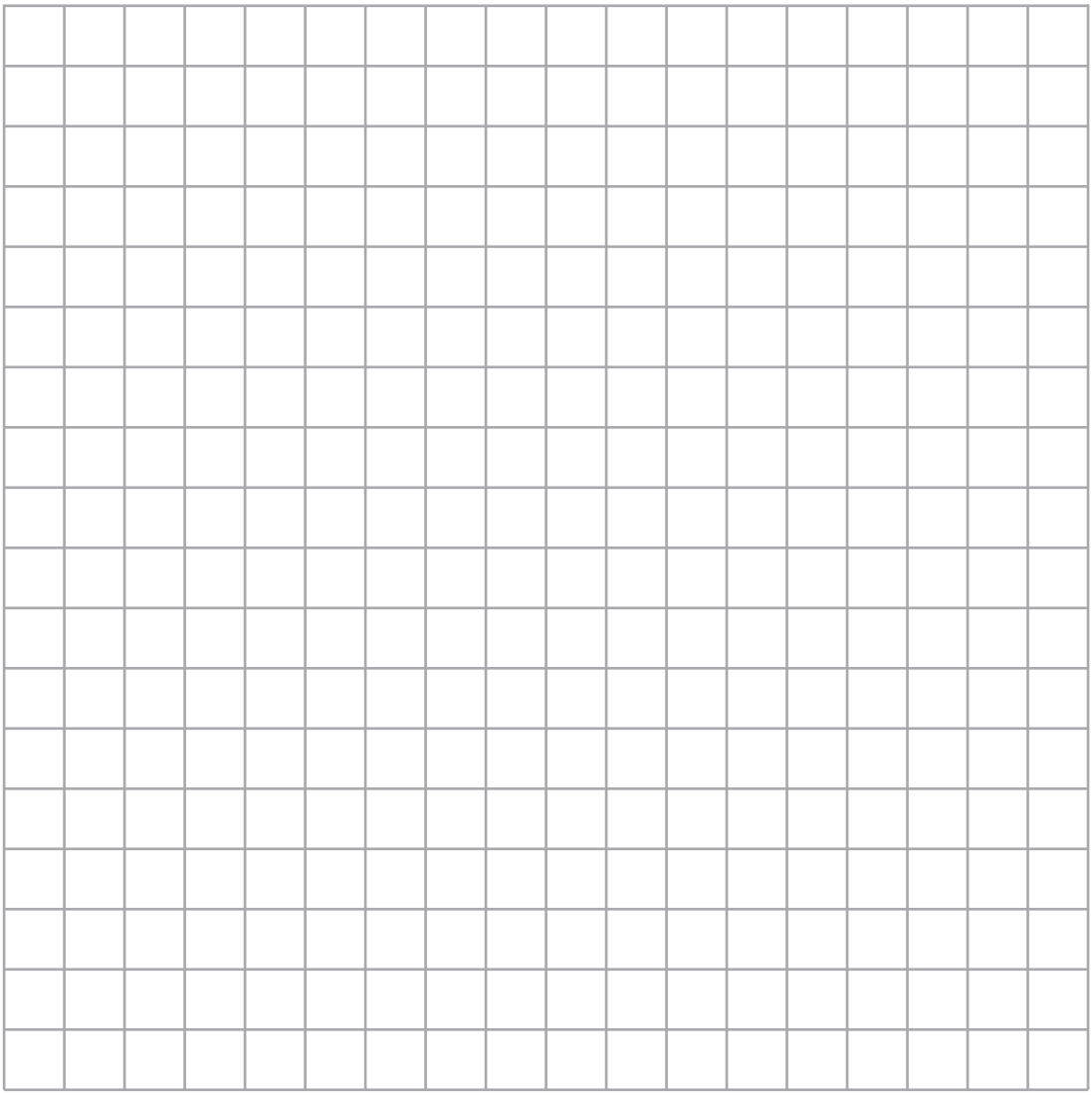
(Total for Question 22 is 4 marks)

*6 The table shows information about the numbers of cars sold in Tyler's garage and in Fletcher's garage for each of four months.

	Jan	Feb	Mar	Apr
Tyler	20	16	36	20
Fletcher	22	16	32	24

Viv wants to compare this information.

On the grid, draw a suitable diagram or chart.



(Total for Question 6 is 4 marks)

Question 124

16 Lin is carrying out a survey at a leisure centre.
She wants to collect information so she can find out the most popular sporting activity.

Design a suitable table for a data collection sheet Lin can use.

(Total for Question 16 is 3 marks)

1 The table shows some information about six students.

Name	Gender	Age	Hair colour
Ali	male	14	brown
Becky	female	13	blonde
Charlie	male	15	black
Derek	male	14	blonde
Fran	female	16	red
Gary	male	13	brown

(a) Write down Charlie's hair colour.

.....

(1)

(b) Write down the name of the oldest student.

.....

(1)

One student is 14 years old and has blonde hair.

(c) Write down the name of this student.

.....

(1)

(Total for Question 1 is 3 marks)

2 This pictogram shows information about the number of games sold in a shop on Monday, on Tuesday and on Wednesday one week.

Monday	⊠⊠ ⊠⊠ ⊠⊠
Tuesday	⊠⊠ ⊠
Wednesday	⊠⊠ ⊠⊠

Key:

⊠⊠

represents 8 games

Write down the number of games sold

(i) on Wednesday,

.....

(ii) on Tuesday.

.....

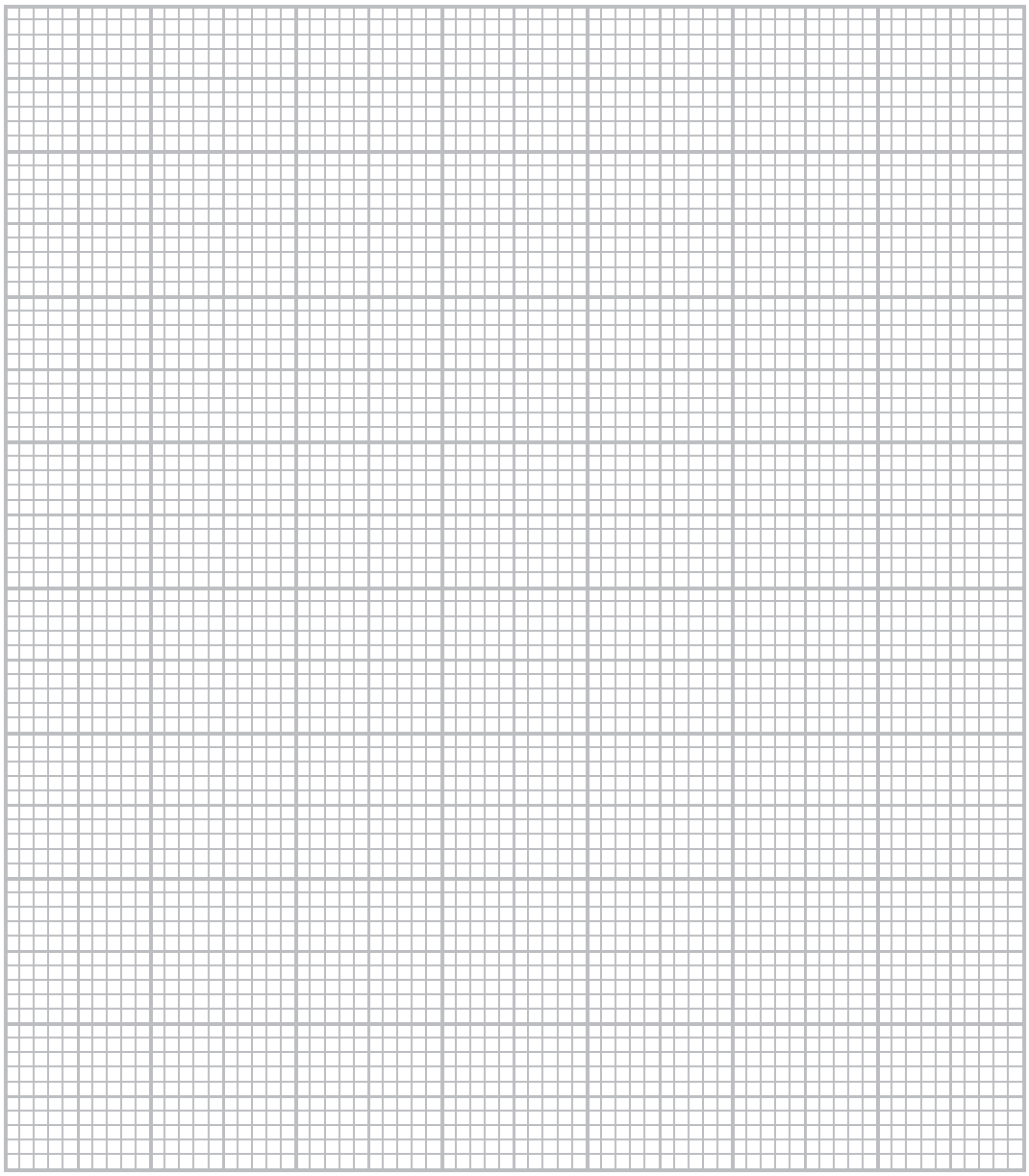
(Total for Question 2 is 2 marks)

***5** Wizard and Reds are two basketball teams.

The table shows some information about the total number of points scored by Wizard and the total number of points scored by Reds in each of four months last year.

	September	October	November	December
Wizard	20	27	19	33
Reds	18	26	38	30

On the grid, draw a suitable diagram to show this information.



(Total for Question 5 is 4 marks)

Question 128

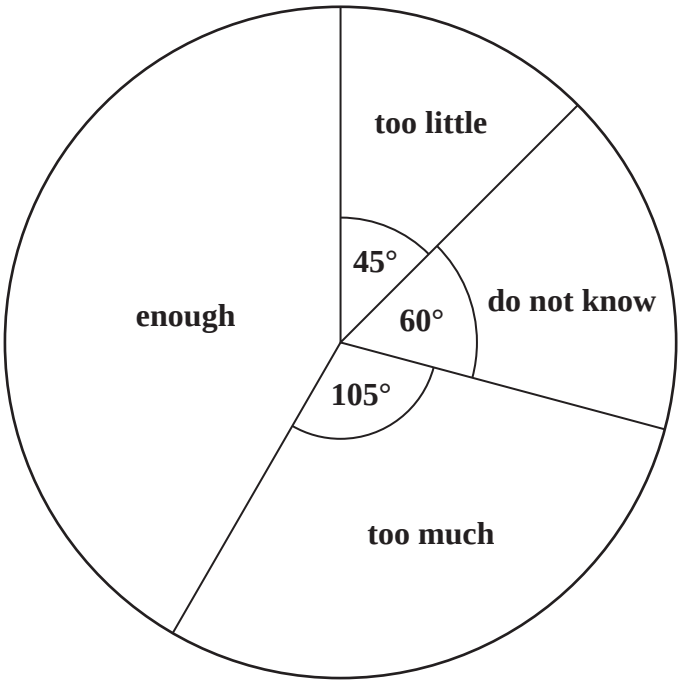
9 Sam wants to find out which type of fruit people like best.

Design a suitable table for a data collection sheet that he could use.

(Total for Question 9 is 3 marks)

13 120 students are asked if they have enough homework one night.

The pie chart shows some information about their answers.



(a) Work out the number of students who answered **do not know**.

.....

(2)

(b) Work out the number of students who answered **enough**.

.....

(3)

(Total for Question 13 is 5 marks)

16 People can buy three types of plane tickets.

They can buy

an Economy ticket
a Premium ticket
or a Business ticket

200 people buy plane tickets.

92 males buy tickets
30 of the males buy Business tickets
62 females buy Economy tickets

A total of 44 people buy Business tickets.
A total of 60 people buy Premium tickets.

How many males buy Premium tickets?
You must show all your working.

.....

(Total for Question 16 is 4 marks)

1 Jack grows five types of vegetable.

The table shows some information about the vegetables.

Vegetable	Sow seeds	Depth of planting	Harvest
peas	May	5 cm	July
carrots	February	2 cm	May
beans	March	5 cm	July
lettuces	May	1 cm	July
onions	February	1 cm	September

(a) Write down the month when Jack sows seeds for carrots.

.....

(1)

(b) Which vegetable does Jack harvest in September?

.....

(1)

Jack sows seeds for one type of vegetable in May at a depth of 1 cm.

(c) Which vegetable?

.....

(1)

(Total for Question 1 is 3 marks)

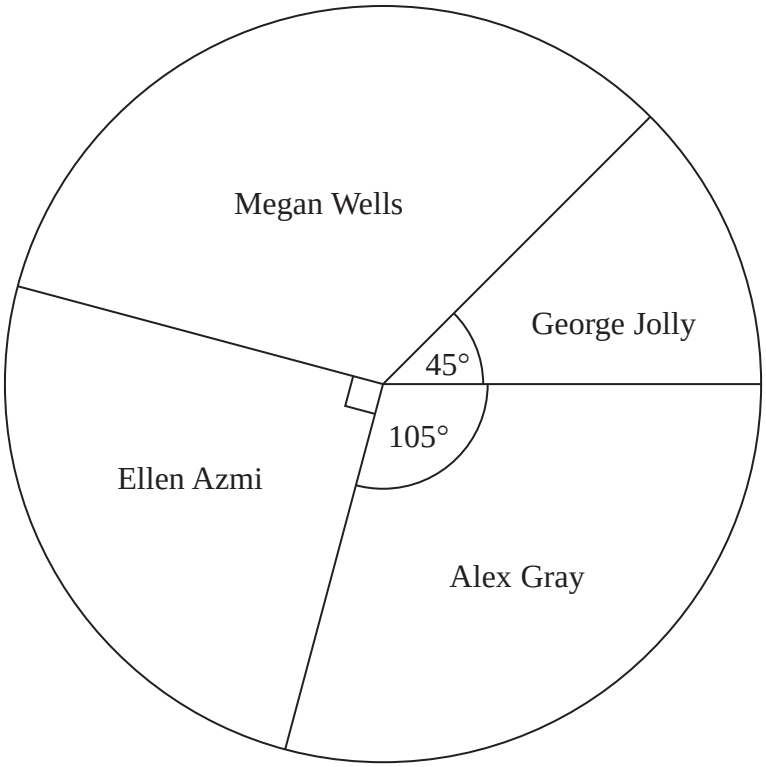
Question 132

15 Colin wants to find out the type of fruit that students at his school like best.

Design a suitable table for a data collection sheet he could use.

(Total for Question 15 is 3 marks)

18 The pie chart shows information about the number of votes each of four candidates got in an election.



(a) What fraction of the votes did Megan Wells get?

.....

(2)

Ellen Azmi got 4500 votes.

(b) Work out the total number of votes the four candidates got.

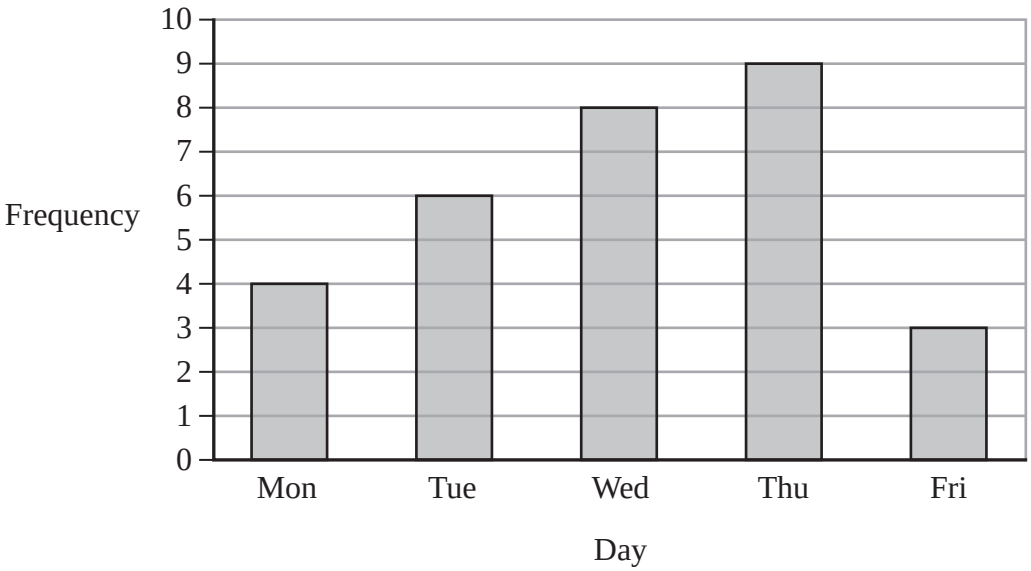
.....

(2)

(Total for Question 18 is 4 marks)

2 Lucy works in a school shop.
She recorded the number of apples sold each day last week.

The bar chart shows this information.



(a) Write down the number of apples sold on Wednesday.

.....

(1)

The total number of apples sold last week is twice the total number of apples sold on two of the days.

(b) Which two days?

..... and .....

(2)

(Total for Question 2 is 3 marks)

17 148 students each choose to study Geography or to study History.

72 of the students choose History.
34 boys choose Geography.
28 girls choose History.

Use this information to complete the two-way table.

	Geography	History	Total
Boys			
Girls			
Total			

(Total for Question 17 is 3 marks)

20 Chloe recorded the test marks of 20 students.

The stem and leaf diagram shows this information.

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

Key:
1 | 5 means 15 marks

(a) Find the median mark.

.....

(2)

(b) Work out the range of the marks.

.....

(2)

The pass mark for the test is 25

(c) How many of the 20 students did **not** pass the test?

.....

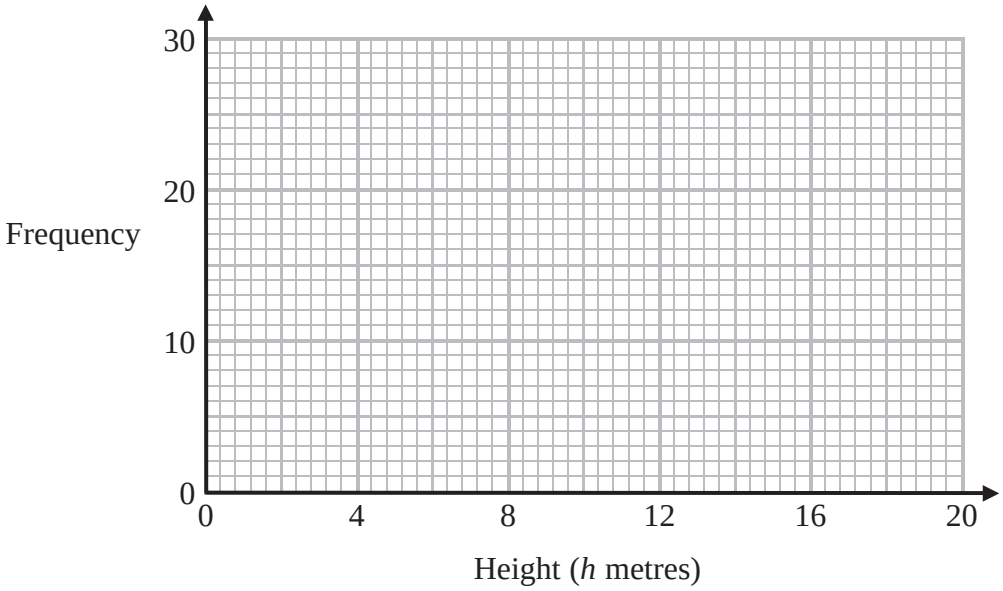
(1)

(Total for Question 20 is 5 marks)

24 The table shows information about the heights of 50 trees.

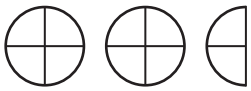
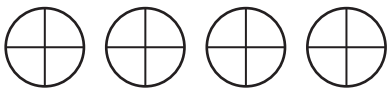
Height (h metres)	Frequency
$0 < h \leqslant 4$	8
$4 < h \leqslant 8$	21
$8 < h \leqslant 12$	12
$12 < h \leqslant 16$	7
$16 < h \leqslant 20$	2

Draw a frequency polygon for the information in the table.



(Total for Question 24 is 2 marks)

2 The pictogram gives information about the number of points scored by each of four boys in a basketball match.

Wayne	
Jed	
Fred	
Mike	

Key:
 represents 4 points

(a) Write down the number of points that Fred scored.

.....

(1)

(b) Work out the total number of points that the boys scored.

.....

(2)

(Total for Question 2 is 3 marks)

6 Liz is a vet.
She writes down the type of each animal she treats one morning.

cat	rabbit	cat	dog	rabbit	cat
hamster	dog	dog	cat	rabbit	dog
dog	rabbit	dog	dog	cat	dog

(a) Complete the frequency table.

Type of animal	Tally	Frequency
cat		
hamster		
rabbit		
dog		

(2)

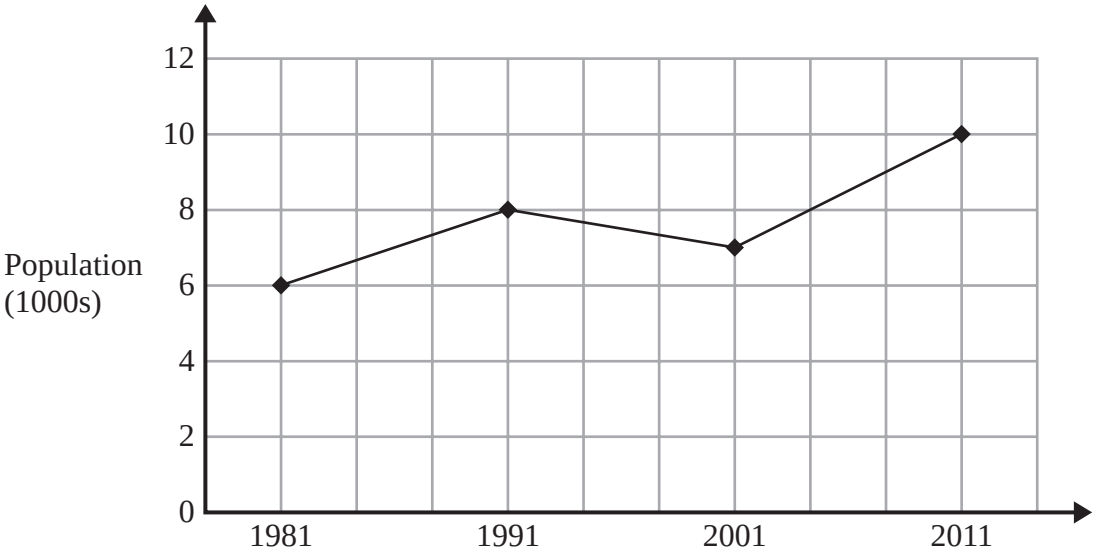
(b) Write down the mode.

.....

(1)

(Total for Question 6 is 3 marks)

10 The graph shows information about the population of a village in thousands.



(a) What was the population of the village in 1991?

.....

(1)

(b) What was the increase in population from 1981 to 2011?

.....

(1)

(Total for Question 10 is 2 marks)

11 The stem and leaf diagram shows the number of passengers on each of 24 buses.

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

Key: 1 | 6 means 16 passengers

(a) Work out the range.

.....

(1)

(b) Work out the median.

.....

(2)

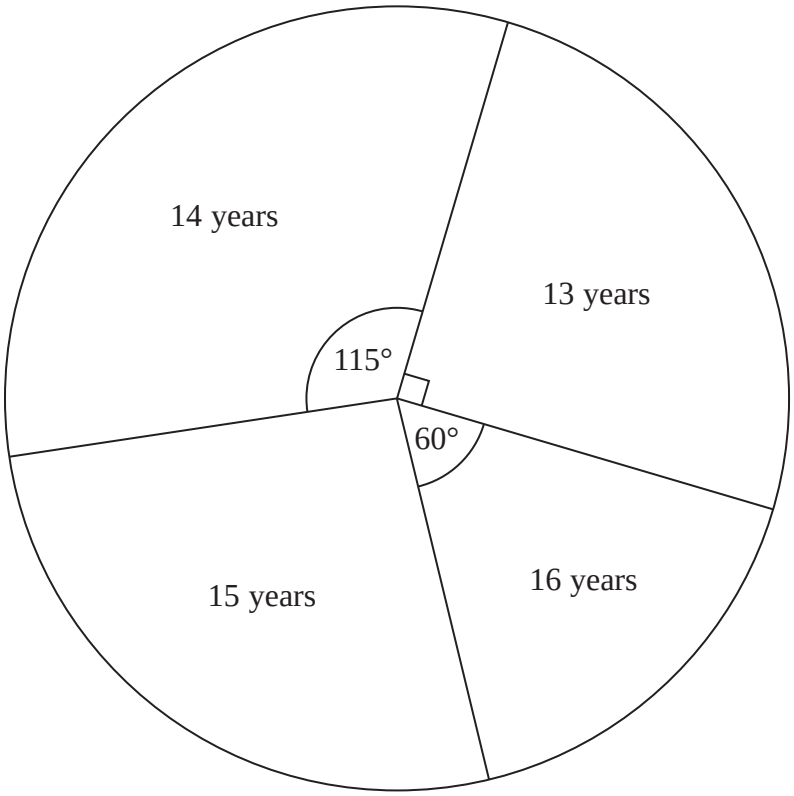
(c) How many buses had less than 20 passengers?

.....

(1)

(Total for Question 11 is 4 marks)

12 The pie chart shows information about the ages of students at an athletics competition.



(a) What fraction of the students have an age of 13 years?

.....

(1)

23 of the students have an age of 14 years.

(b) Work out how many of the students have an age of 15 years.

.....

(3)

(Total for Question 12 is 4 marks)

15 The incomplete two-way table shows information about the nationality of 80 people staying in either a tent or a caravan at a campsite.

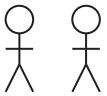
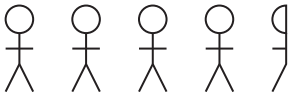
	French	British	Dutch	Total
Tent	8		25	44
Caravan		17		
Total			32	80

Complete the two-way table.

(Total for Question 15 is 3 marks)

1 Heidi asks all the children in her class to tell her the sport they like best.

The pictogram shows how many children like swimming best, like netball best and like football best.

Swimming	
Netball	
Football	
Cricket	

Key:  represents 2 children

8 children like cricket best.

(a) Use this information to complete the pictogram.

(1)

(b) Work out the total number of children in Heidi's class.

.....

(2)

(Total for Question 1 is 3 marks)

13 The table shows information about the number of grams of protein, of carbohydrate and of fat in 100 grams of regular yoghurt and in 100 grams of low fat yoghurt.

	Protein	Carbohydrate	Fat
Regular	4.7	4.7	3.4
Low Fat	5.9	5.8	0.2

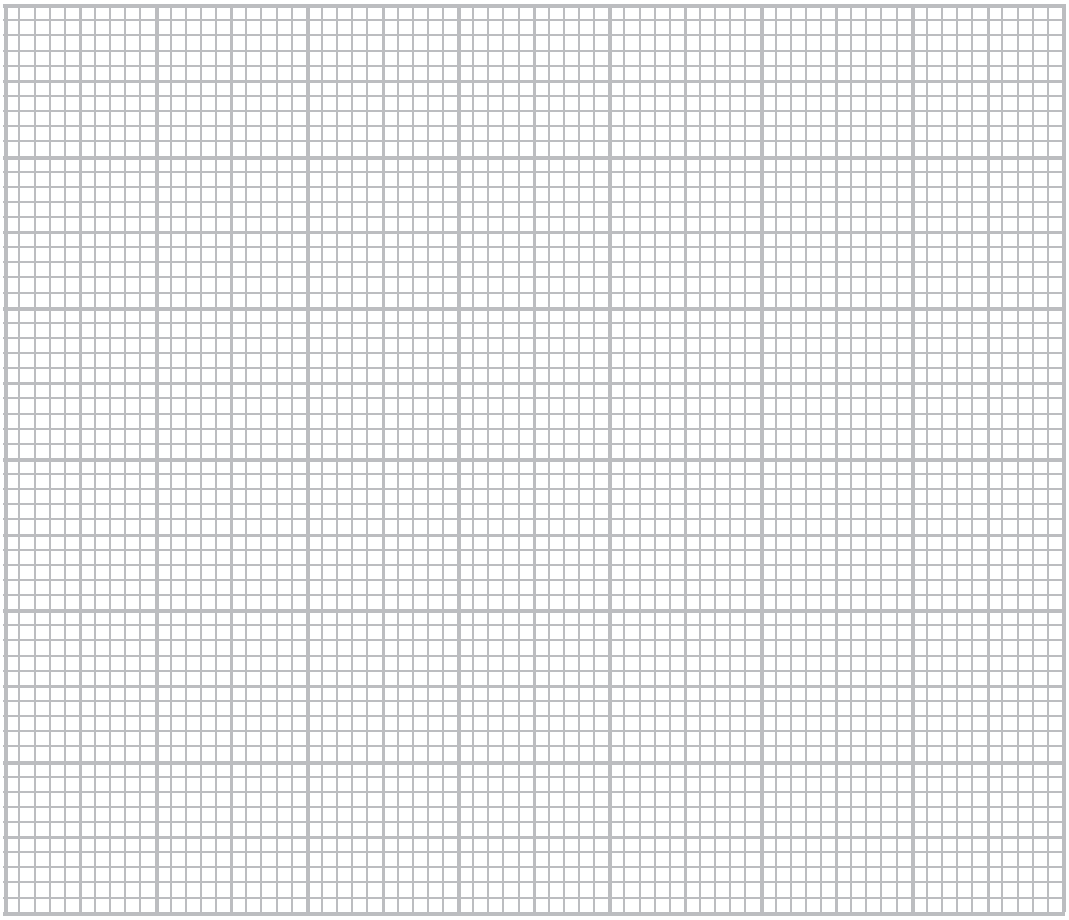
(a) Work out the number of grams of protein in 200 g of regular yoghurt.

..... g

(1)

Jamie is going to compare the information in the table.

*(b) On the grid, draw a suitable diagram or chart he could use.



(4)

(Total for Question 13 is 5 marks)

Question 146

15 Ryan is the manager of a shopping centre.
He wants to find out the method of transport people use to get to the shopping centre.

Design a suitable table for a data collection sheet he could use.

(Total for Question 15 is 3 marks)

22 The table shows some information about the ages of 60 teachers.

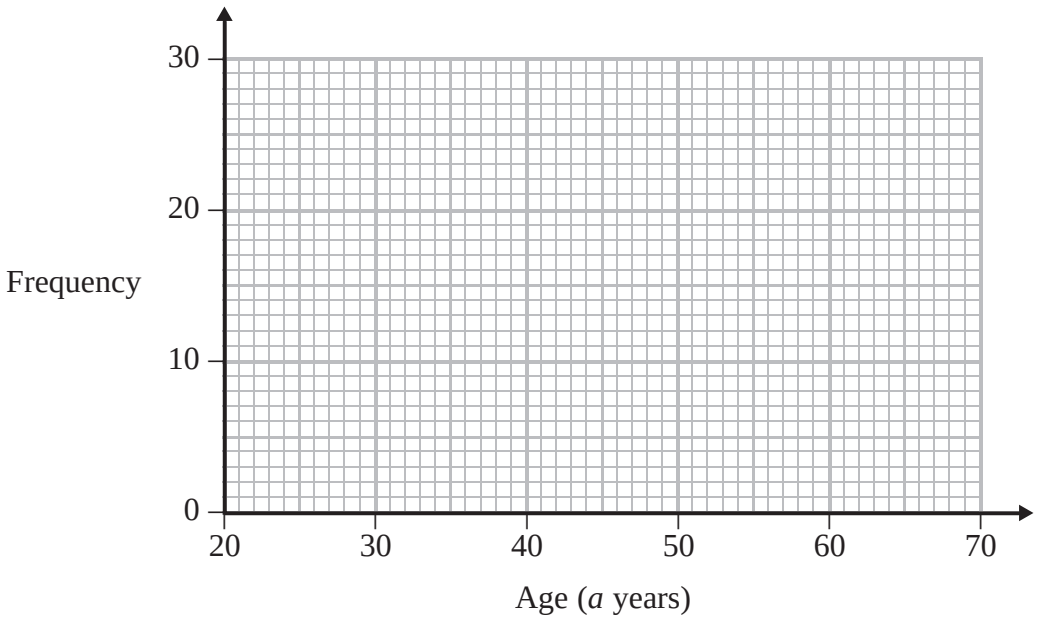
Age (a years)	Frequency
$20 < a \leqslant 30$	6
$30 < a \leqslant 40$	16
$40 < a \leqslant 50$	14
$50 < a \leqslant 60$	22
$60 < a \leqslant 70$	2

(a) Write down the modal class interval.

.....

(1)

(b) Draw a frequency polygon for the information in the table.



(2)

(Total for Question 22 is 3 marks)

2 The table shows some information about five plants.

Name of plant	Height	Colour of flower	Planting time
foxglove	120 cm	white	October
lupin	100 cm	red	June
marigold	15 cm	yellow	February
poppy	25 cm	red	March
sunflower	180 cm	yellow	March

(a) Write down the colour of the foxglove's flower.

.....

(1)

(b) Write down the name of the tallest plant.

.....

(1)

A plant with a red flower has a planting time in March.

(c) Write down the name of this plant.

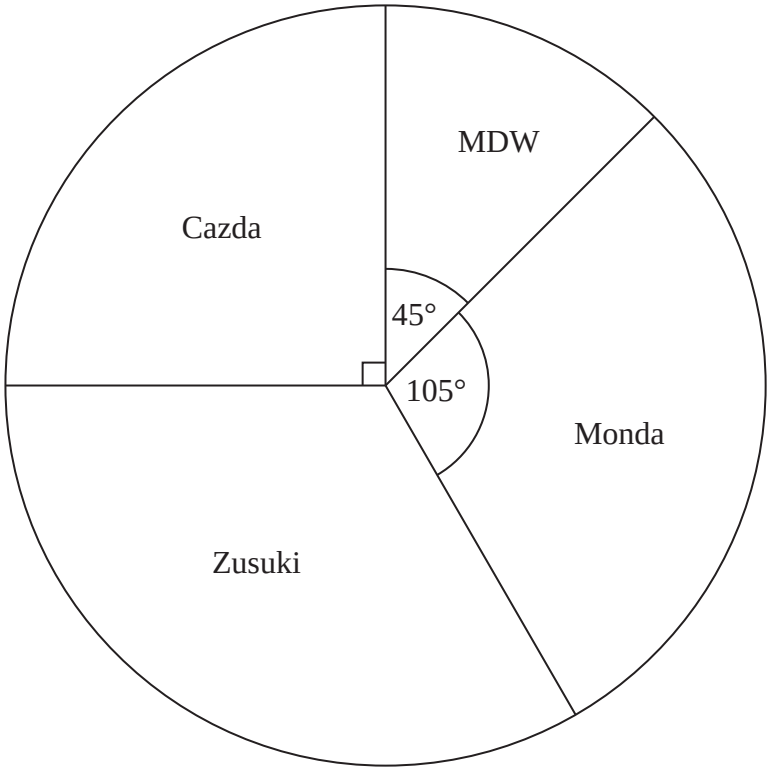
.....

(1)

(Total for Question 2 is 3 marks)

8 Some drivers are asked which make of car they like best.

The pie chart and table show some information about their answers.

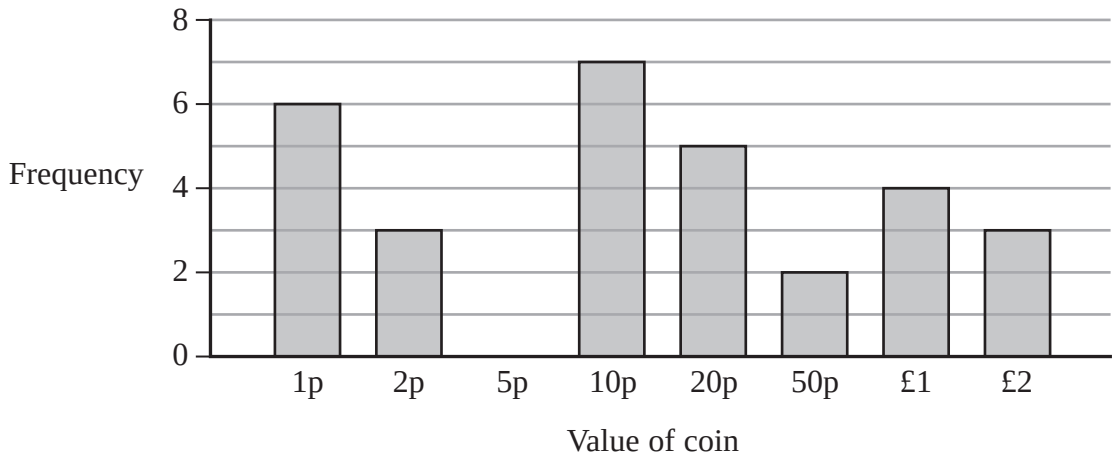


Complete the table.

Make of car	Number of drivers	Angle of sector
MDW	18	45°
Cazda	.....	90°
Zusuki	48	.....
Monda	.....	105°

(Total for Question 8 is 4 marks)

1 Yasah saves coins of different values in a box.
The bar chart gives information about the numbers of all the coins in the box.



(a) Which coin does Yasah have most of in the box?

.....

(1)

Yasah had no coins of one value in the box.

(b) What value of coin is this?

.....

(1)

(c) Work out the total number of coins in the box.

.....

(1)

(Total for Question 1 is 3 marks)

3 Betty sells jars of honey.

The pictogram shows the numbers of jars of honey Betty sold on Tuesday, on Wednesday and on Thursday.

Tuesday	
Wednesday	
Thursday	
Friday	
Saturday	

Key:
 represents 12 jars

(a) Work out the number of jars of honey Betty sold

(i) on Thursday,

.....

(ii) on Wednesday.

.....

(2)

Betty sold
24 jars of honey on Friday,
14 jars of honey on Saturday.

(b) Use this information to complete the pictogram.

(2)

(Total for Question 3 is 4 marks)

9 Diana is going to have a party.
She wants to find out what people would like to drink at the party.

They can choose lemonade or cola or orange.

(a) Design a suitable table for a data collection sheet she could use.

(3)

Diana buys some bottles of orange and some bottles of lemonade.

A bottle of orange costs £1.75
A bottle of lemonade costs £1.20

Diana buys 2 bottles of orange and 3 bottles of lemonade.

She gets $\frac{1}{5}$ off the total cost.

Diana pays with a £10 note.

(b) How much change should Diana get?

£.....

(4)

(Total for Question 9 is 7 marks)

11 The two-way table shows some information about the numbers of ice creams sold in a shop.

	Friday	Saturday	Sunday	Total
Morning		34		
Afternoon	38		63	153
Total	65			265

Complete the two-way table.

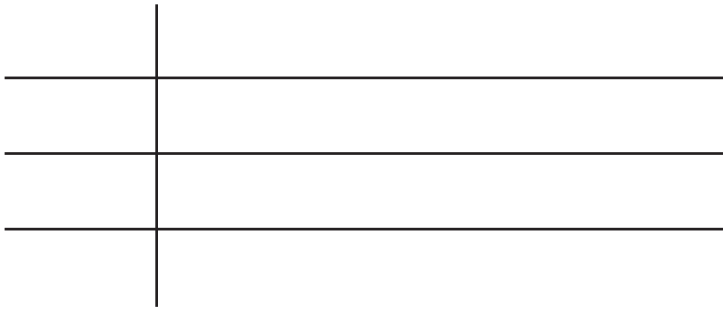
(Total for Question 11 is 3 marks)

13 Jeremy catches 19 fish.

Here are the weights, in grams, of the fish.

50	61	57	47	53	75	62	48	64	73
78	51	66	58	66	48	55	69	50	

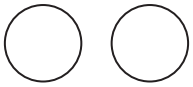
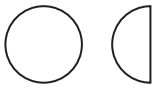
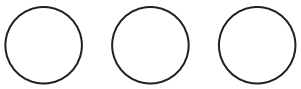
Draw an ordered stem and leaf diagram for these weights.



Key:

(Total for Question 13 is 3 marks)

1 The pictogram gives information about the number of buns Sujata sold in her shop on each of four days last week.

Monday	
Tuesday	
Wednesday	
Thursday	
Friday	

Key:
 represents 4 buns

(a) Write down the number of buns Sujata sold on Monday.

.....

(1)

(b) Work out the total number of buns sold on Monday, Tuesday, Wednesday and Thursday.

.....

(2)

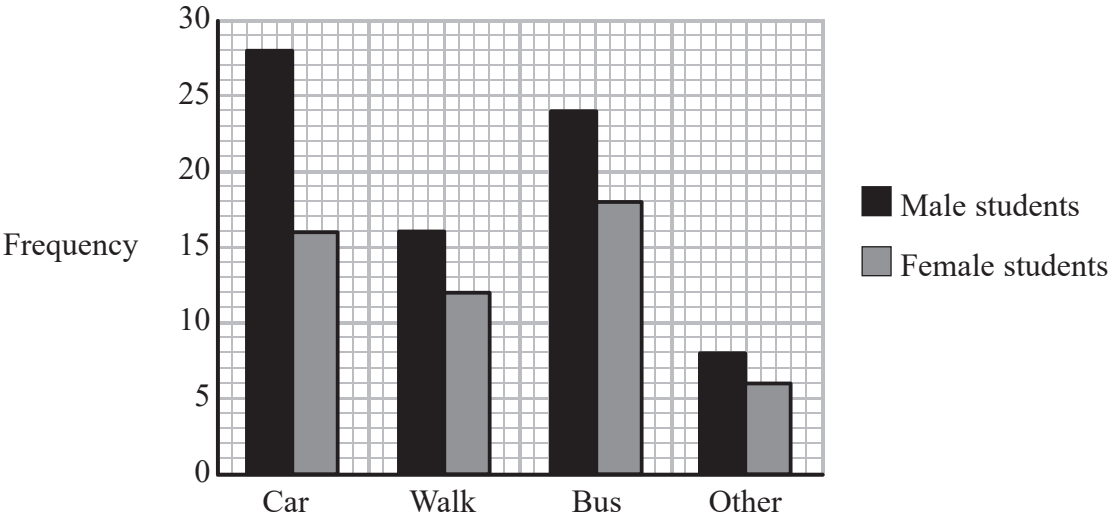
On Friday last week Sujata sold 16 buns.

(c) Show this information on the pictogram.

(1)

(Total for Question 1 is 4 marks)

10 The bar chart gives information about how students got to a college yesterday.



(a) How many male students got to the college by car?

.....

(1)

(b) Work out the total number of students who got to the college by bus.

.....

(1)

More male students than female students got to the college.

(c) How many more?

.....

(2)

(Total for Question 10 is 4 marks)

15

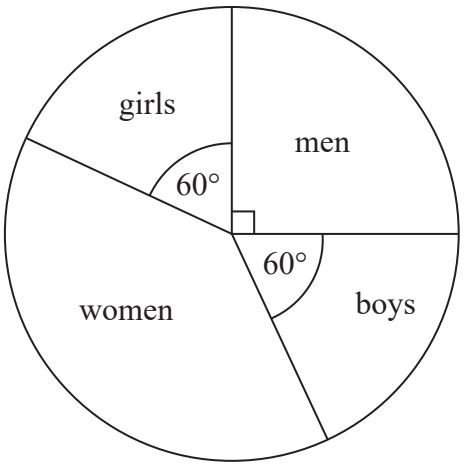


Diagram **NOT** accurately drawn

The pie chart above gives information about the people who went to a shop last week.

(a) What fraction of the people were girls?
Give your answer in its simplest form.

.....

(2)

30 boys went to the shop.

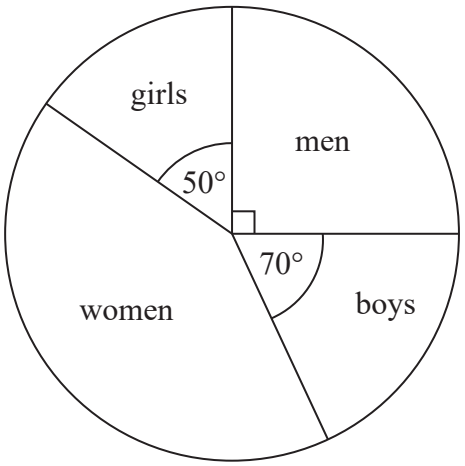
(b) Work out the number of women who went to the shop.

.....

(3)

The pie chart below gives information about the people who went to the same shop this week.

Diagram **NOT** accurately drawn



Laurent says,

"The pie chart shows that more boys went to the shop this week than last week."

(c) Is Laurent correct?
Explain your answer.

.....

.....

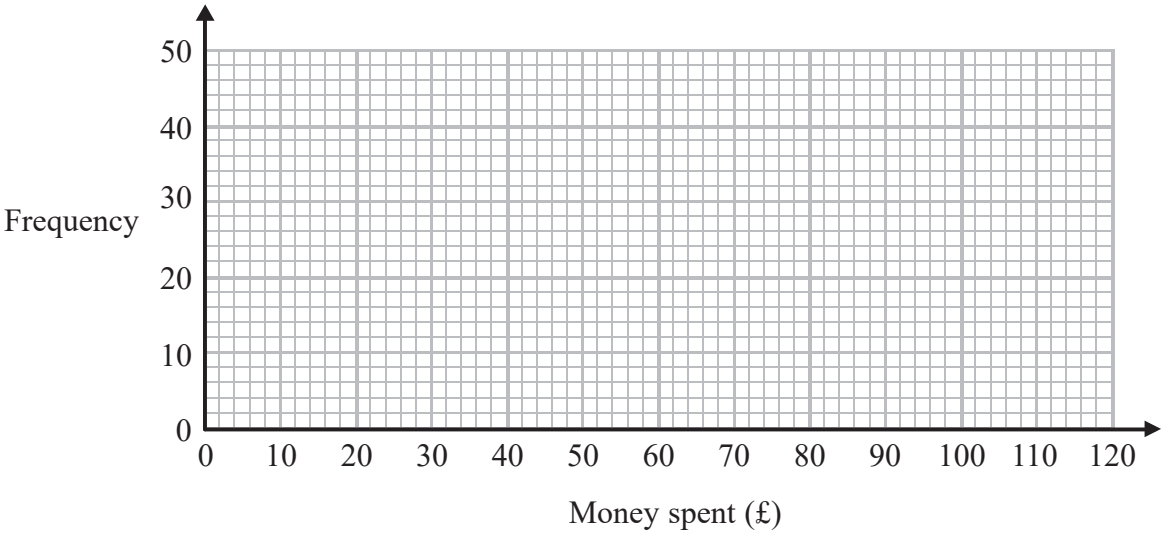
(1)

(Total for Question 15 is 6 marks)

20 The table gives information about the money, £A, some people spent on an internet site one day.

Money spent (£A)	Frequency
$0 < A \leqslant 20$	10
$20 < A \leqslant 40$	15
$40 < A \leqslant 60$	25
$60 < A \leqslant 80$	40
$80 < A \leqslant 100$	6

(a) On the grid, draw a frequency polygon for this information.



(2)

(b) Write down the modal class interval.

.....

(1)

(Total for Question 20 is 3 marks)

***10** The table shows information about the number of students absent from a school last week.

	Mon	Tues	Wed	Thur	Fri
Year 7	16	14	17	21	26
Year 8	16	18	11	13	20

Simon wants to compare this information.

On the grid, draw a suitable diagram or chart Simon can use.

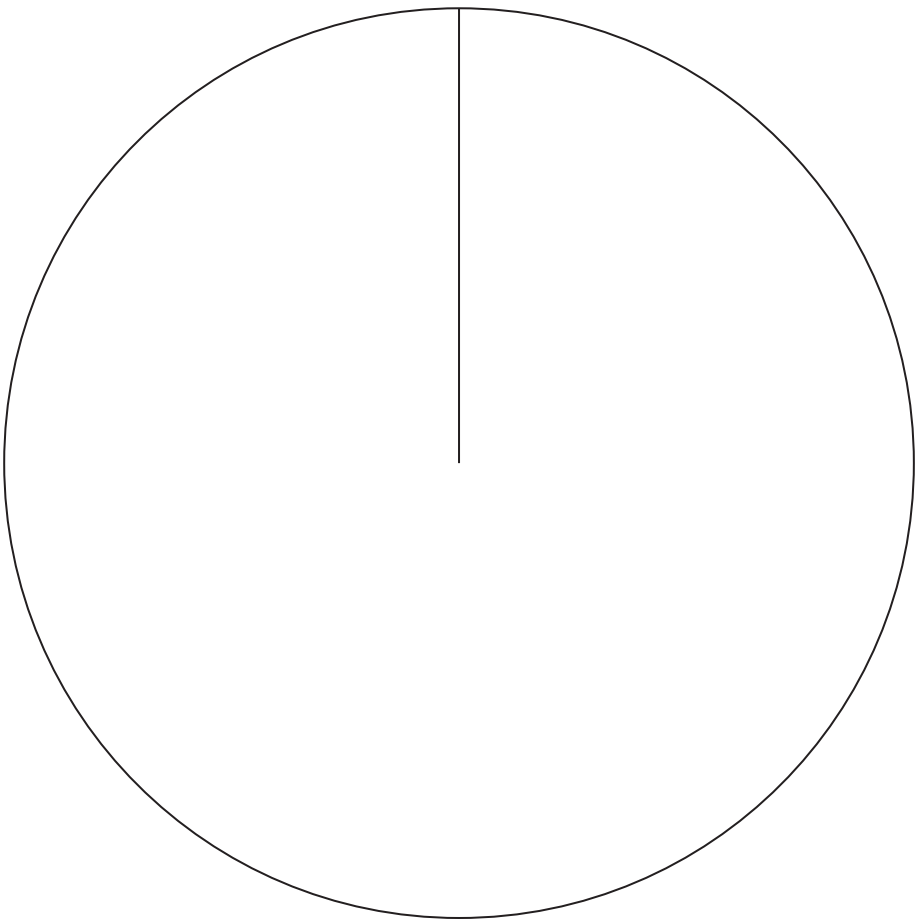
(Total for Question 10 is 4 marks)

14 Year 9 students from Halle School were asked to choose one language to study.

The table shows information about their choices.

Language	Number of students	
French	56	
Spanish	40	
German	24	

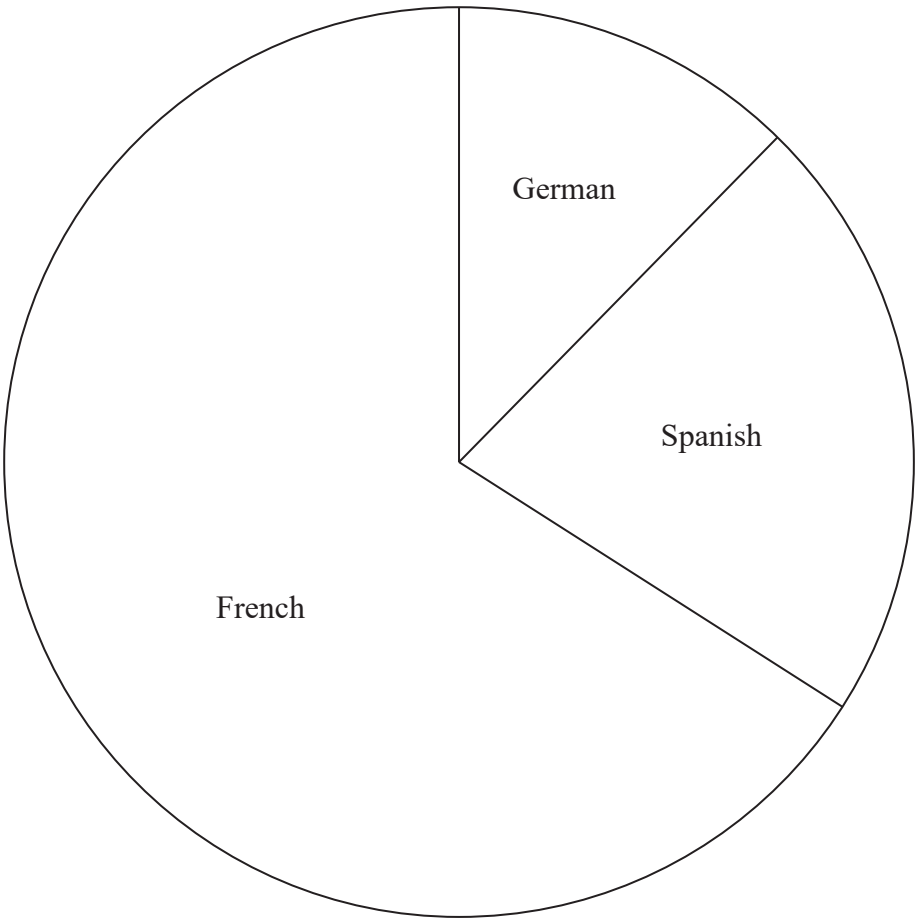
(a) Draw an accurate pie chart to show this information.



(3)

Year 9 students from Lowry School were also asked to choose one language to study.

This accurate pie chart shows information about their choices.



Shameena says,

"The pie chart shows that French was chosen by more Year 9 students at Lowry School than at Halle School."

(b) Is Shameena right?
You must explain your answer.

.....

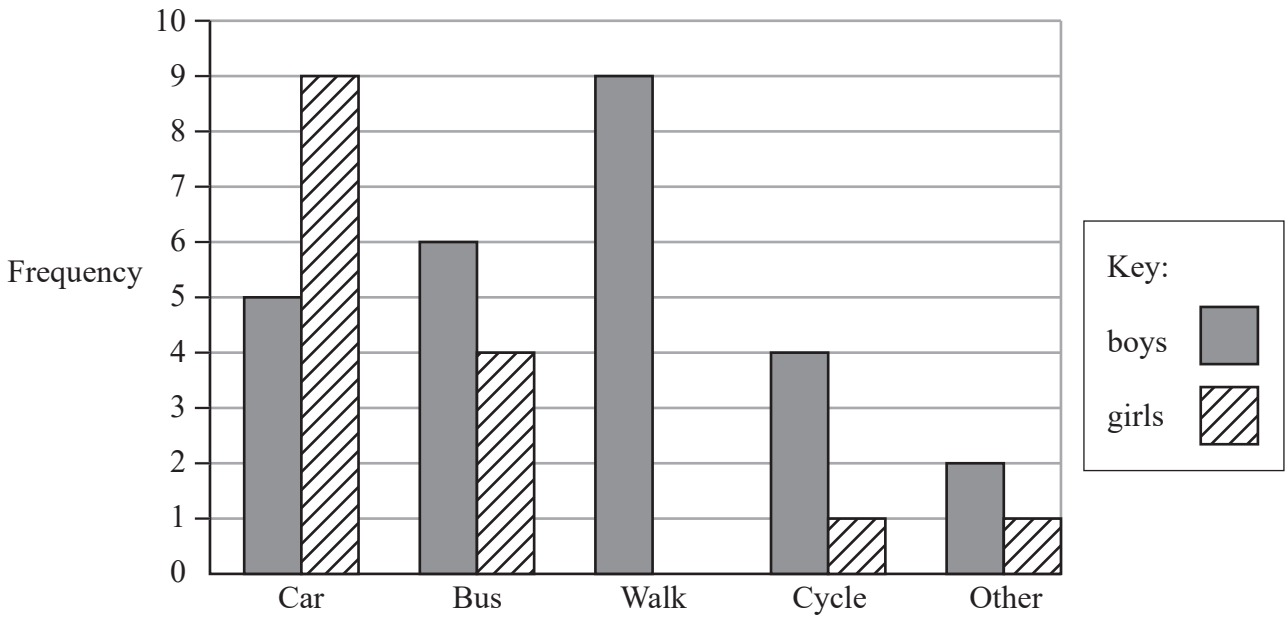
.....

.....

(1)

(Total for Question 14 is 4 marks)

3 A teacher asks the students in Year 6 what type of transport they use to get to school.
The dual bar chart shows some of the results.



(a) What is the most popular type of transport used by the boys?

.....

(1)

7 girls walk to school.

(b) Show this information on the dual bar chart.

(1)

More of the students get to school by car than by bus.

(c) How many more?

.....

(1)

The number of students in Year 5 is the same as the number of students in Year 6

(d) What is the total number of students in Years 5 and 6?

.....

(2)

(Total for Question 3 is 5 marks)

5 David sells CDs in a shop.

The tally chart shows information about the number of CDs David sold on Monday, on Tuesday and on Wednesday.

	Tally	Frequency
Monday	𝍸 𝍸 | | |	12
Tuesday	𝍸 𝍸 𝍸 | | |	18
Wednesday	𝍸 | | |	8

(a) Write down **one** thing that is wrong with the tally chart.

.....

.....

(1)

David drew this pictogram to show the information for Tuesday and Wednesday.

Tuesday	◐ ◐ ◐ ◐ ◐
Wednesday	◐ ◐ ◗

Key: ◐ represents 3 CDs

(b) Write down **one** thing that is wrong with this pictogram.

.....

.....

(1)

(Total for Question 5 is 2 marks)

1 The table shows the lengths of five rivers.

River	Length (km)
Trent	297
Don	112
Severn	354
Thames	346
Mersey	113

(a) Write down the rivers in order of length.

Start with the shortest river.

.....

.....

(1)

Ami says,

"The River Thames is more than three times as long as the River Don."

(b) Show that Ami is correct.

.....

.....

(1)

(Total for Question 1 is 2 marks)

10 Jake and Sarah each played a computer game six times.

Their scores for each game are shown below.

Jake	10	9	8	11	12	8
Sarah	2	10	7	14	4	10

(a) Who had the most consistent scores, Jake or Sarah?
You must give a reason for your answer.

.....

.....

(1)

Jake played a different game 20 times.

The stem and leaf diagram shows information about his scores.

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

Key
1 | 2 represents 12 points

Jake said his modal score was 6 points because 6 occurs most often in the diagram.

(b) Is Jake correct?
You must explain your answer.

.....

.....

(1)

(Total for Question 10 is 2 marks)

12 Emma has 45 rabbits.

30 of the rabbits are male.
8 of the female rabbits have short hair.
12 of the rabbits with long hair are male.

(a) Use the information to complete the two-way table.

	Male	Female	Total
Long hair			
Short hair			
Total			

(3)

One of Emma's rabbits is chosen at random.

(b) Write down the probability that this rabbit is a female with short hair.

.....

(1)

(Total for Question 12 is 4 marks)

5 60 students were asked how they get to school.

The table shows the results.

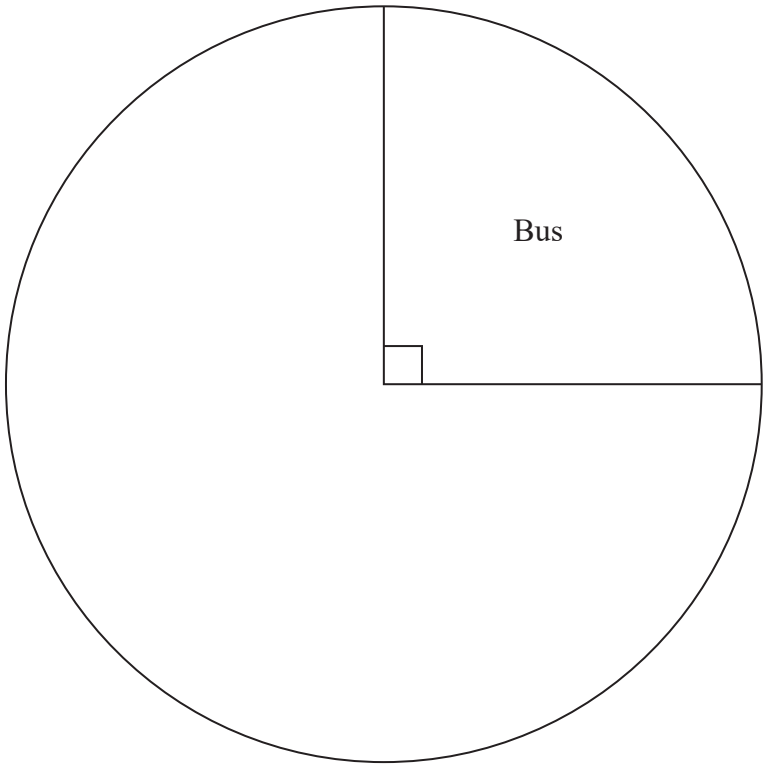
	Bus	Walk	Car	Bicycle
Number of students	15	27	12	6

(a) What fraction of the 60 students did **not** walk to school?

.....

(2)

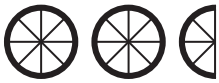
(b) Complete the pie chart for the information in the table.



(4)

(Total for Question 5 is 6 marks)

6 The incomplete pictogram shows information about the number of cycles sold in a shop on Tuesday, on Wednesday and on Thursday.

Tuesday	
Wednesday	
Thursday	
Friday	
Saturday	

Key:

A total of 20 cycles were sold on Tuesday, Wednesday and Thursday.

8 cycles were sold on Friday.
15 cycles were sold on Saturday.

Use this information to complete the pictogram.

(Total for Question 6 is 3 marks)

19 The table shows information about the heights of 80 children.

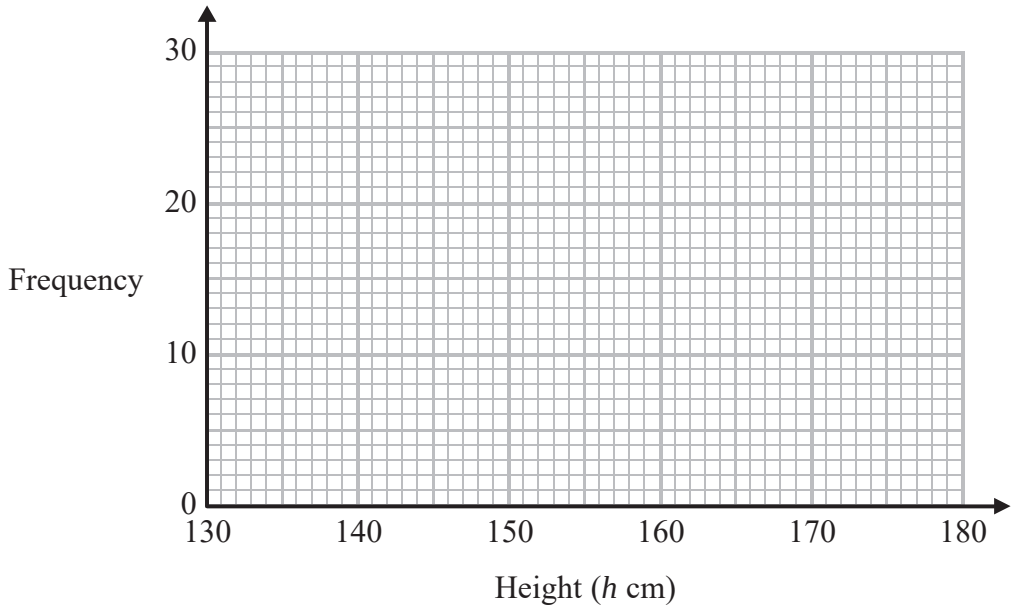
Height (h cm)	Frequency
$130 < h \leqslant 140$	4
$140 < h \leqslant 150$	11
$150 < h \leqslant 160$	24
$160 < h \leqslant 170$	22
$170 < h \leqslant 180$	19

(a) Find the class interval that contains the median.

.....

(1)

(b) Draw a frequency polygon for the information in the table.

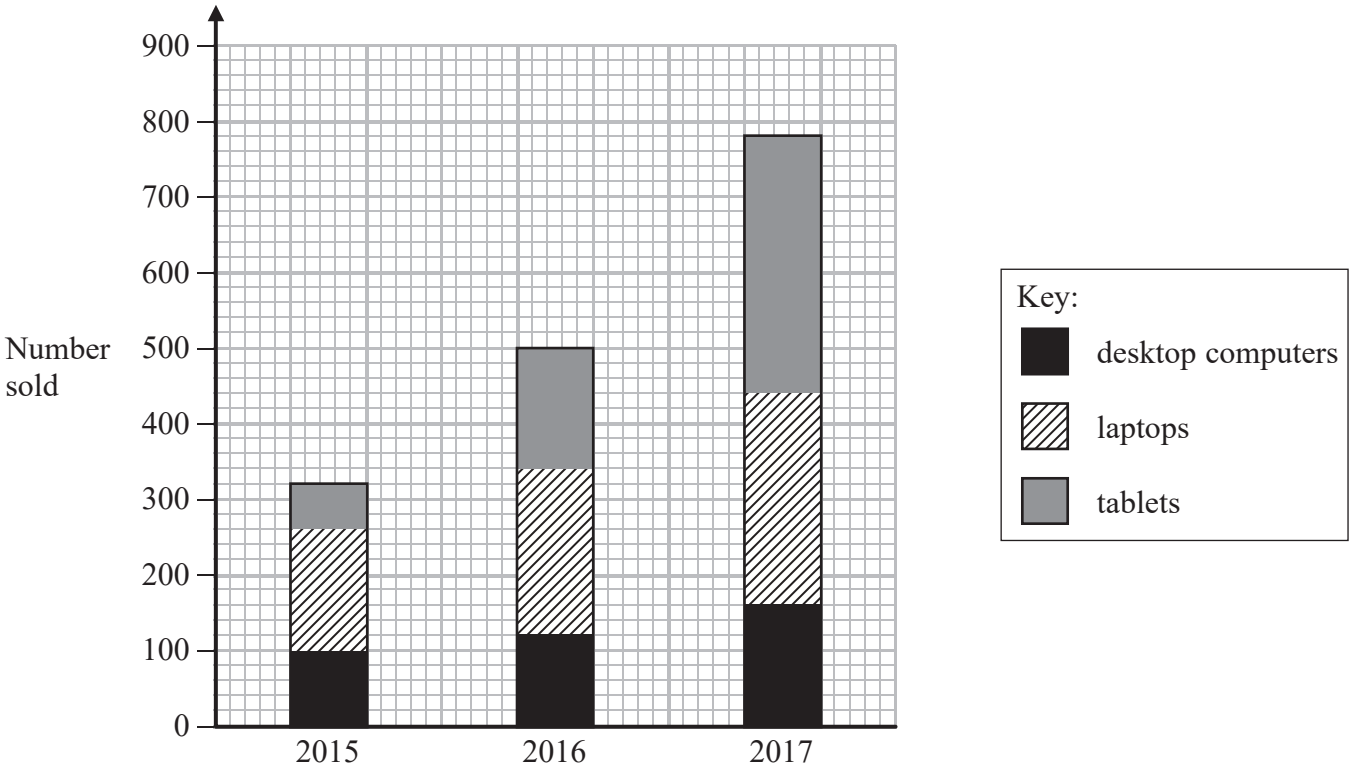


(2)

(Total for Question 19 is 3 marks)

12 A shop sells desktop computers, laptops and tablets.

The composite bar chart shows information about sales over the last three years.



(a) Write down the number of desktop computers sold in 2015

.....

(1)

(b) Work out the total number of laptops sold in the 3 years.

.....

(3)

(c) State the item that had the greatest increase in sales over the 3 years.
Give a reason for your answer.

.....

.....

.....

(2)

Alex says,

"In 2017, more tablets were sold than desktop computers. This means the shop makes more profit from the sale of tablets than from the sale of desktop computers."

(d) Is Alex correct?
You must justify your answer.

.....

.....

.....

(1)

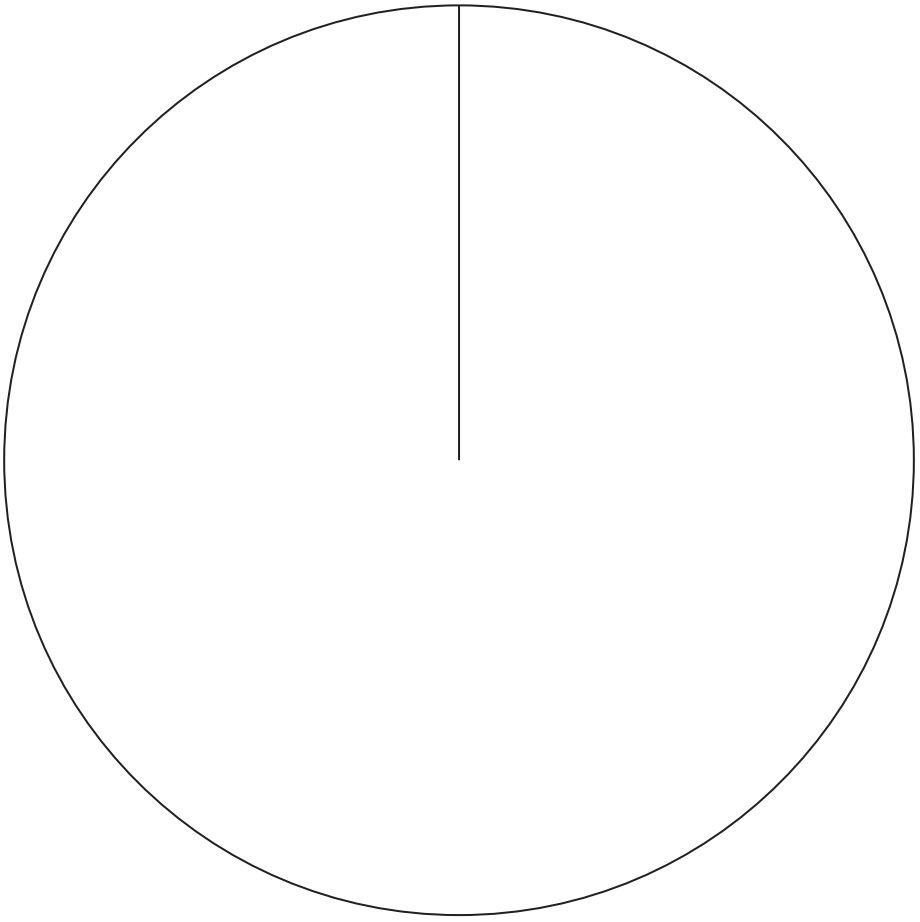
(Total for Question 12 is 7 marks)

12 A group of football fans were asked what their half time snack was.

The table below gives information about their answers.

Snack	Number of fans
burger	11
pie	17
hot dog	8

Draw an accurate pie chart for this information.

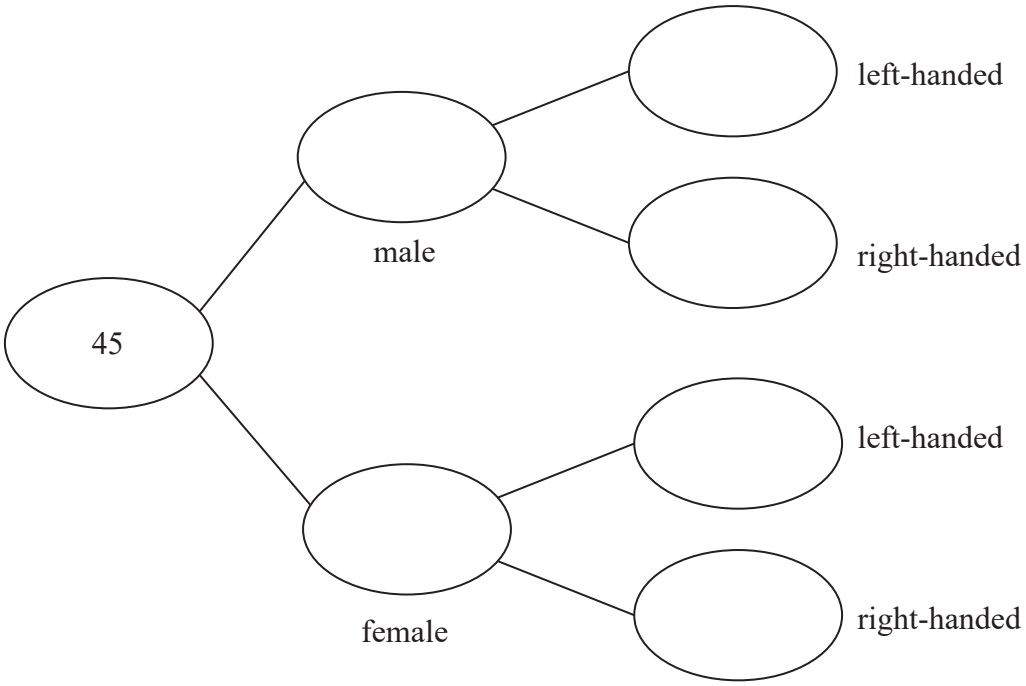


(Total for Question 12 is 3 marks)

14 Each worker in a factory is either left-handed or right-handed.

22 of the 45 workers are male.
16 of the 34 right-handed workers are female.

Complete the frequency tree for this information.

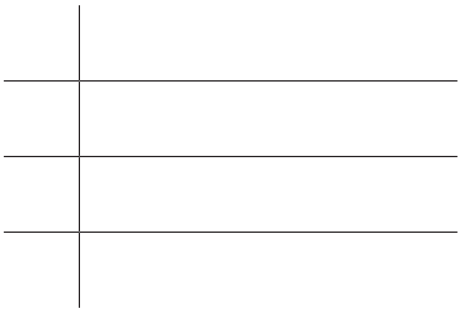


(Total for Question 14 is 3 marks)

14 Here are the marks 20 students got in a French test.

76	82	84	69	80	64	70	81	75	91
87	67	80	70	94	76	81	69	71	77

(a) Show this information in a stem and leaf diagram.



(3)

One of these students is going to be chosen at random.

The pass mark in the French test is 71

Omar writes,

The probability that this student failed the French test is $\frac{1}{4}$

Omar is wrong.

(b) Explain why.

.....

.....

(2)

(Total for Question 14 is 5 marks)

7 There are only apple trees, cherry trees, pear trees and plum trees in an orchard.

The pictogram shows information about the numbers of apple trees, cherry trees and pear trees in the orchard.

Apple	▭ ▭ ▭
Cherry	▭ ▫
Pear	▭ ▯
Plum	

Key:

▭ represents 4 trees

There is a total of 30 trees in the orchard.

Complete the pictogram.

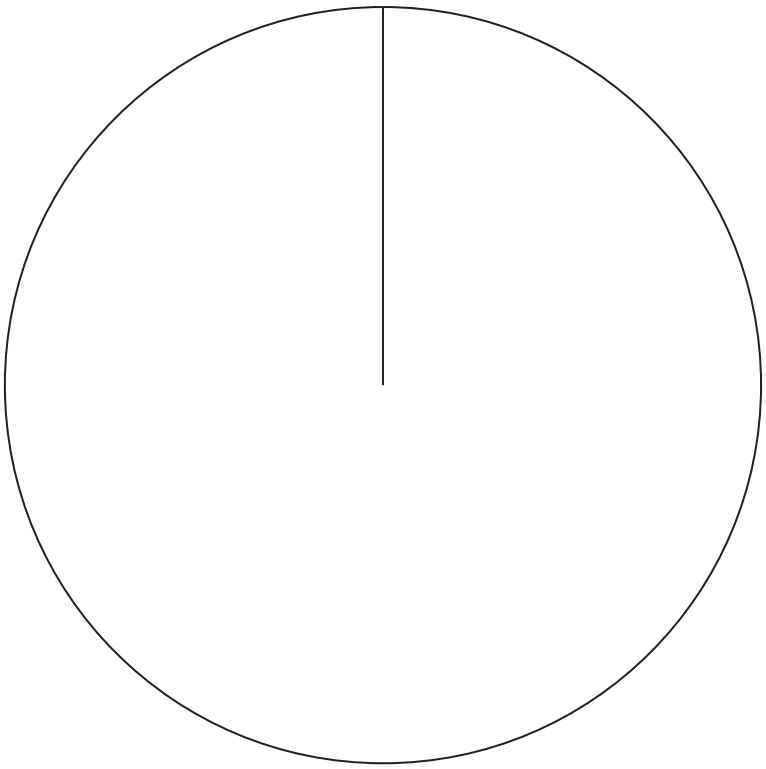
(Total for Question 7 is 3 marks)

12 Joan asked each of 60 people to name their favourite vegetable.

Here are her results.

Vegetable	Frequency
Peas	24
Carrots	16
Mushrooms	20

Draw an accurate pie chart for her results.



(Total for Question 12 is 3 marks)

Question 175

21 There are 40 students in a class.
Each student walks to school or cycles to school or gets the bus to school.

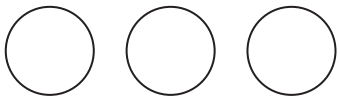
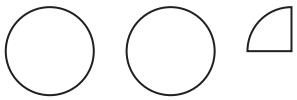
There are 22 girls in the class.
9 of the girls walk to school.
7 of the boys cycle to school.
6 of the 10 students who get the bus to school are boys.

Find the number of these students who walk to school.

.....

(Total for Question 21 is 4 marks)

9 The pictogram shows information about the number of vinyl records sold in a shop on Monday and on Tuesday.

Monday	
Tuesday	
Wednesday	
Thursday	

Key:



represents 8 vinyl records

(a) Write down the number of vinyl records sold

(i) on Monday,

.....

(1)

(ii) on Tuesday.

.....

(1)

On Wednesday and Thursday a total of 36 vinyl records were sold.
The number of records sold on Thursday was 8 times the number of records sold on Wednesday.

(b) Use this information to complete the pictogram.

(3)

(Total for Question 9 is 5 marks)

26 The table shows information about the heights of 80 plants.

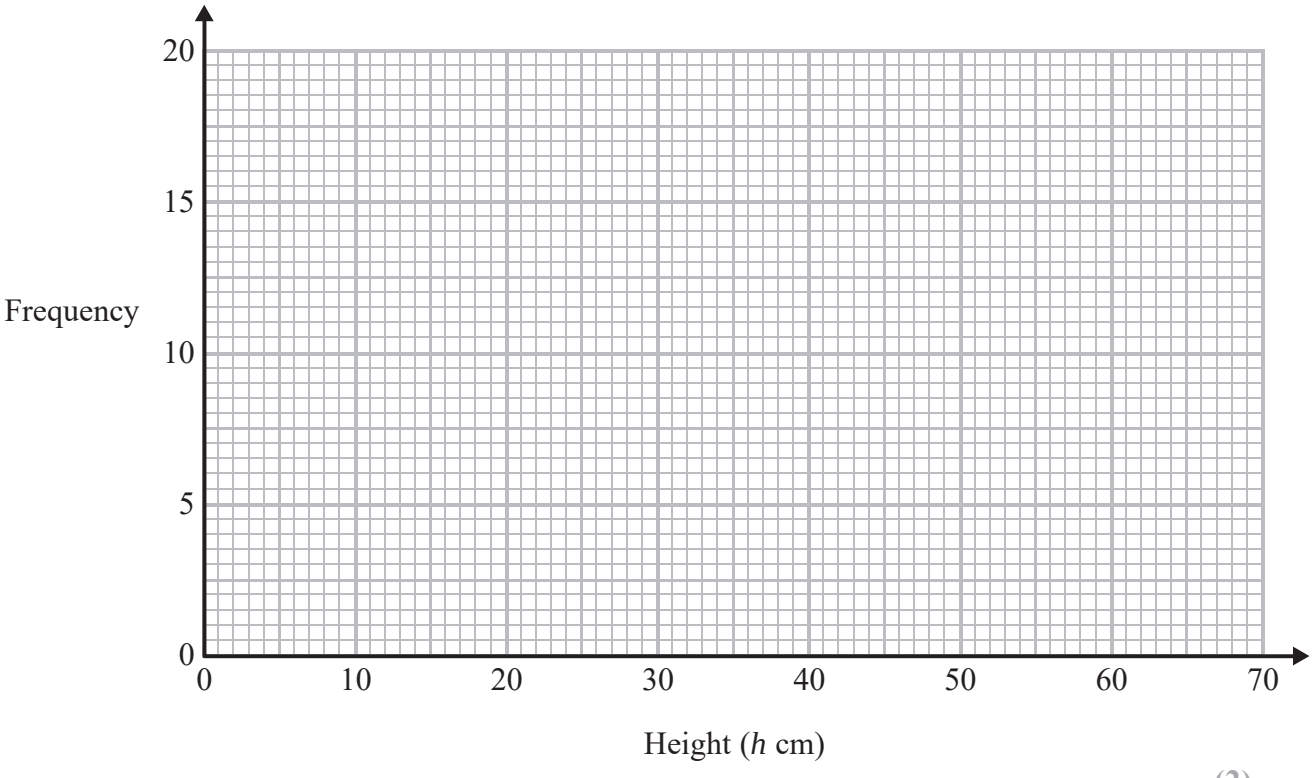
Height (h cm)	Frequency
$10 < h \leqslant 20$	7
$20 < h \leqslant 30$	13
$30 < h \leqslant 40$	14
$40 < h \leqslant 50$	12
$50 < h \leqslant 60$	16
$60 < h \leqslant 70$	18

(a) Find the class interval that contains the median.

.....

(1)

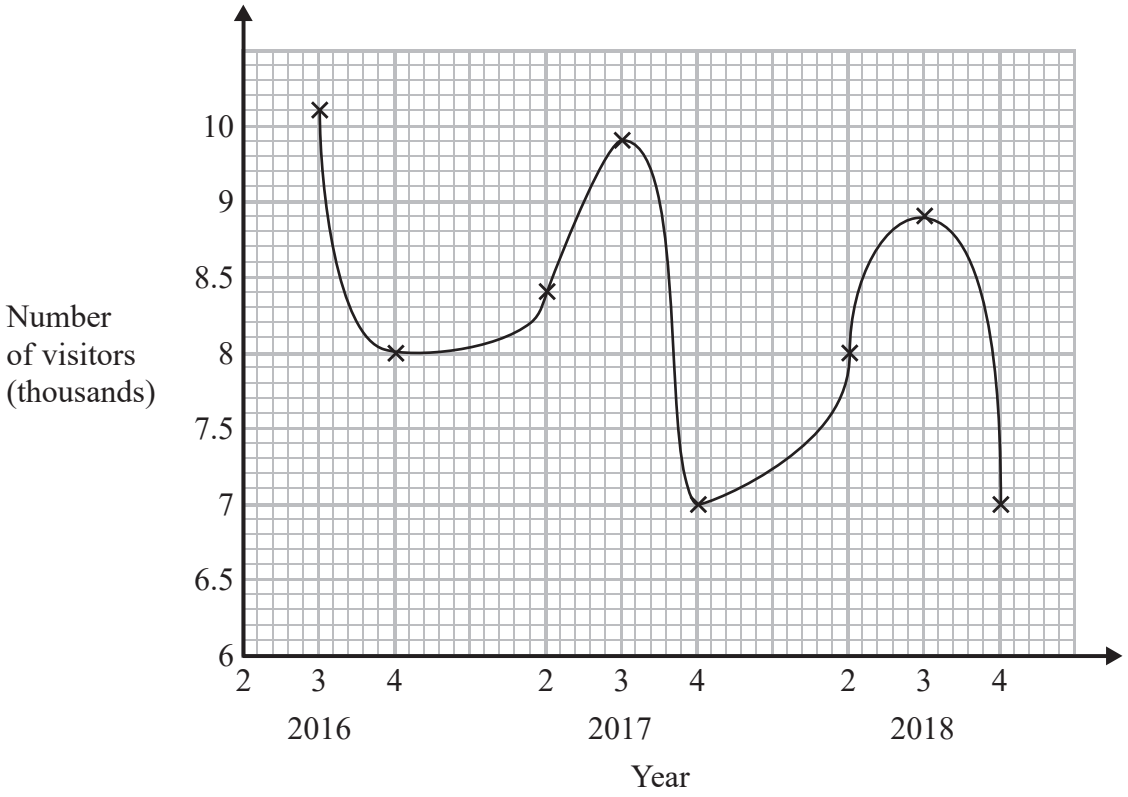
(b) On the grid, draw a frequency polygon for the information in the table.



(2)

(Total for Question 26 is 3 marks)

27 Sean has drawn a time series graph to show the numbers, in thousands, of visitors to a fun park.



Write down two things that are wrong or could be misleading with this graph.

1 .....

.....

.....

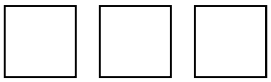
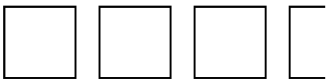
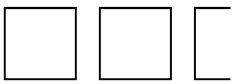
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.....

.....

(Total for Question 27 is 2 marks)

6 The pictogram shows information about the number of pictures sold in an art shop in each of January, February and March.

January	
February	
March	
April	

Key:
 represents 8 pictures

(a) Write down the number of pictures sold in January.

.....

(1)

12 pictures were sold in April.

(b) Show this information on the pictogram.

(1)

(c) What was the total number of pictures sold in these four months?

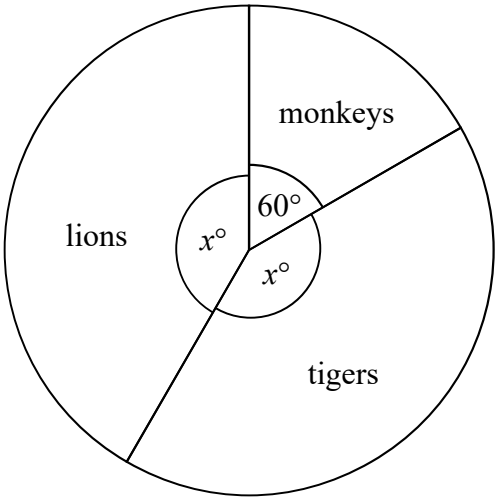
.....

(2)

(Total for Question 6 is 4 marks)

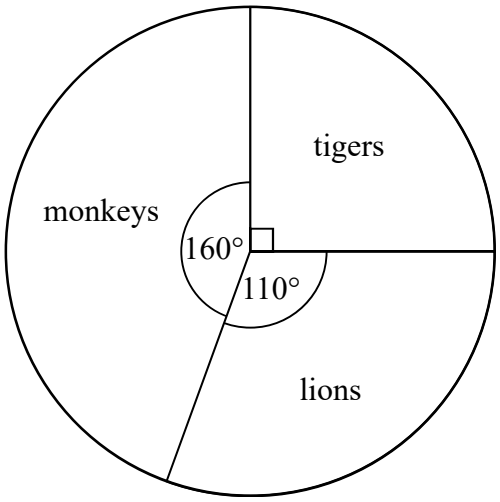
18 The pie charts show information about the favourite animal of each student at school **A** and of each student at school **B**.

School **A**



There are 480 students at school **A**.

School **B**



There are 760 students at school **B**.

Henry says,

"The same number of students at each school have tigers as their favourite animal."

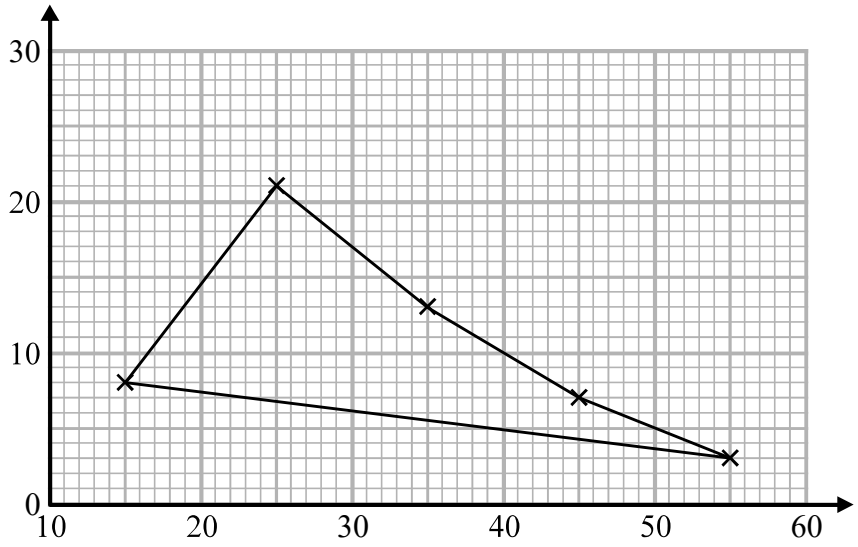
Is Henry correct?
You must show how you get your answer.

(Total for Question 18 is 4 marks)

21 The table shows some information about the weights of 50 potatoes.

Weight (w grams)	Frequency
$10 < w \leqslant 20$	6
$20 < w \leqslant 30$	21
$30 < w \leqslant 40$	13
$40 < w \leqslant 50$	7
$50 < w \leqslant 60$	3

Iveta drew this frequency polygon for the information in the table.
The frequency polygon is **not** fully correct.



Write down **two** things that are wrong with the frequency polygon.

1 .....

.....

2 .....

.....

(Total for Question 21 is 2 marks)

9 Mrs Brown asked each child in her class which pet they liked best.

Here are her results.

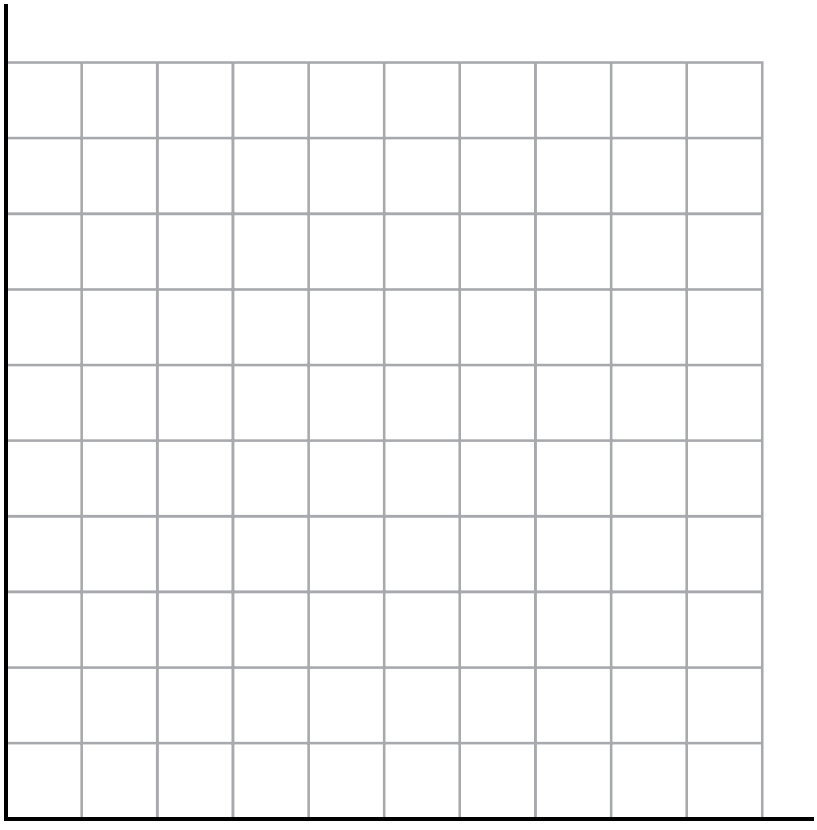
dog	rabbit	cat	dog	dog	hamster
cat	dog	rabbit	hamster	cat	cat
dog	dog	cat	dog	rabbit	dog

(a) Complete the frequency table for this information.

Pet	Tally	Frequency
dog		
rabbit		
cat		
hamster		

(2)

(b) On the grid below, draw a bar chart for this information.



(3)

(c) Write down the most popular pet.

.....

(1)

(Total for Question 9 is 6 marks)

13 The stem and leaf diagram below gives information about the ages of people in a social club.

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

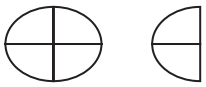
Key: 4|2 represents 42 years

Find the range of these ages.

..... years

(Total for Question 13 is 2 marks)

7 The incomplete pictogram shows information about the number of eggs sold from a farm shop on Monday.

Monday	
Tuesday	
Wednesday	

Key:

On Monday the shop sold 18 eggs.
On Tuesday the shop sold 24 eggs.
On Wednesday the shop sold 27 eggs.

Use this information to complete the pictogram and the key.

(Total for Question 7 is 4 marks)

14 Ishmael asked 30 students at college to tell him the sport they each like the best from cricket or tennis or swimming.

11 of the 20 female students said swimming.
2 of the male students said tennis.
5 students said cricket.

The number of male students who said cricket was the same as the number of male students who said swimming.

Complete the two-way table.

	Cricket	Tennis	Swimming	Total
Male students				
Female students				20
Total				30

(Total for Question 14 is 3 marks)

26 The table shows information about the heights, in cm, of a group of Year 9 girls.

least height	150 cm
median	165 cm
greatest height	170 cm

This stem and leaf diagram shows information about the heights, in cm, of a group of 15 Year 9 boys.

15	8 9 9
16	4 5 7 7 8
17	0 3 4 4 7
18	0 2

Key: 15 | 8 represents 158 cm

Compare the distribution of the heights of the girls with the distribution of the heights of the boys.

.....

.....

.....

.....

.....

.....

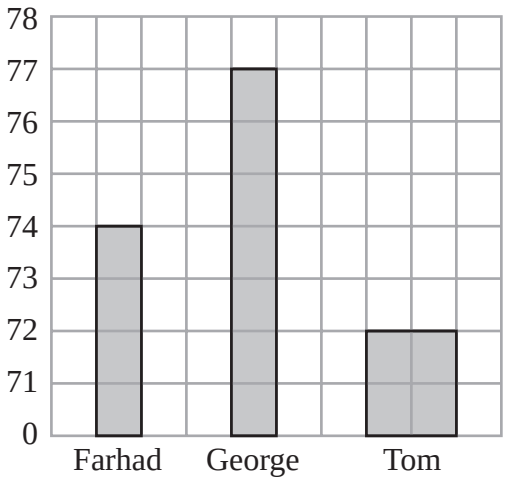
(Total for Question 26 is 3 marks)

7 Farhad, George and Tom each did a test.

Here are their marks for the test.

Farhad	74
George	77
Tom	72

George drew this bar chart to show the marks they got.
The bar chart is **not** fully correct.



Write down **two** things that are wrong with George's bar chart.

1 .....

.....

.....

2 .....

.....

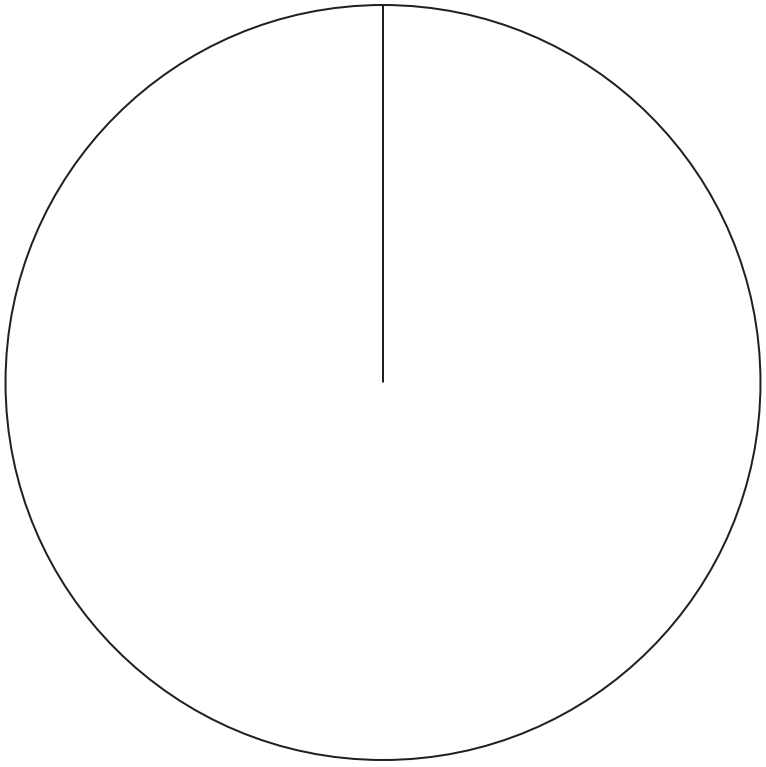
.....

(Total for Question 7 is 2 marks)

14 The table gives information about the number of goals scored by each of three teams.

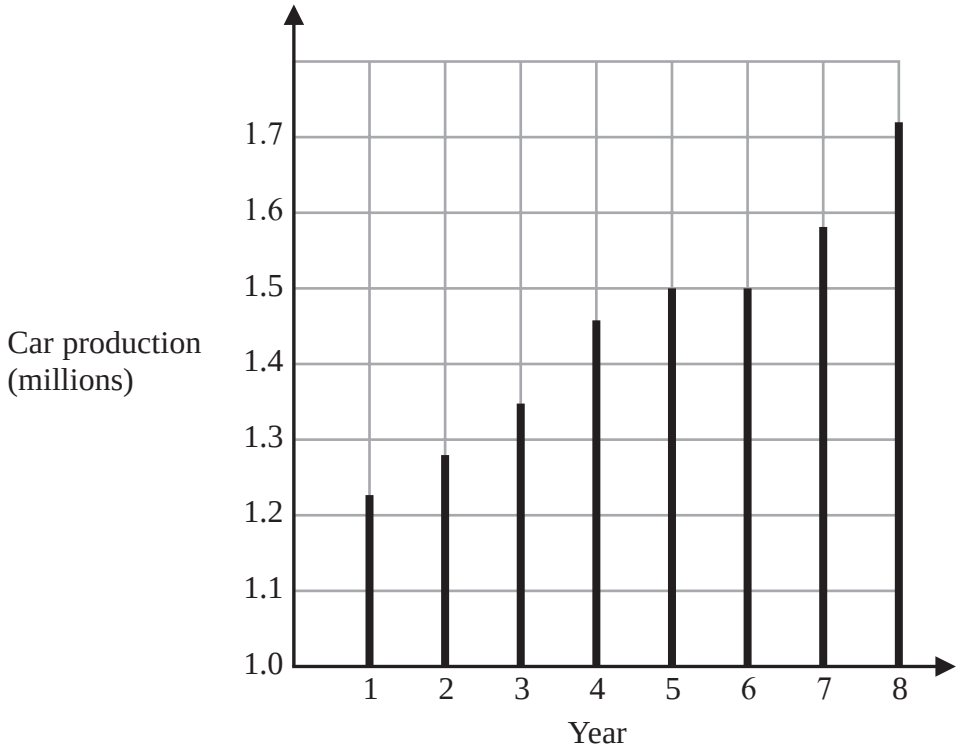
Team	Number of goals
City	50
Rovers	45
United	25

Draw an accurate pie chart for this information.



(Total for Question 14 is 3 marks)

6 The graph shows some information about car production in the UK over eight years.



(a) For how many of these years was car production more than 1.4 million?

.....

(1)

(b) In which two years was car production the same?

..... , ...

(1)

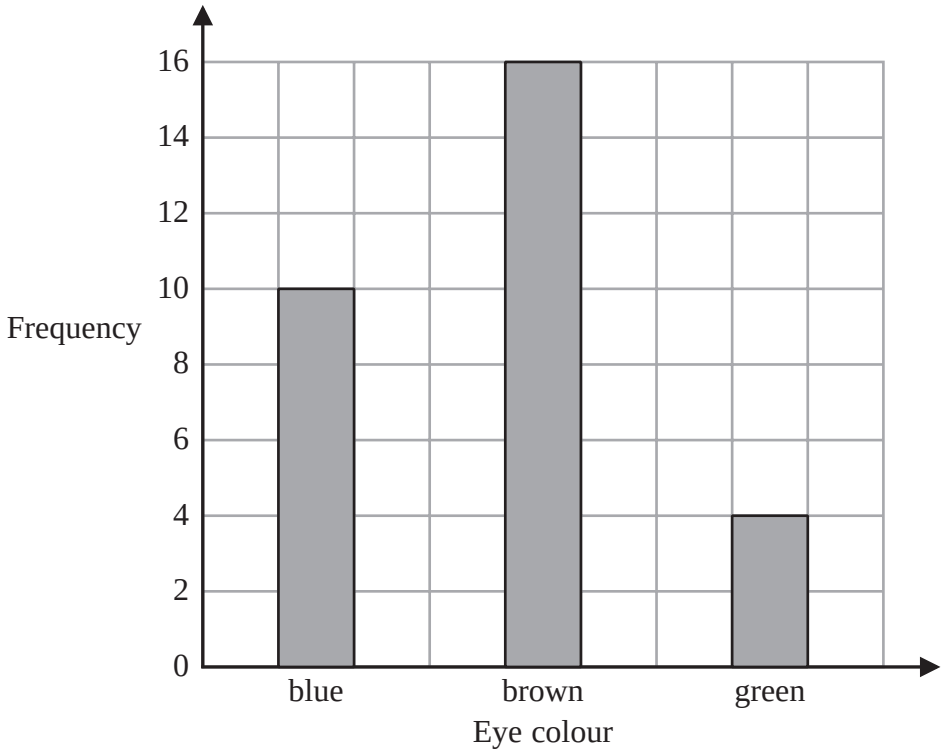
(Total for Question 6 is 2 marks)

8 Grace recorded the eye colour of each of the students in her class.

The frequency table below shows her results.

Eye colour	Frequency
blue	10
brown	15
green	4

Grace then drew the bar chart below for this information.



Write down one thing that is wrong with this bar chart.

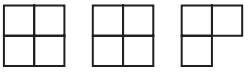
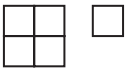
.....

.....

.....

(Total for Question 8 is 1 mark)

11 The pictogram shows information about the number of video games sold in a shop on Monday, on Tuesday and on Wednesday.

Monday	
Tuesday	
Wednesday	
Thursday	
Friday	

Key:
 represents 8 video games

(a) How many video games were sold on Monday?

.....

(1)

More video games were sold on Tuesday than on Wednesday.

(b) How many more?

.....

(2)

On Thursday and Friday, a total of 32 video games were sold in the shop.

$\frac{1}{4}$ of these 32 video games were sold in the shop on Thursday.

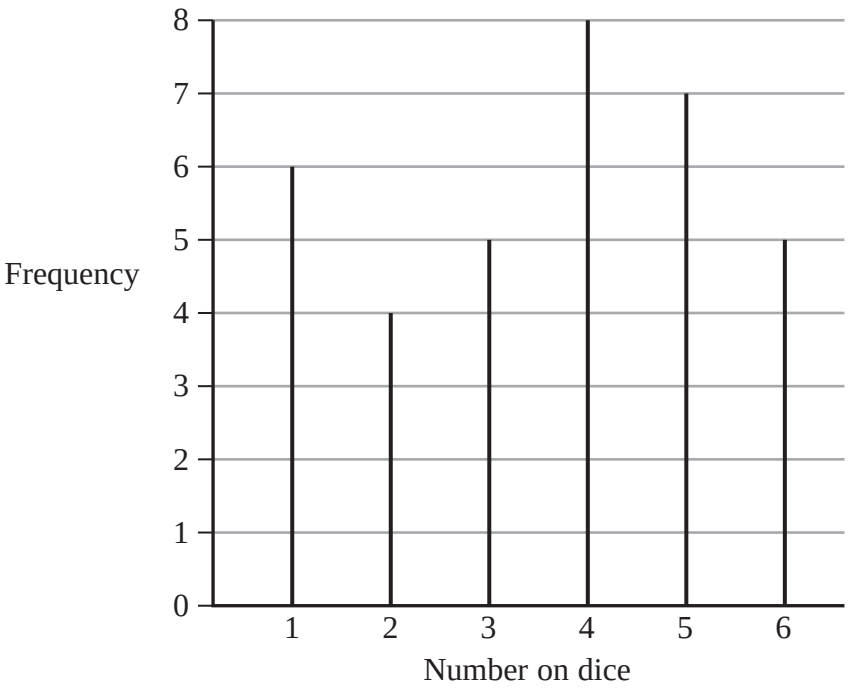
(c) Complete the pictogram for Thursday and Friday.

(3)

(Total for Question 11 is 6 marks)

8 5 students throw a dice.
They each throw the dice the same number of times.

The diagram gives information about the number of times the dice lands on each number.

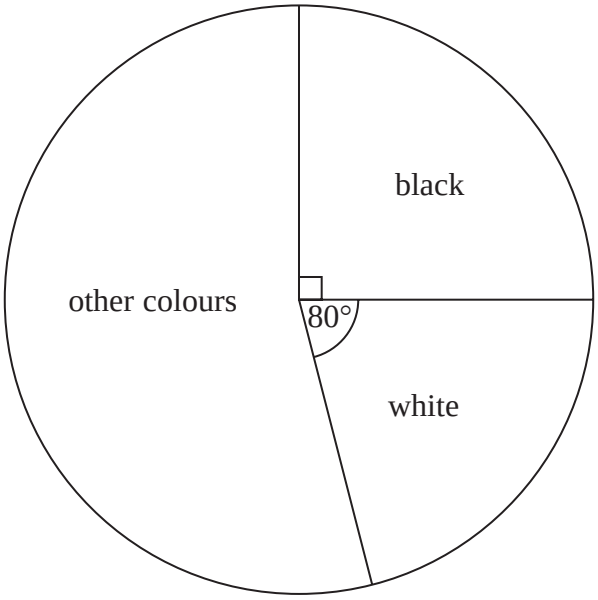


Work out how many times each student throws the dice.

.....

(Total for Question 8 is 3 marks)

16 The pie chart gives information about the colour of each car in a car park.



There are 135 black cars in the car park.

(a) Work out the number of white cars in the car park.

.....

(3)

There are 50 grey cars in the car park.

A car in the car park is picked at random.

(b) Find the probability that this car is grey.

.....

(2)

(Total for Question 16 is 5 marks)

9 Vadim has 56 clocks.
The clocks are only red, only blue or only black.

32 of the clocks are plastic.
5 of the 14 blue clocks are plastic.
8 of the 12 red clocks are **not** plastic.

Use this information to complete the two-way table.

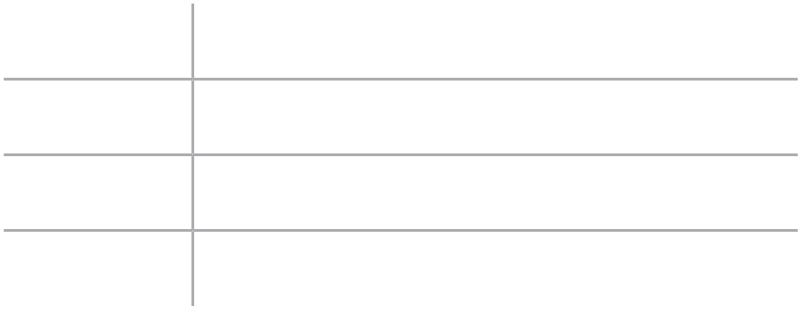
	Red	**Blue**	**Black**	**Total**
Plastic				
Not plastic				
Total				

(Total for Question 9 is 3 marks)

20 Here are the heights, in centimetres, of 15 plants.

15	20	25	33	17	22	25	18
22	19	32	35	24	28	19	

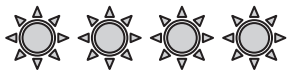
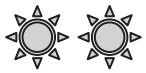
Draw a stem and leaf diagram for these heights.



Key:

(Total for Question 20 is 3 marks)

6 The pictogram gives information about the number of hours of sunshine on a Saturday and on a Sunday.

Saturday	
Sunday	

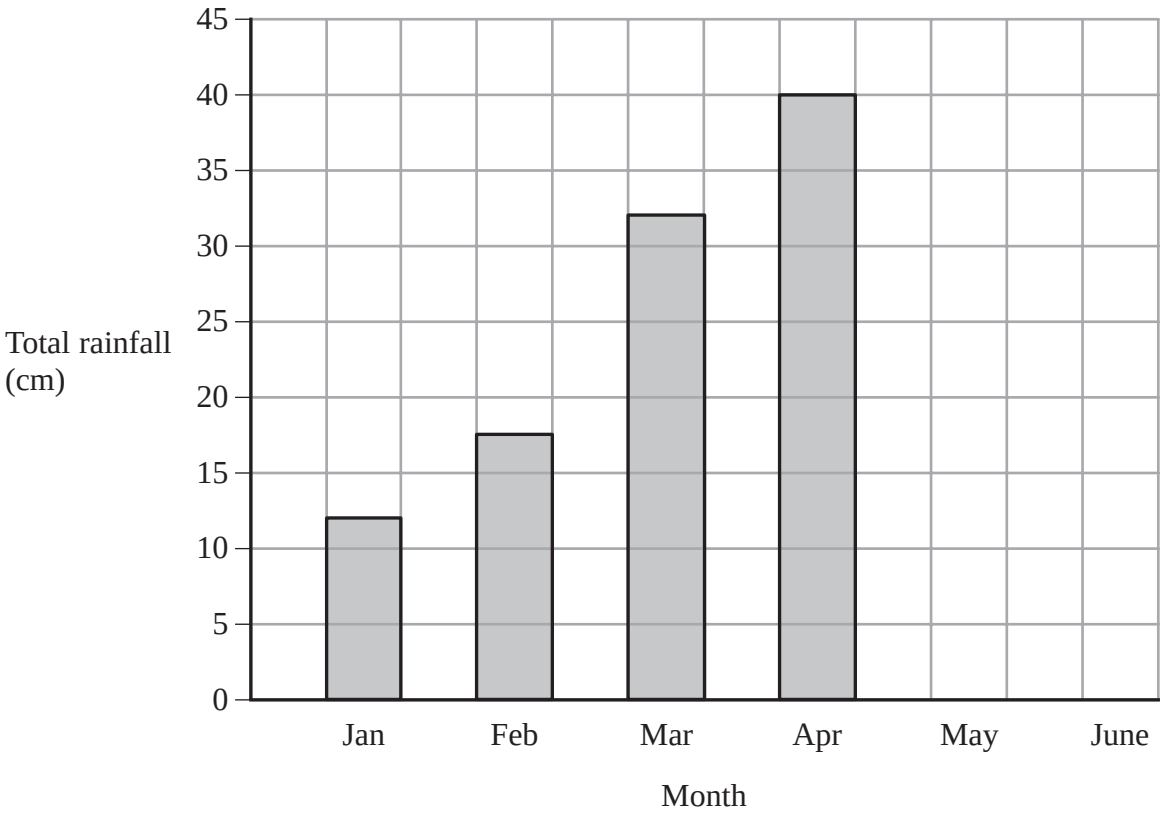
Key:  represents 2 hours of sunshine

Work out the number of hours of sunshine on Saturday.

..... hours

(Total for Question 6 is 1 mark)

8 The bar chart shows information about the total rainfall each month for four months in a city.



In May, the total rainfall was 35 cm.
In June, the total rainfall was 20 cm.

(a) Use this information to complete the bar chart.

(2)

Rupa says,

"In February there was 15.5 cm of rainfall because the bar is half a square above 15"

(b) Explain why Rupa is incorrect.

.....

.....

.....

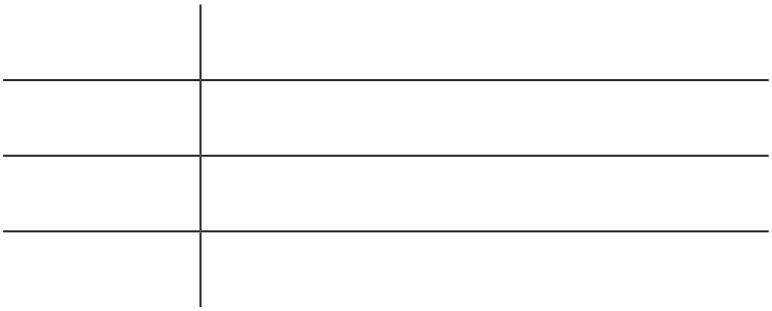
(1)

(Total for Question 8 is 3 marks)

21 Here are the ages, in years, of 15 people.

19	28	29	33	27
27	37	25	27	37
17	45	47	25	26

Show this information in a stem and leaf diagram.



Key:

(Total for Question 21 is 3 marks)

13 Sophie works in a bed shop.
During the last three months she sold 198 beds.

59 beds were sold without a mattress.
45 beds were double beds.
17 of the single beds were sold without a mattress.
67 of the 83 king size beds were sold with a mattress.

Use this information to complete the two-way table.

	Single	Double	King size	Total
With mattress				
Without mattress				
Total				

(Total for Question 13 is 3 marks)

7 The table shows the total number of apples sold and the total number of oranges sold in a shop in each of three weeks.

	Week 1	**Week 2**	**Week 3**
Number of apples	86	75	92
Number of oranges	68	80	76

In total for the three weeks, more apples than oranges were sold.
How many more?

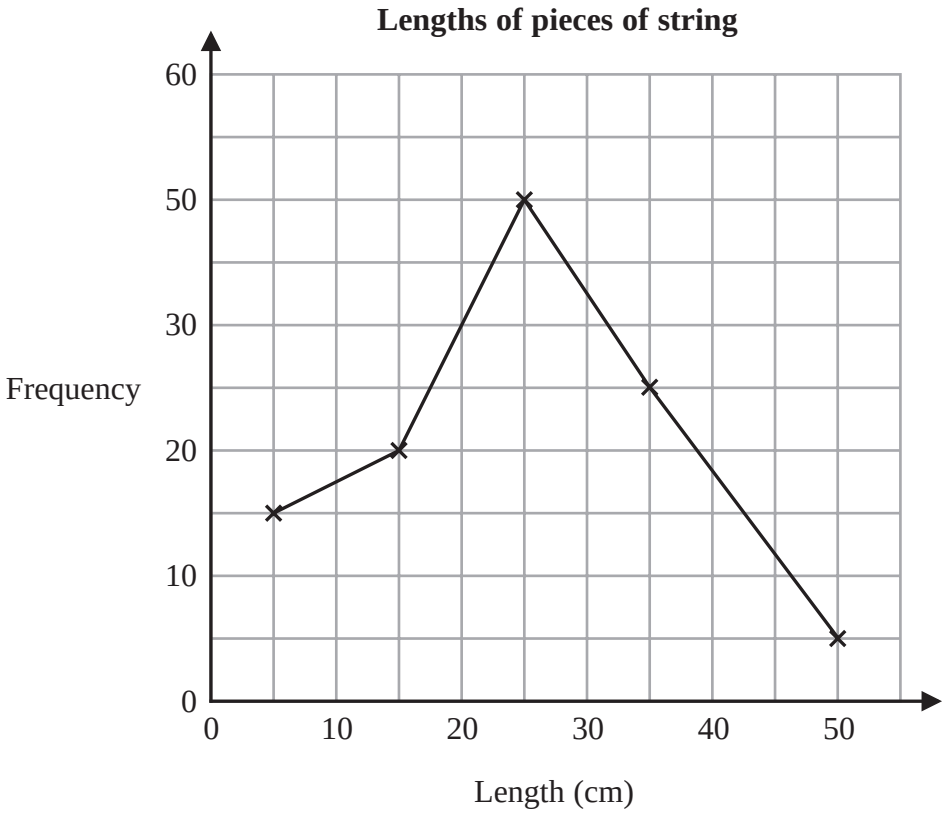
.....

(Total for Question 7 is 3 marks)

26 The table gives information about the lengths, in cm, of some pieces of string.

Length (t cm)	Frequency
$0 < t \leqslant 10$	15
$10 < t \leqslant 20$	20
$20 < t \leqslant 30$	50
$30 < t \leqslant 40$	25
$40 < t \leqslant 50$	5

Amos draws a frequency polygon for the information in the table.



Write down **two** mistakes that Amos has made.

1 .....

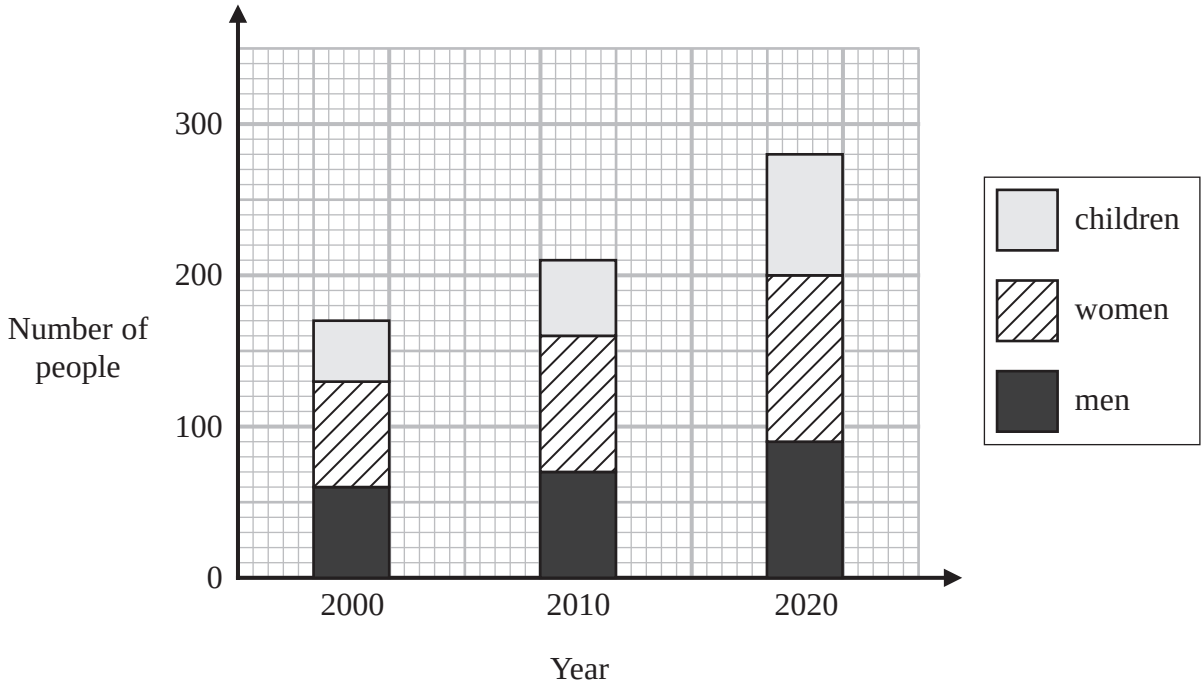
.....

2 .....

.....

(Total for Question 26 is 2 marks)

13 The composite bar chart shows information about the number of people living in a village.



(a) Write down the number of men living in the village in the year 2000

.....

(1)

(b) Find the number of children living in the village in the year 2010

.....

(1)

For the people living in the village in the year 2020

(c) find the ratio of the number of children to the **total** number of men and women.

.....

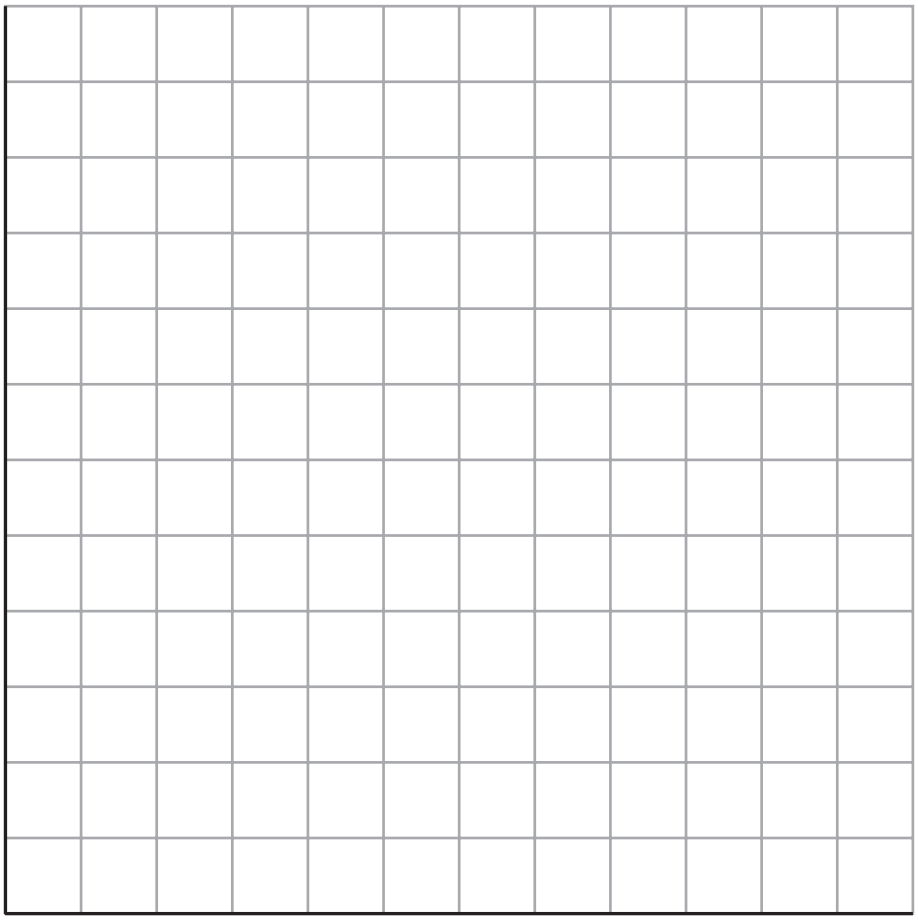
(2)

(Total for Question 13 is 4 marks)

9 The table shows information about the number of students who arrived late at school each day one week.

	Number of students
Monday	9
Tuesday	10
Wednesday	8
Thursday	6
Friday	3

On the grid, draw a bar chart for this information.

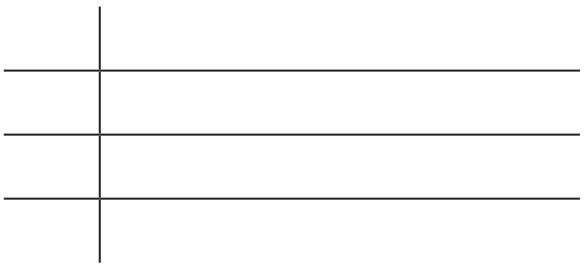


(Total for Question 9 is 3 marks)

15 Hetvi asked her friends how many stickers they each have in their collection.
Here are her results.

77	86	94	87	71	98
74	103	71	85	82	84
97	91	88	89	75	

(a) Show this information in a stem and leaf diagram.



Key:

(3)

(b) Find the median number of stickers.

.....

(2)

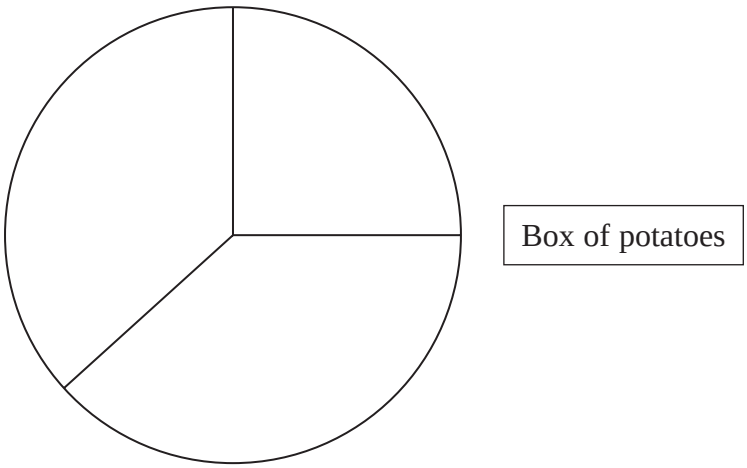
(Total for Question 15 is 5 marks)

16 There are three different types of potato in a box.

The table gives the number of each type of potato.

Type of potato	Number of potatoes
Jersey Royal	90
Charlotte	105
Maris Piper	105

Salim draws this pie chart for the information in the table.



Write down two different things that are wrong or misleading with this pie chart.

1 .....

.....

2 .....

.....

(Total for Question 16 is 2 marks)

23 200 students chose one language to study.
Each student chose one language from French or Spanish or German.

Of the 200 students,

90 are boys and the rest of the students are girls
70 chose Spanish
60 of the 104 students who chose French are boys
18 girls chose German.

Work out how many boys chose Spanish.

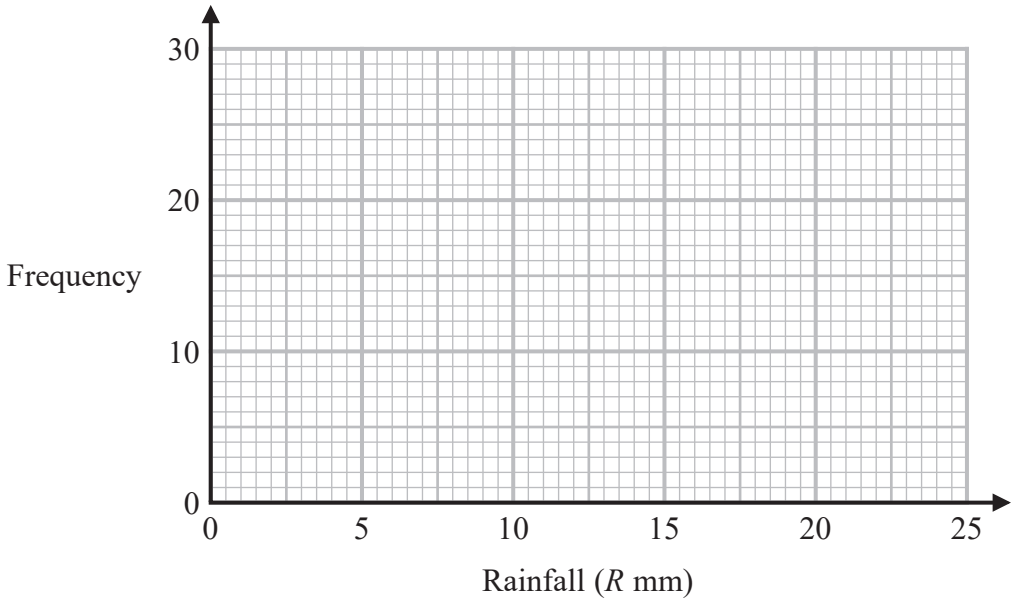
.....

(Total for Question 23 is 3 marks)

23 The table shows information about the daily rainfall in a town for 60 days.

Rainfall (R mm)	Frequency
$0 \leqslant R < 5$	8
$5 \leqslant R < 10$	24
$10 \leqslant R < 15$	13
$15 \leqslant R < 20$	11
$20 \leqslant R < 25$	4

Draw a frequency polygon for this information.



(Total for Question 23 is 2 marks)

11 The table shows information about the weights of the people in a hotel lift.

Weight	Number of people
40 kg	1
50 kg	2
60 kg	4
70 kg	5
80 kg	3
90 kg	1

Show that the total weight of the people in the lift is less than 1200 kg.

(Total for Question 11 is 3 marks)

9 The table shows the number of books read by four people in one month.

Person	Number of books
Ximena	7
Martha	9
Kezia	1
Tabby	5

(a) Work out the median number of books.

.....

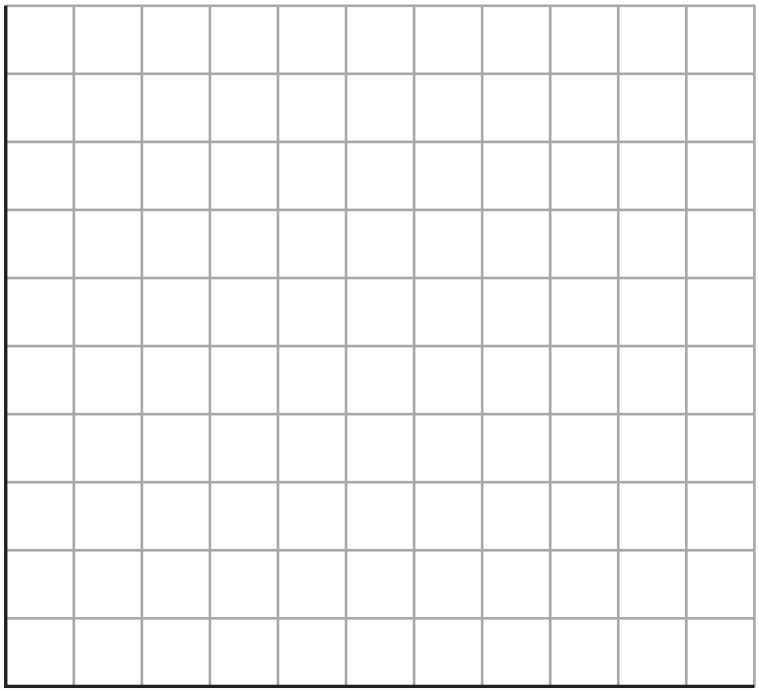
(2)

(b) Find the range.

.....

(1)

(c) On the grid, draw a bar chart to show the information in the table.

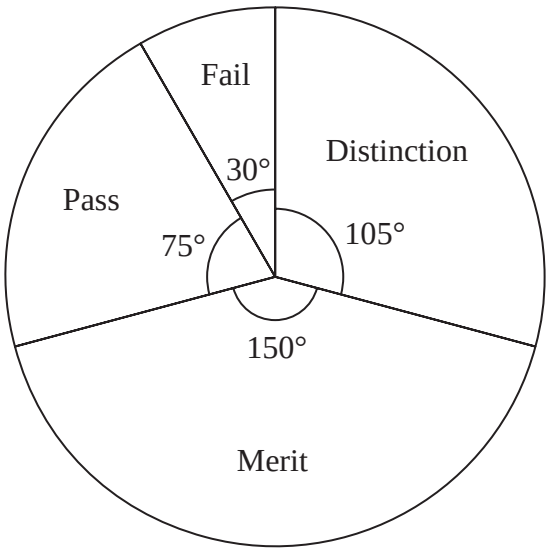


(3)

(Total for Question 9 is 6 marks)

12 Some students took a guitar exam.

The pie chart shows information about the grades the students got.



(a) Write down the modal grade.

.....

(1)

7 students got distinction.

(b) Work out the total number of students who took the guitar exam.

.....

(3)

(Total for Question 12 is 4 marks)

8 Miss Bailey asked 24 students where they each wanted to go on a school trip.

Here are the results.

museum	castle	castle	farm
farm	castle	farm	farm
castle	farm	castle	castle
castle	farm	castle	museum
museum	farm	castle	museum
museum	museum	castle	castle

(a) Complete the frequency table.

Place	Tally	Frequency
castle		
farm		
museum		

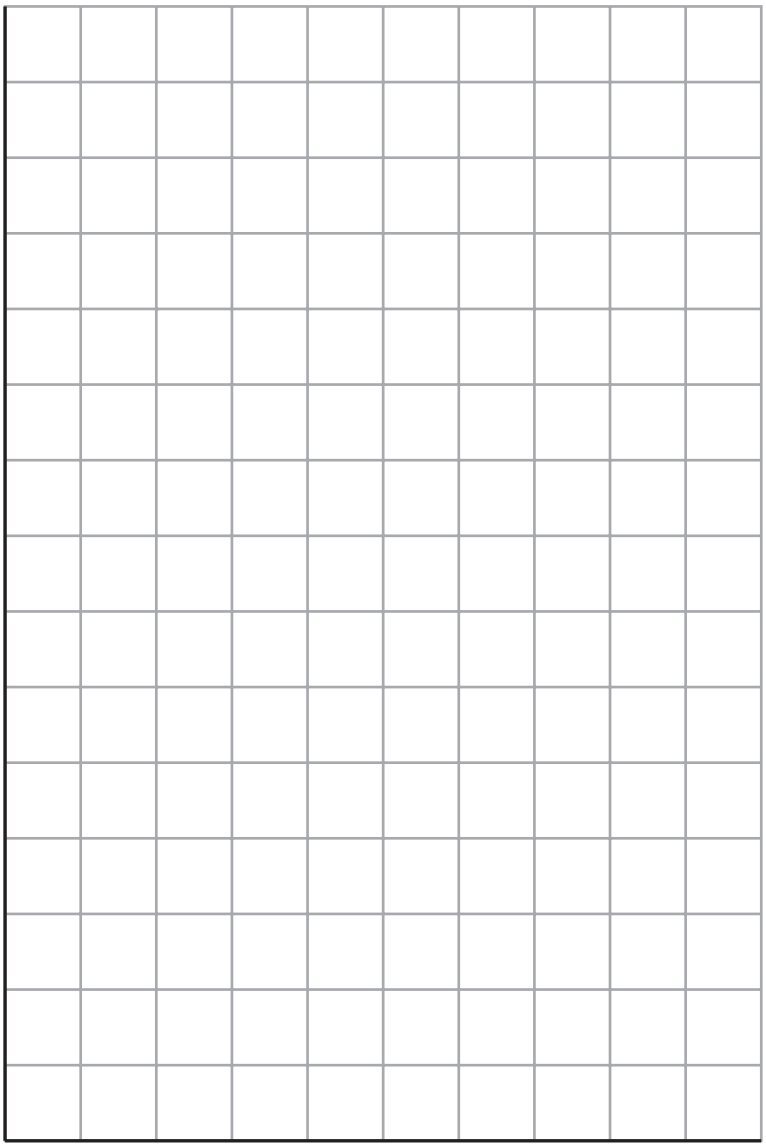
(2)

(b) Write down the place that is the mode.

.....

(1)

(c) Draw a bar chart to show the results.



(3)

(Total for Question 8 is 6 marks)

16 160 people were asked to choose their favourite type of book.
They each chose from romance or adventure or horror or thriller.

85 of these people were children.
The rest were adults.

19 of the 33 people who chose romance were children.
34 of the 76 people who chose adventure were adults.
7 adults chose thriller.

The number of children who chose thriller was the same as the number of adults who chose horror.

Work out the total number of people who chose horror.
You must show how you get your answer.

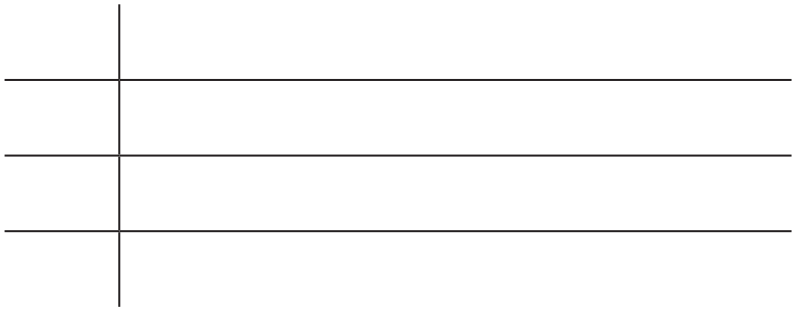
.....

(Total for Question 16 is 4 marks)

17 Here are the heights, in cm, of 16 sunflowers.

168	173	172	180	162	191	183	160
178	184	197	177	172	186	188	180

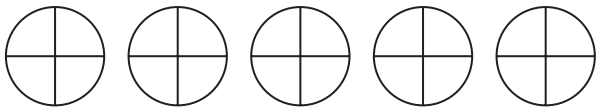
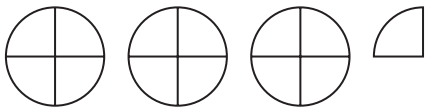
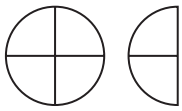
Show this information in a stem and leaf diagram.



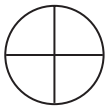
Key:

(Total for Question 17 is 3 marks)

6 The pictogram shows information about the number of chocolate cakes, vanilla cakes and lemon cakes sold by Year 7 at a school fair.

Chocolate	
Vanilla	
Lemon	
Banana	

Key:



represents 12 cakes

24 banana cakes were sold by Year 7

(a) Use this information to complete the pictogram.

(1)

At the fair, Year 8 sold a total of 150 cakes.

(b) Which Year sold most cakes at the fair, Year 7 or Year 8?
You must show how you get your answer.

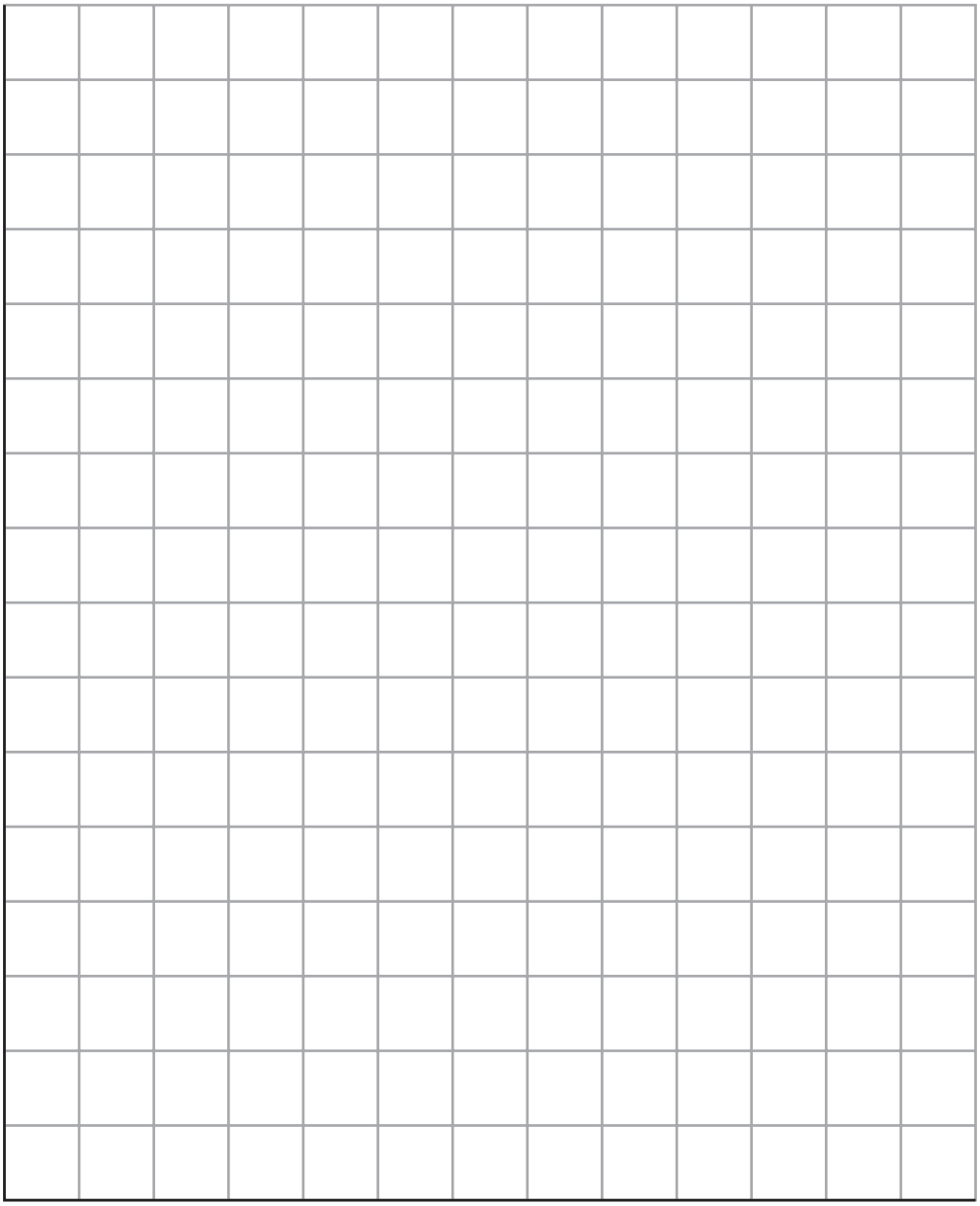
(3)

(Total for Question 6 is 4 marks)

7 The table shows the number of hours that Lena and Pavel worked on each of four days last week.

	Wednesday	**Thursday**	**Friday**	**Saturday**
Lena	6	9	8	6
Pavel	7	6	5	6

On the grid, draw a suitable diagram or chart for this information.



(Total for Question 7 is 4 marks)

15 Tessa recorded the times that 15 adults took to complete a run.
She showed her results in a stem and leaf diagram.

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

Key:
4 | 5 represents 45 minutes

(a) Find the median.

..... minutes
(1)

(b) Find the range.

..... minutes
(2)

Tessa also recorded the times that 15 children took to complete the run.

For the children, the median was 75 minutes.

(c) Compare the times that the adults took with the times that the children took.

.....

.....

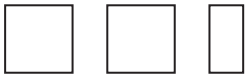
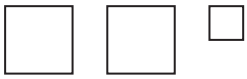
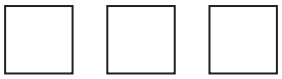
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(1)

(Total for Question 15 is 4 marks)

6 Ben sells houses.

The pictogram shows information about the number of houses Ben sold in each of the first three months of last year.

January	
February	
March	
April	
May	

Key:  represents 4 houses

(a) Write down the number of houses Ben sold in January.

.....

(1)

In April, Ben sold 11 houses.

(b) Show this information on the pictogram.

(1)

Ben sold a total of 60 houses in the first five months of last year.

(c) Work out the number of houses Ben sold in May.

.....

(3)

(Total for Question 6 is 5 marks)

13 James asks students in Year 10 and Year 11 to name their favourite language from French or German or Spanish.

The two-way table shows information about his results.

	French	German	Spanish	Total
Year 10	33		34	
Year 11		45		113
Total			67	207

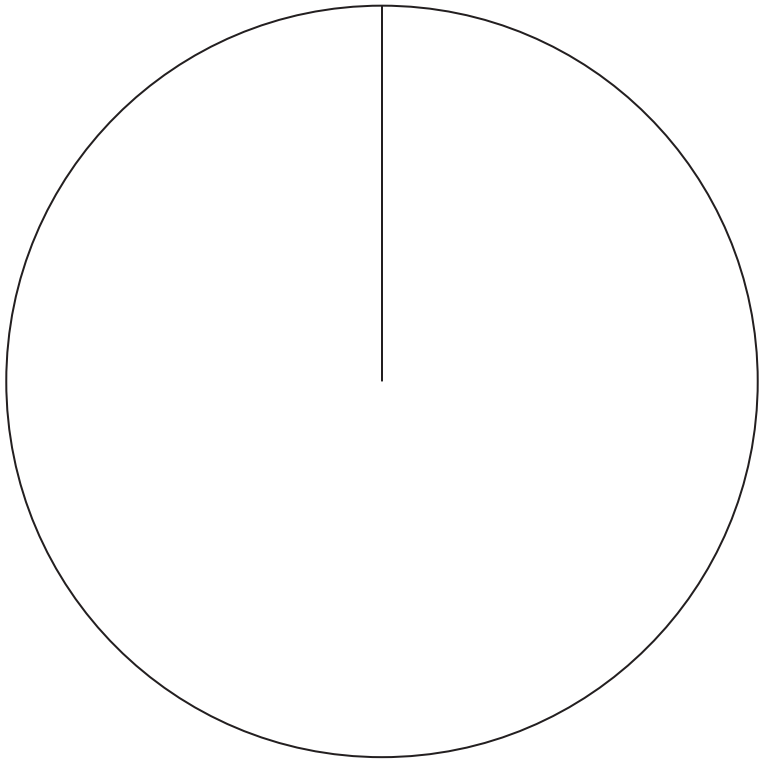
Complete the two-way table.

(Total for Question 13 is 3 marks)

14 The table gives information about the drinks people ordered in a cafe.

Drink	Number of people
Coffee	30
Hot chocolate	10
Tea	50

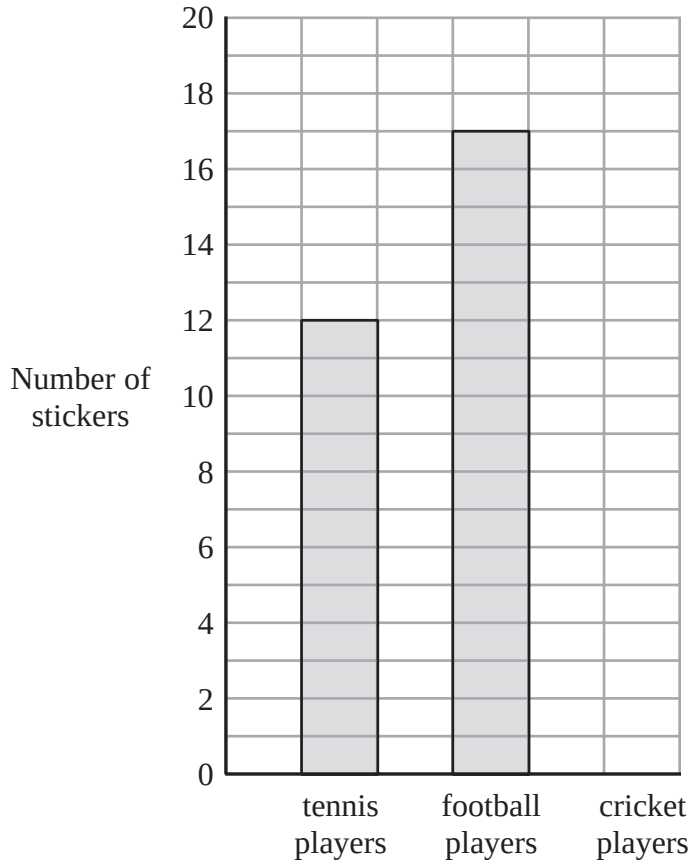
Draw an accurate pie chart for this information.



(Total for Question 14 is 3 marks)

9 Milly collects stickers of sports players.
She only has stickers of tennis players, football players and cricket players.

The incomplete bar chart shows some information about the number of stickers Milly has.



Milly has a total of 40 stickers.

(a) Complete the bar chart.

(3)

(b) What fraction of the 40 stickers are stickers of tennis players?
Give your fraction in its simplest form.

.....

(2)

Ewan also collects stickers.
He only has large stickers and small stickers.

For Ewan's stickers,

the number of large stickers : the number of small stickers = 5 : 4

(c) Write down the fraction of Ewan's stickers that are large stickers.

.....

(1)

(d) Write the ratio 5 : 4 in the form $n : 1$

.....

(1)

(Total for Question 9 is 7 marks)

11 500 people were asked what type of film they liked best.

280 of the 500 people were adults.
100 of the adults said they liked action films best.
80 of the children said they liked thriller films best.

150 of the people said they liked action films best.
200 of the people said they liked comedy films best.

(a) Complete the two-way table.

	Comedy	Thriller	Action	Total
Adults				
Children				
Total				500

(3)

One of these 500 people is chosen at random.

(b) Find the probability that this person is an adult who said they liked action films best.

.....

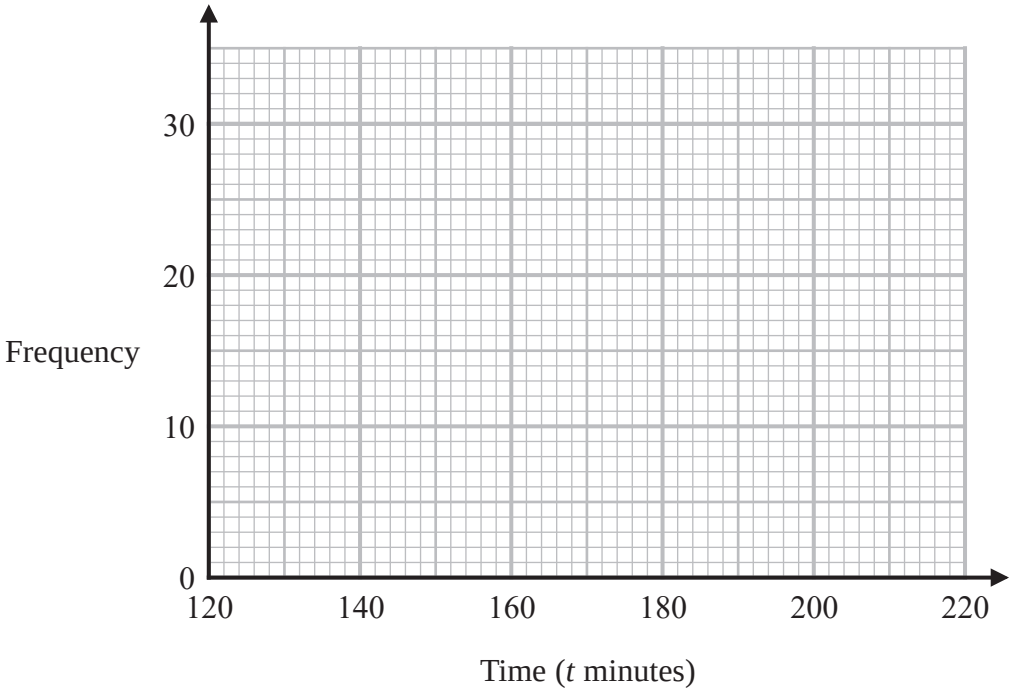
(2)

(Total for Question 11 is 5 marks)

17 The table shows information about the times, in minutes, 100 people took to complete a bike race.

Time (t minutes)	Frequency
$120 \leqslant t < 140$	12
$140 \leqslant t < 160$	28
$160 \leqslant t < 180$	30
$180 \leqslant t < 200$	22
$200 \leqslant t < 220$	8

On the grid below, draw a frequency polygon for this information.



(Total for Question 17 is 2 marks)

22 The stem and leaf diagram shows the test scores of 23 students from School **A**.

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

Key:
3 | 0 represents 30

23 students from School **B** did the same test.

Their median score was 56
The range of their scores was 47

Compare the distribution of the test scores of the students from School **A** with the distribution of the test scores of the students from School **B**.

(Total for Question 22 is 4 marks)

6 Samina works in a shop that sells pens.

The table shows the number of blue pens and the number of red pens Samina sold in each of three months.

Month	Blue pens	Red pens
April	33	20
May	40	14
June	27	15

(a) Work out the total number of blue pens and red pens Samina sold in June.

.....

(1)

Samina says,

"In these three months, in total, I sold more than twice as many blue pens as red pens."

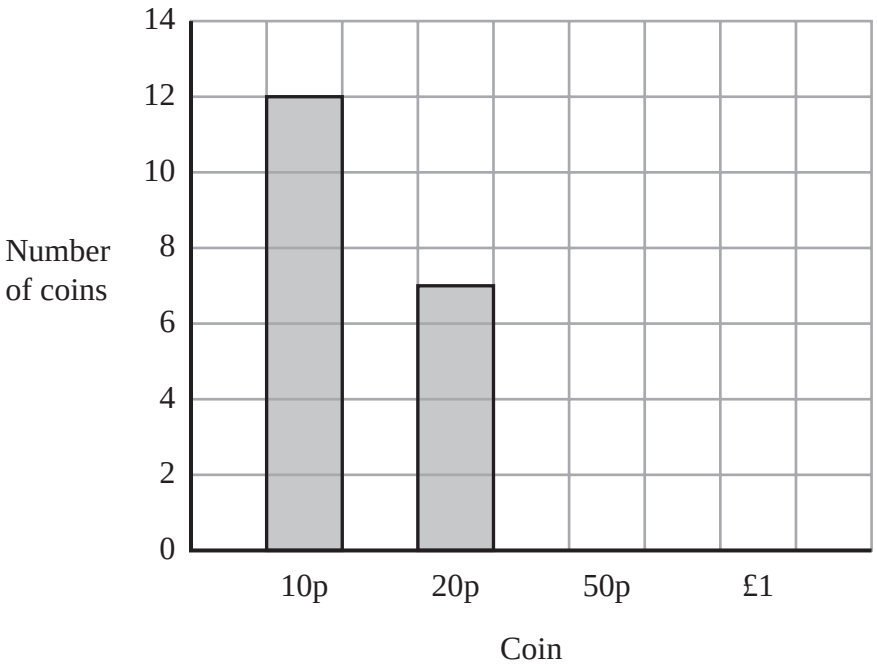
(b) Is Samina correct?
You must show how you get your answer.

(3)

(Total for Question 6 is 4 marks)

7 There are only 10p coins, 20p coins, 50p coins and £1 coins in a bag.

The bar chart shows information about the number of 10p coins and the number of 20p coins in the bag.



There are eight 50p coins in the bag.
There are three £1 coins in the bag.

(a) Use this information to complete the bar chart.

(2)

(b) Show that the total amount of money in the bag is less than £10

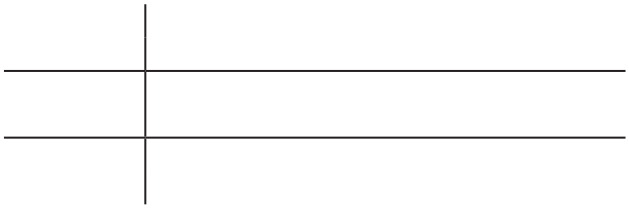
(3)

(Total for Question 7 is 5 marks)

18 Here are the heights, in cm, of 12 children.

146	135	142	150	138	149
152	146	137	154	147	144

Show this information in a stem and leaf diagram.



Key:

(Total for Question 18 is 3 marks)

12 A factory makes mountain bikes and road bikes.
Each bike has disc brakes or rim brakes or caliper brakes.

In June the factory makes a total of 240 bikes.

102 of the bikes are mountain bikes.
75 of the 110 bikes with disc brakes are mountain bikes.
105 bikes have rim brakes.
20 of the mountain bikes have caliper brakes.

Use this information to complete the two-way table.

	disc brakes	**rim brakes**	**caliper brakes**	**Total**
mountain bikes				
road bikes				
Total				

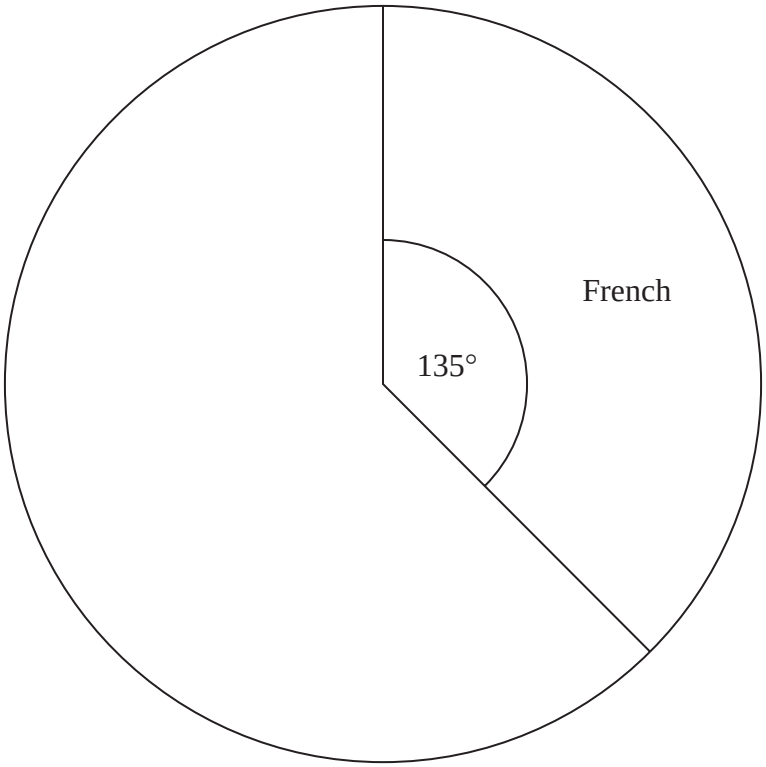
(Total for Question 12 is 3 marks)

14 120 students in Year 10 each choose one language to study.

The table below shows information about their choices.

Language	Number of students
French	45
Mandarin	20
Spanish	55

(a) Complete the accurate pie chart to show this information.



(3)

In another pie chart the number of students in Year 11 studying French is represented by an angle of 150°

Navi says,

"This means that French was chosen by more students in Year 11 than by students in Year 10"

(b) Is Navi correct?
Explain why you think this.

.....

.....

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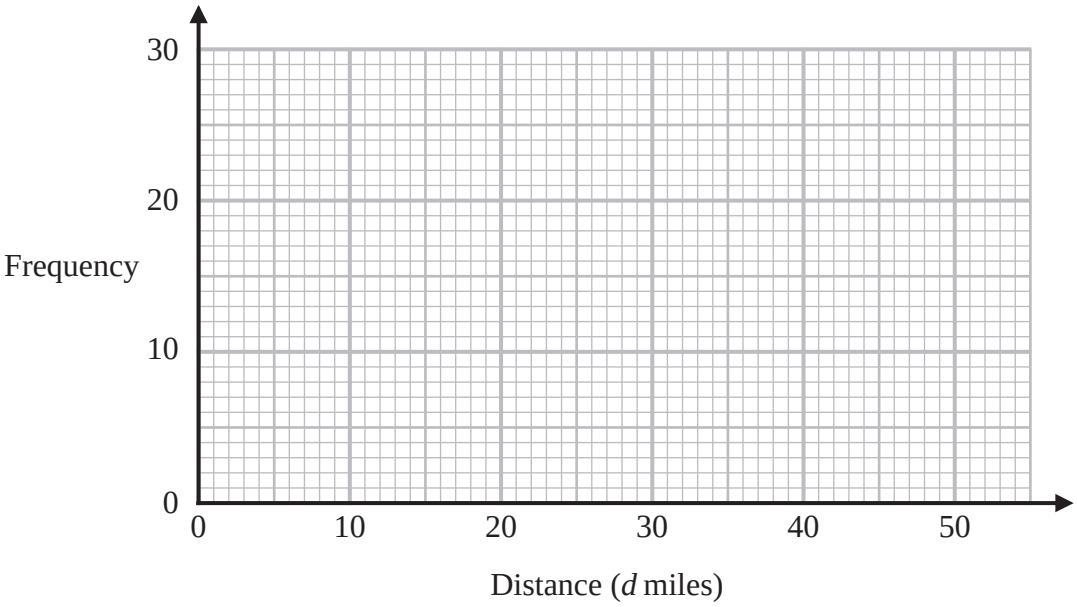
(1)

(Total for Question 14 is 4 marks)

22 The table shows information about the distances that 60 people travel to work.

Distance (d miles)	**Frequency**
$0 < d \leqslant 10$	12
$10 < d \leqslant 20$	25
$20 < d \leqslant 30$	10
$30 < d \leqslant 40$	8
$40 < d \leqslant 50$	5

Draw a frequency polygon for the information in the table.



(Total for Question 22 is 2 marks)