NOTICE TO CUSTOMER:

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Answer **all** questions in the spaces provided.

1 (a) Matthew records the types of birds that visit his garden one morning.

1 (a) (i) Complete the table.

Type of bird	Tally	Frequency
robin	IIII	
blackbird	III	
starling	𝍸 𝍸 II	
sparrow	𝍸 IIII	
	Total	

(3 marks)

1 (a) (ii) What fraction of the birds are robins?
Give your answer in its simplest form.

.....

Answer ..... *(2 marks)*

***1 (b)** This table shows the types of birds that Leah records in her garden one morning.

Type of bird	robin	blackbird	starling	sparrow
Frequency	4	6	5	3

She has finished the first row of a pictogram to show the results.

Complete the key and pictogram.

Key: ⌒ represents ..... birds

robin	⌒ ⌒
blackbird	
starling	
sparrow	

(4 marks)

1 (c) 500 000 people record the types of birds in their gardens.
In total, they record eight million birds.

On average, how many birds does each person record?

.....

.....

.....

Answer ..... *(3 marks)*

1 (d) Here is a list of the birds at a bird table.

robin	robin	sparrow	blackbird	starling
blackbird	starling	blackbird	robin	blackbird

One bird flies away.
Another bird arrives at the bird table.

The new mode is robin.

What type of bird flies away and what type of bird arrives?
Complete the table.

.....

.....

	Type of bird
Flies away	
Arrives	

(2 marks)

2 Ella has these coins.

Jayden has these coins.

Ella gives Jayden one coin.
They now have the same amount of money as each other.

Which coin does Ella give to Jayden?

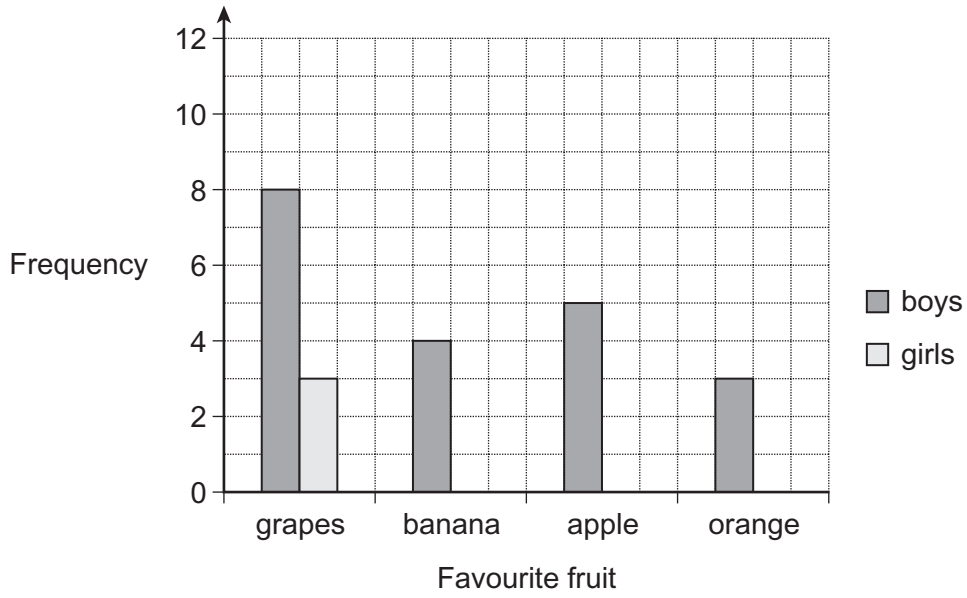
.....

.....

.....

Answer ..... p *(2 marks)*

3 Callum asks some boys and girls to choose their favourite fruit.
He is drawing a dual bar chart of the results.
Callum has only drawn the first bar of the results for the girls.



3 (a) How many more boys than girls choose grapes?

.....

Answer ..... *(2 marks)*

3 (b) How many boys does Callum ask altogether?

.....

Answer ..... *(2 marks)*

3 (c) Callum asks the same number of boys and girls.
Two girls choose apple.
Twice as many girls choose banana as choose orange.

Complete the bar chart.

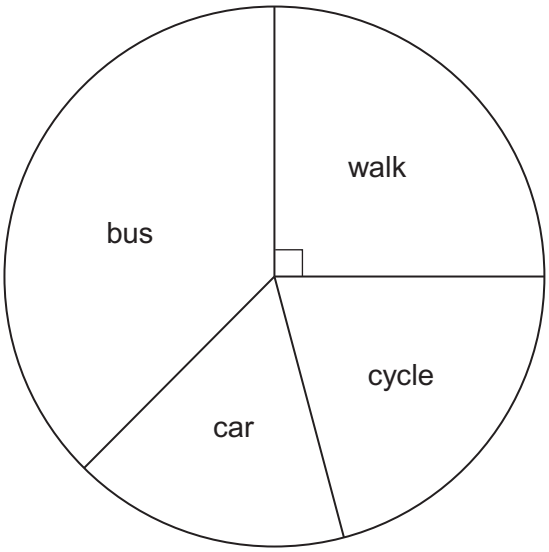
.....

.....

(3 marks)

9

4 The pie chart shows information about how year 10 students travel to a school.



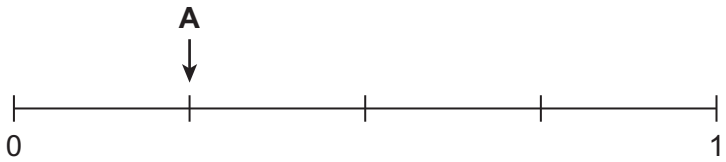
4 (a) A student from year 10 is chosen at random.

Mark, with the letter, the probabilities of each of the following on the scale below.
The first one has been done for you.

A: The student walks to school.

B: The student does **not** walk to school.

C: The student travels to school by train.



(2 marks)

4 (b) 40 students travel to school by car.

How many year 10 students are there?

.....

.....

.....

Answer ..... *(3 marks)*

4 (c) There are 252 students in year 11.
The same proportion of students walk to school as in year 10.

Work out the number of year 11 students that walk to school.

.....

.....

.....

Answer ..... *(2 marks)*

Turn over for the next question

7

*5 Danni and Ed are in the same quiz team.
In each round a person can score up to 10 points.

Here are the scores for Danni.

1 1 10 2 10 1 3

The scores for Ed have a range of 3.
The mean score for Ed is 5.

5 (a) Compare the scores for Danni and Ed.

.....

.....

.....

.....

.....

.....

(5 marks)

5 (b) In the final round, only one person can play.
Their team needs 9 points to win.

Who would you choose, Danni or Ed?
Give a reason for your answer.

.....

.....

.....

(1 mark)

6 A bag only contains red and blue counters.
It contains 24 red counters.

A counter is chosen at random from the bag.

The probability of choosing a blue counter is $\frac{1}{4}$.

How many counters are in the bag?

.....

.....

.....

.....

Answer ..... *(3 marks)*

7 A train ticket costs £23.50
The price increases by 6%.
Felix has £100.

Can Felix buy four tickets at the new price?

.....

.....

.....

.....

.....

(4 marks)

13

8 A newspaper headline states:

> Only 80% of teenagers think
> Winston Churchill was a real person.

8 (a) Show that the ratio of the number of teenagers who think Winston Churchill was a real person to those who do not is 4 : 1

.....

(1 mark)

8 (b) Hana claims:

> GCSE History students are more likely than other teenagers to know that Winston Churchill was a real person

Design a data collection sheet for Hana to investigate her claim.

(2 marks)

8 (c) The ratio of GCSE History students who think Winston Churchill was a real person to those who do not is 17 : 3

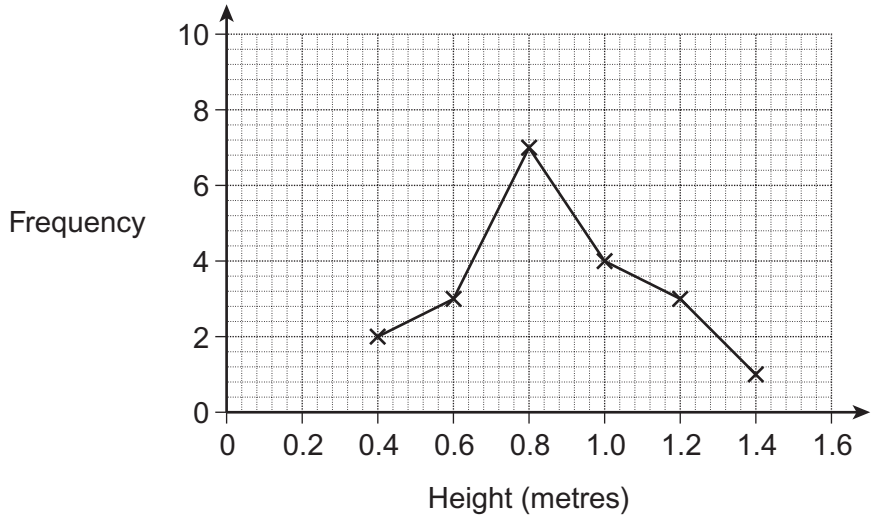
Is Hana's claim true?
Show how you decide.

.....

.....

(2 marks)

9 (a) Amir drops different balls from the same height onto a wood floor.
He measures the height, to the nearest 0.2 metres, of their first bounce.
The frequency polygon shows his results.



Calculate an estimate of the mean bounce height.

.....

.....

.....

.....

.....

Answer ..... m *(3 marks)*

Question 9 continues on the next page

8

Turn over ▶

9 (b) Amir wants to test this hypothesis.

Balls bounce higher on concrete than on wood.

Use the Data Handling Cycle to write a plan for Amir.

.....

.....

.....

.....

.....

.....

.....

.....

(3 marks)

END OF QUESTIONS

3

1 This pictogram represents the drinks sold one morning from a machine.

Tea	
Coffee	
Chocolate	
Orange	
Soup	
Cola	

Key:  = 4 drinks

(a) How many drinks of Tea were sold?

(a) _____ **[1]**

(b) How many **more** drinks of Orange were sold than drinks of Chocolate?

(b) _____ **[1]**

(c) 9 drinks of Cola were sold.

Complete the last row of the pictogram. **[1]**

(d) Which drink was the most popular?

(d) _____ **[1]**

2

34	6	16	17	48	20	21

Choose from this list of numbers

(a) a multiple of 5,

(a) _____ **[1]**

(b) a factor of 24,

(b) _____ **[1]**

(c) a prime number,

(c) _____ **[1]**

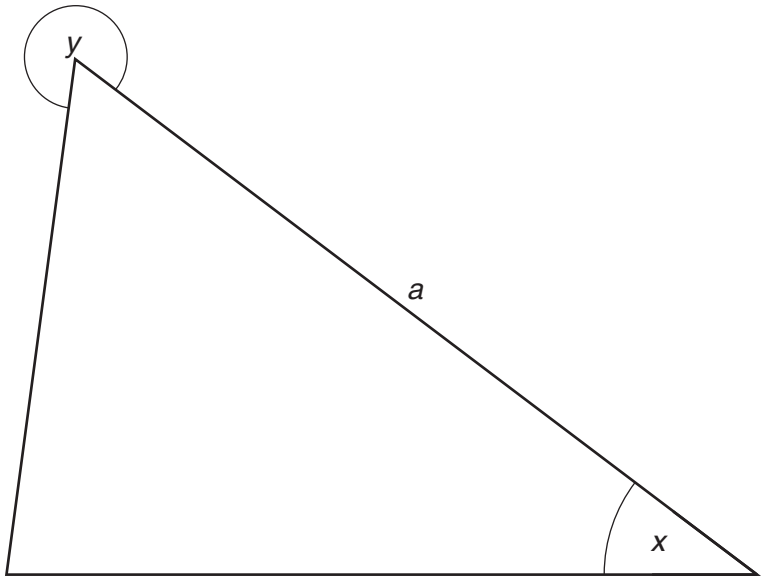
(d) two numbers that add to 50,

(d) _____ and _____ **[1]**

(e) a square number.

(e) _____ **[1]**

3 Here is a triangle.



(a) Measure the length of side *a*.
Give the units of your answer.

(a) _____ **[2]**

(b) Measure angle *x*.

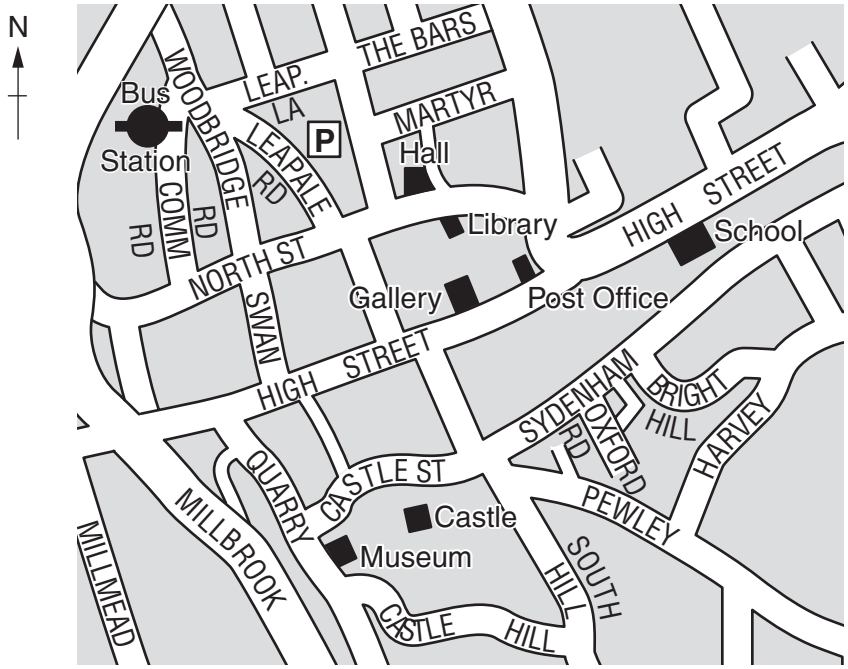
(b) _____ ° **[1]**

(c) What type of angle is angle *y*?
Put a ring around the correct answer.

obtuse	right angle
acute	reflex

[1]

4 **(a)** This map shows part of Guildford.



(i) Use compass directions to complete the following sentences.

From the Castle, the Hall is _____ .

From the Castle, the School is _____ . **[2]**

(ii) Here are directions to walk from the car park **P** to the Library.

Complete them using left and right.

Walk from the car park and turn _____ into Leapale Road.

At the end of the road, turn _____ into North Street.

Walk along the street. The Library is on the _____ . **[1]**

(b) Jan surveyed some shoppers in the High Street and asked them how they had travelled to Guildford.
She filled in a tally chart with the results.

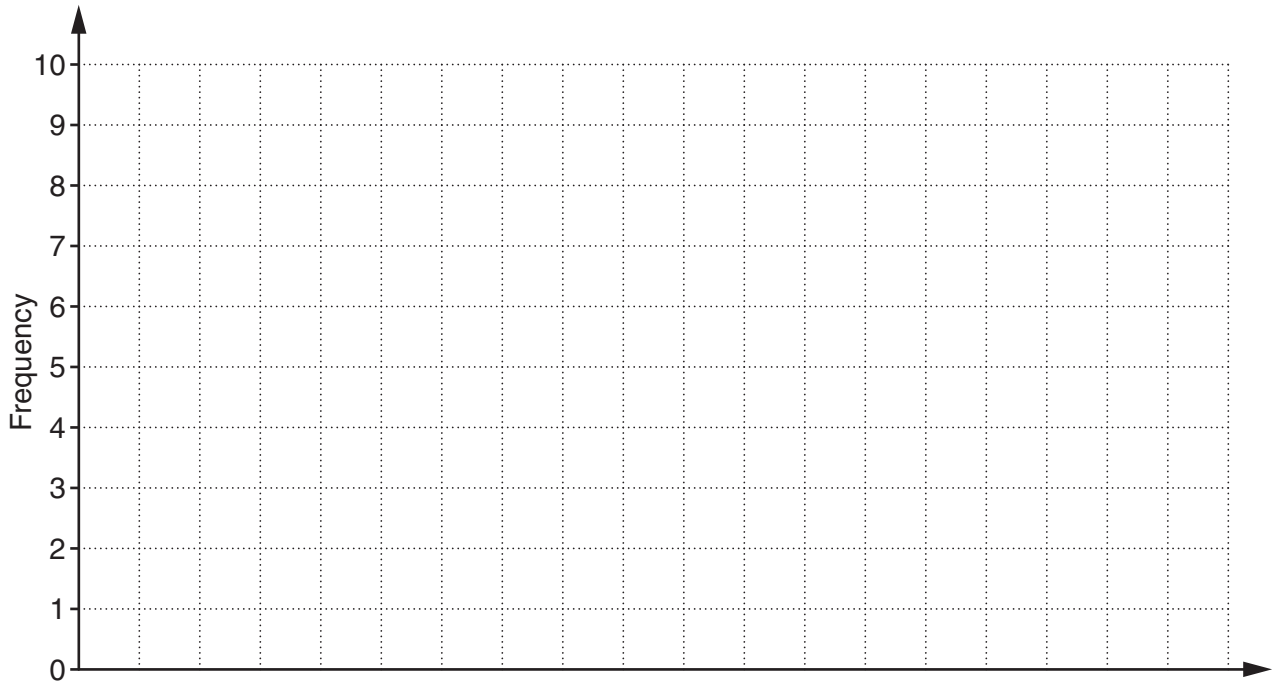
Type of travel	Tally	Frequency
Walk	II	2
Bus	𝍸 II	7
Train	𝍸	5
Cycle	III	3
Car	𝍸	
Park and Ride	𝍸 III	

(i) Complete the frequency column on her chart. **[1]**

(ii) How many people did Jan survey altogether?

(b)(ii) _____ **[1]**

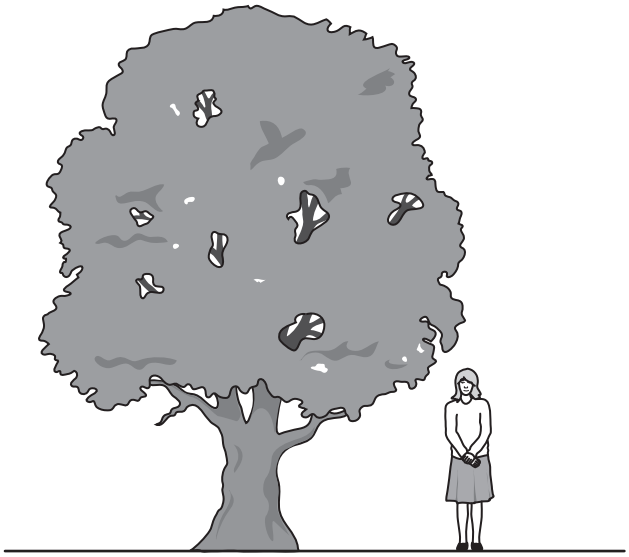
(iii) Draw a frequency diagram to represent her results.



[3]

5 This girl's height is 1.6 m.

Estimate the height of the tree.
Show how you worked out your answer.



_____ m **[2]**

6 Katie buys a 500 ml bottle of blackcurrant squash costing £2.95.
She mixes it with 6 litres of sparkling water to make 6.5 litres of fizzy blackcurrant drink.
Katie uses a supermarket basic brand of sparkling water which costs 10p for a 2 litre bottle.

(a) How much does Katie's fizzy blackcurrant drink cost her per litre?

(a) _____ p **[4]**

(b) The supermarket also sells a ready-made fizzy blackcurrant drink.
This costs £2.10 for a 750 ml bottle.

How much more expensive is this per litre than the drink that Katie made?

(b) £ _____ **[4]**

(c) Katie uses the 6.5 litres of fizzy blackcurrant drink for a party.

How many glasses, each holding 300 ml, can she fill with the drink?

(c) _____ **[3]**

7 Dolbear's Law connects air temperature and the number of chirps made by an insect called a Snowy Tree Cricket.

> Temperature in °F = number of chirps that the cricket makes in fifteen seconds + 40

(a) Find the temperature when the cricket makes 12 chirps in fifteen seconds.

(a) _____ °F **[1]**

(b) How many chirps does the cricket make in a **minute** when the temperature is 85 °F?

(b) _____ **[3]**

8 Calculate.

(a) $\sqrt{14.44}$

(a) _____ **[1]**

(b) $\dfrac{6.26 - 0.82}{1.55}$

Give your answer correct to 2 decimal places.

(b) _____ **[2]**

9 **(a)** Simplify.

(i) $a \times a \times a$

(a)(i) _____ **[1]**

(ii) $5a + 3b + 2a - b$

(ii) _____ **[2]**

(b) Work out the value of $4b^2$ when $b = {}^{-}2.5$.

(b) _____ **[2]**

(c) Solve.

$5(2x - 7) = 3$

(c) _____ **[3]**

10 **(a)** In a sale, the ratio of the sale price to the normal price is 3 : 5.
Mary buys a jacket in the sale.
Its normal price is £45.

What is the sale price of the jacket?

(a) £ _____ **[2]**

(b) On the final day of the sale, prices are reduced further.
The price of a rucksack on the final day is £12; its normal price is £32.

Write the ratio of the final price to the normal price.
Give your answer in its simplest form.

(b) _____ **[2]**

11 The number of matches in each of 50 boxes is summarised in the table.

Number of matches	Frequency
46	7
47	18
48	14
49	10
50	1

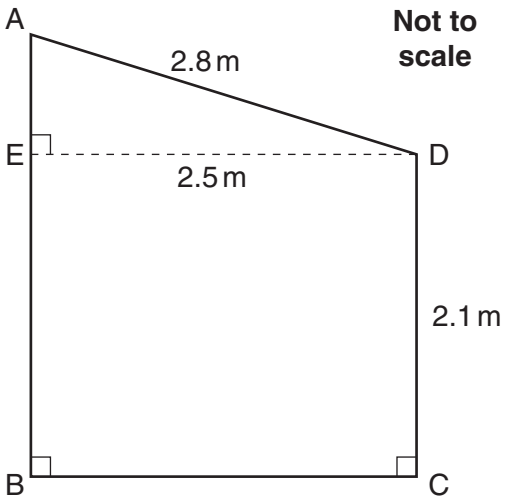
Calculate the mean number of matches in a box.

_____ **[3]**

12 Sean is building a shed.
This diagram shows the end view of his shed.
The width ED of the shed is 2.5 m.
The height CD of the front of the shed is 2.1 m.

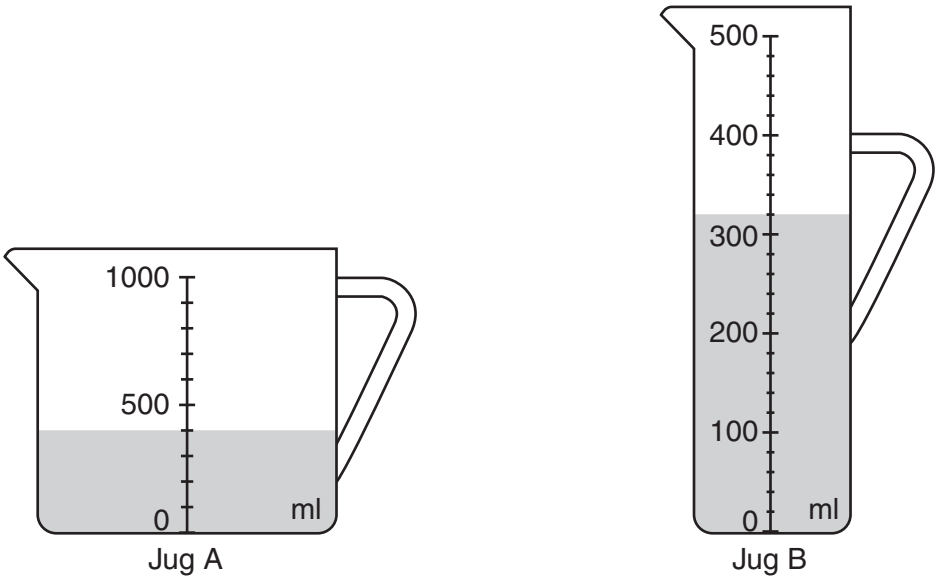
Sean makes the roof AD 2.8 m long.

Calculate the height AB of the back of the shed.



_____ m **[4]**

1 (a)



(i) How many millilitres of water are in jug A?

(a)(i) _____ ml **[1]**

(ii) Complete this statement.

(ii) Jug _____ has _____ ml **more** water in it than jug _____ **[2]**

(iii) Jill adds half a litre of water to jug A.

How many millilitres of water are in jug A now?

(iii) _____ ml **[2]**

(b) Here are some amounts of water in millilitres.

Put them in order, starting with the smallest.

2039 3194 4193 3419 1999

_____ _____ _____ _____ _____ **[1]**

smallest

2 **(a)** **(i)** John works out 12.6 × 0.5 = 6.3.

What is 0.5 as a percentage?

(a)(i) _____ % **[1]**

(ii) John wants to find 25% of 12.6.

How can he do this?

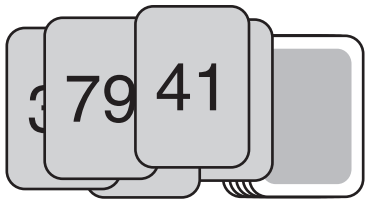
_____ **[1]**

(b) Cancel this fraction down into its simplest form.

$$\frac{18}{24}$$

(b) _____ **[2]**

3 Luke has some cards that show **all** possible positive two-digit whole numbers from 10 onwards.
Each card has a different two-digit number written on it.



(a) Write down the **largest** two-digit number written on a card.

(a) _____ **[1]**

(b) What is the lowest total Luke can make by adding the numbers on two cards?

(b) _____ **[1]**

(c) Write down a pair of these cards where the numbers add up to 100.

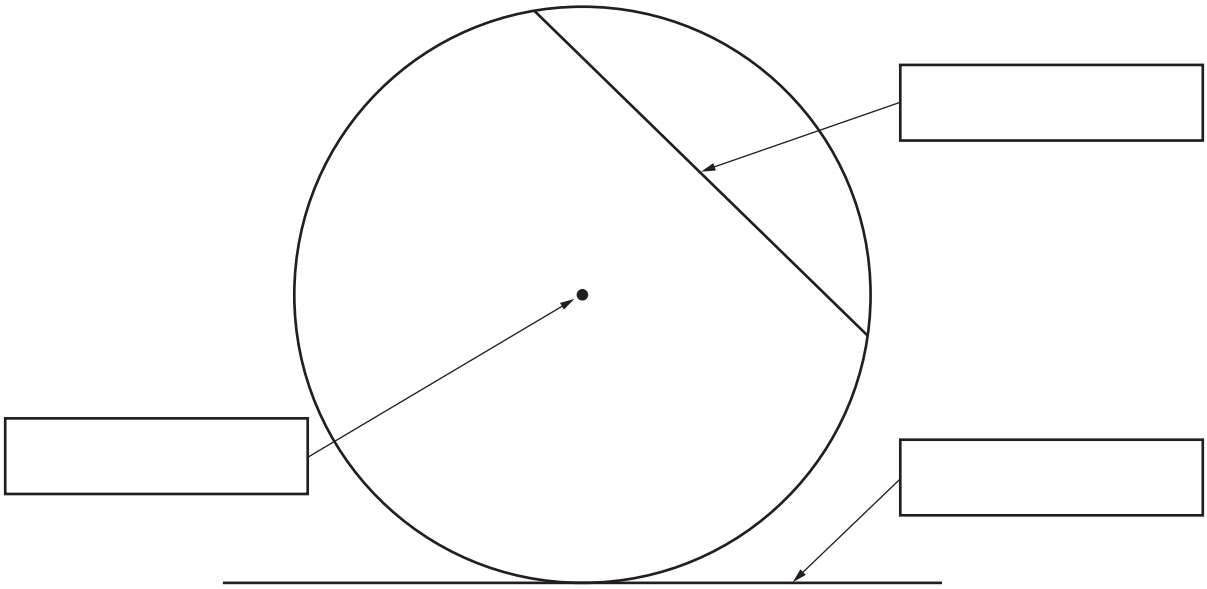
(c) _____ and _____ **[1]**

(d)* Luke thinks that he can find 50 **different** pairs of cards where the numbers add up to 100.

Is Luke correct?
Show how you decide. **[3]**

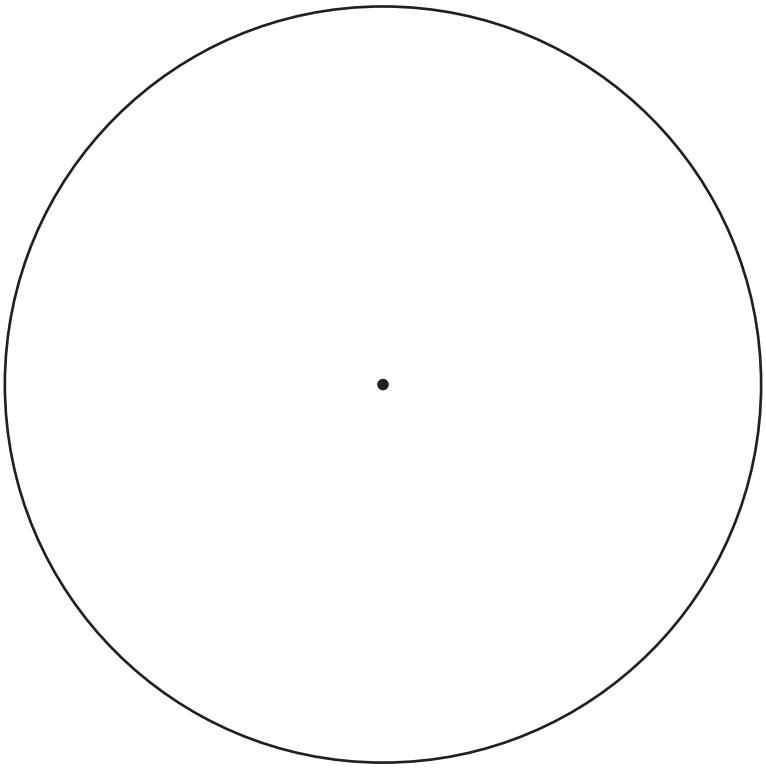
4 **(a)** Write the correct mathematical name in each box.
Choose from this list.

radius	chord	diameter	tangent	centre



[3]

(b) Construct a regular hexagon.
Each vertex of the hexagon must lie on the circle.



[3]

5 Triangle B is a 4 times enlargement of triangle A.
Write either True or False beside each statement.

Statement	True or False
The sides of triangle B are 4 times as long as the sides of triangle A.	
The angles of triangle B are 4 times as big as the angles of triangle A.	
The perimeter of triangle B is 12 times as long as the perimeter of triangle A.	

[2]

6 **(a)** Change $\frac{7}{10}$ to a percentage.

(a) _____ % **[1]**

(b) Change $\frac{3}{5}$ to a decimal.

(b) _____ **[2]**

(c) Complete this statement by using **one** of these symbols <, ⩽, =, ⩾ or >.

(c) $\frac{3}{5}$ _____ 56% **[1]**

7 **(a)** Work out an estimate of the answer to this calculation.

$$19.6 \times 3.2 + 12.07$$

(a) _____ **[2]**

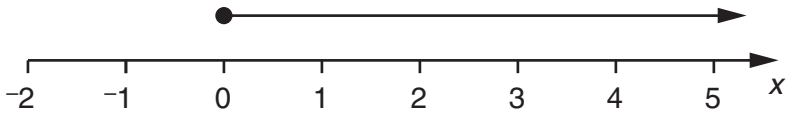
(b)* Sally sees this advert.

WAREHOUSE WORKER
Hourly rate £7.19
$8\frac{3}{4}$ hours each day, Monday to Friday
No weekend work

She estimates that she would earn £400 for a full week's work.

Is Sally correct?
Show how you decide. **[3]**

8 **(a)** Write down the inequality represented on this diagram.



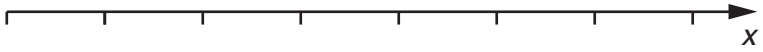
(a) _____ **[1]**

(b) **(i)** Solve this inequality.

$$7x + 5 \leqslant 47$$

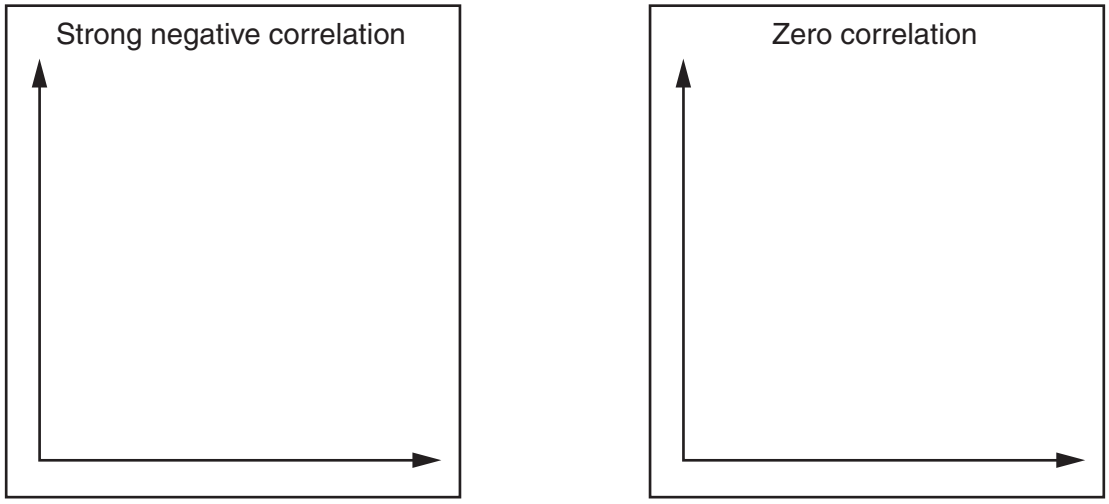
(b)(i) _____ **[2]**

(ii) Show the solution to part **(b)(i)** on this number line.



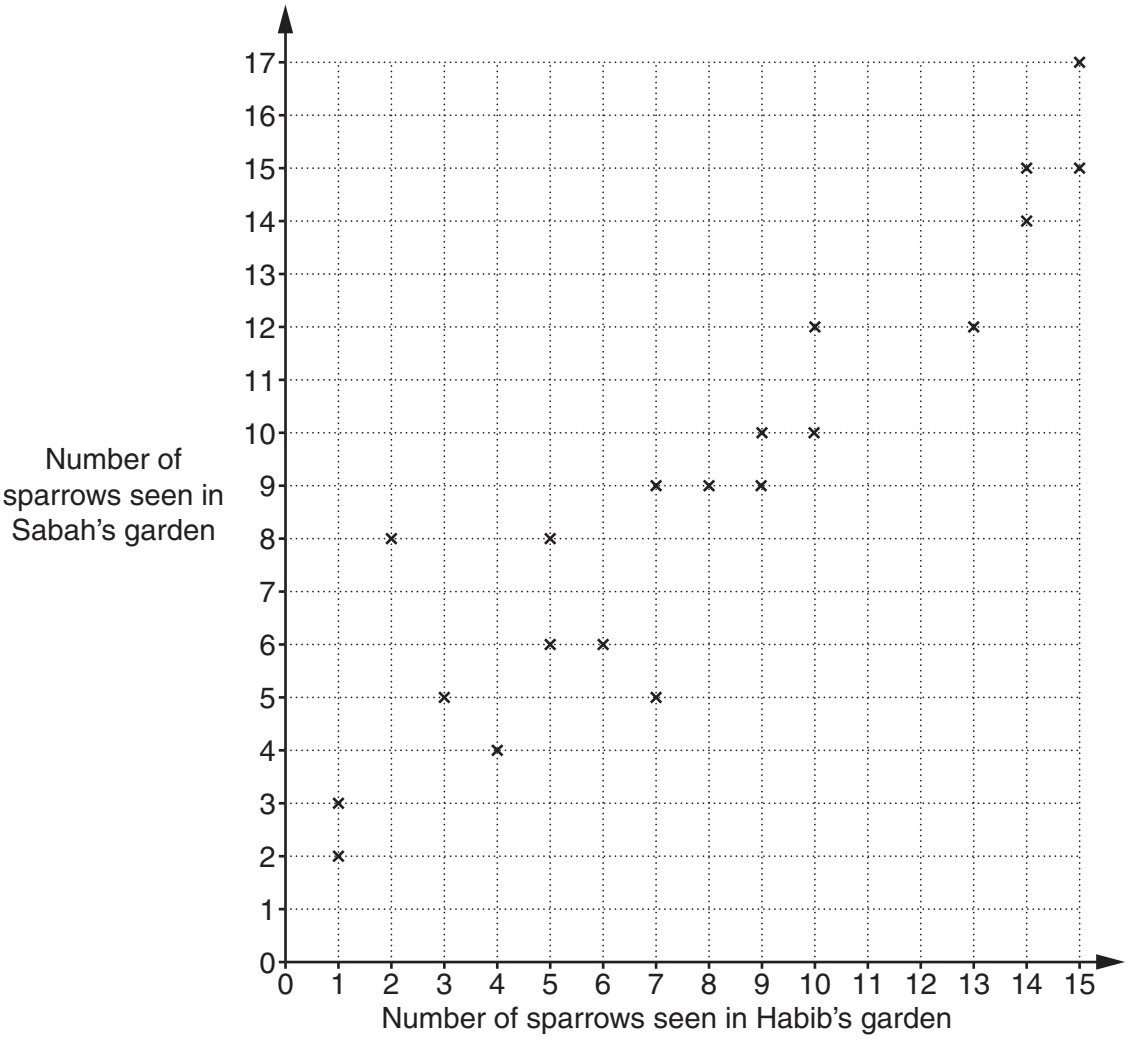
[2]

9 **(a)** Put 8 crosses on **each** diagram to show the type of correlation stated.



[2]

(b) Habib and Sabah live next door to each other. They are both keen birdwatchers. Each day they record the number of sparrows they see in their own garden. This scatter graph shows some of their results.



(i) Draw a line of best fit on the scatter graph. **[1]**

(ii) One day Habib saw 12 sparrows in his garden.

Use your line of best fit to estimate the number of sparrows Sabah saw in her garden.

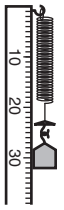
(b)(ii) _____ **[1]**

(iii) One day Sabah saw four times as many sparrows as Habib saw.

How many sparrows did Sabah see that day?

(iii) _____ **[1]**

10 Harpreet is doing an experiment.
She attaches different weights to the end of a spring
and then measures the length of the spring.

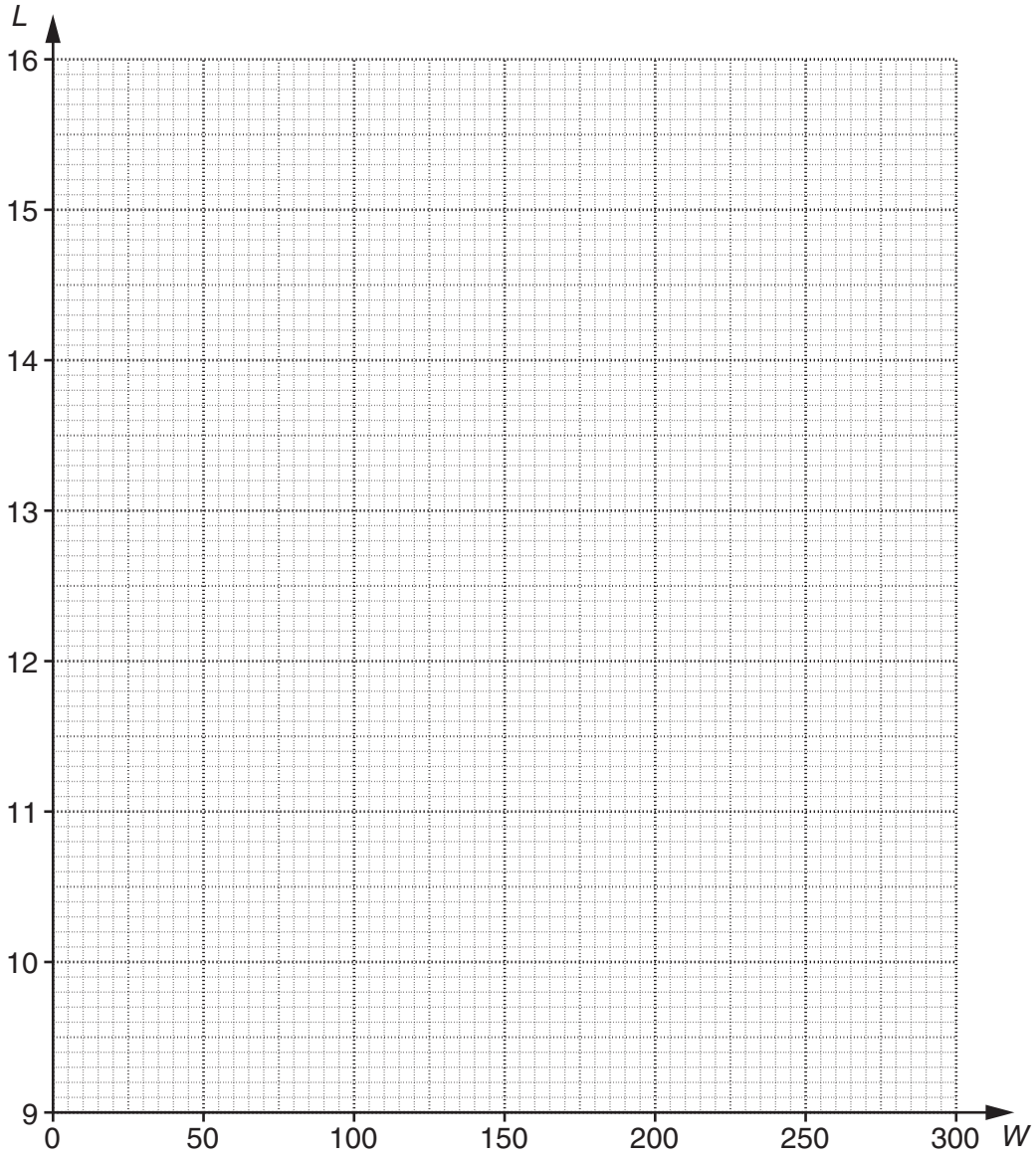


She records the length, L cm, of the spring for each weight, W g.

Her results are given in the table.

W	50	80	120	200	260
L	11	11.6	12.4	14	15.2

(a) Use these values to draw the straight line graph of L against W.



[3]

(b) How long was the spring before Harpreet attached any weight to it?

(b) _____ cm **[1]**

(c) The equation of the graph in part **(a)** is

$$L = 0.02\,W + 10.$$

Write down the gradient of this line.

(c) _____ **[1]**

(d) Harpreet says that she can use the equation in part **(c)** to calculate the length of the spring if she attaches a 5 kg weight to it.

Explain why she may be wrong.

_____

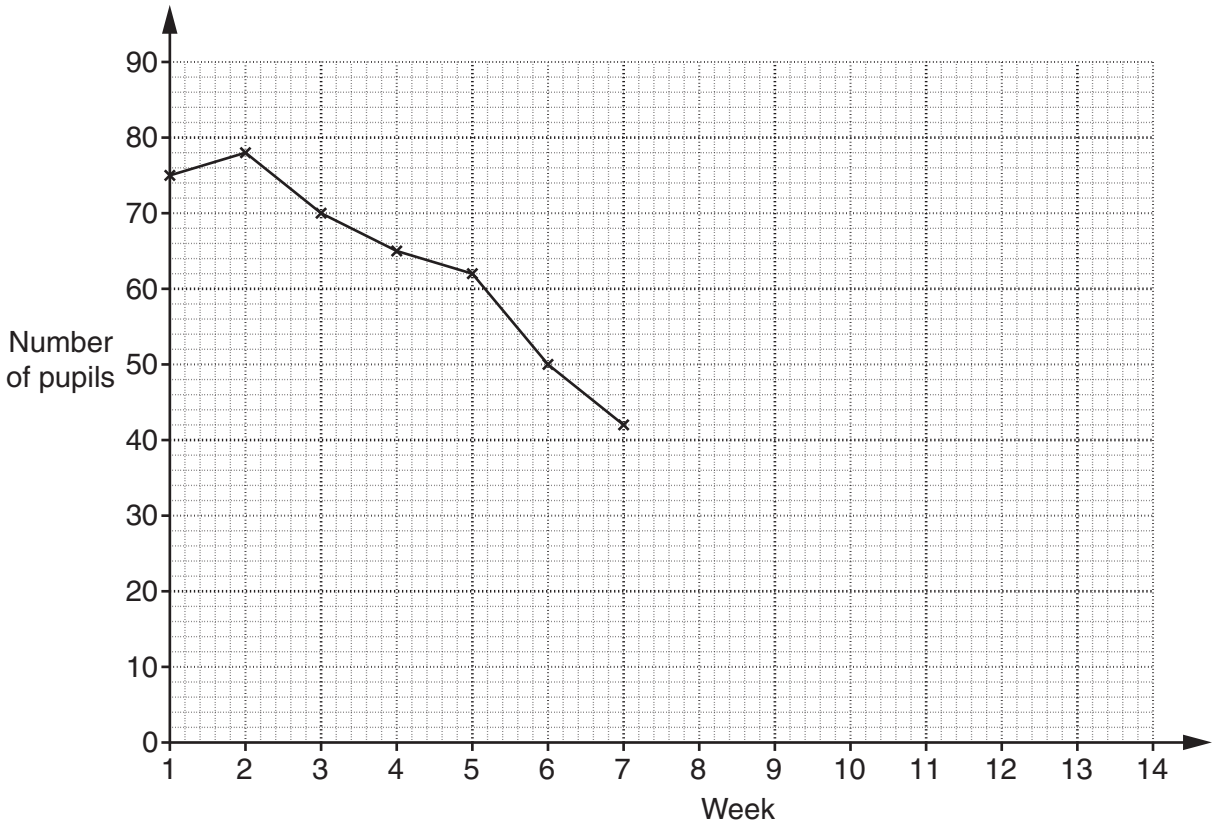
_____

_____ **[1]**

11 **(a)** These are the numbers of pupils that used the local school bus, each week, during one autumn term.
The figures for the last week of term, week 14, are covered in ink.

Week	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Total number of pupils using the bus in the week	75	78	70	65	62	50	42	35	55	62	65	68	69	

Complete the time series graph up to week 13.



[2]

(b) The school had an outbreak of flu that term.

In which week do you think the flu outbreak died down?
You must use evidence from the graph to support your answer.

Week _____ because _____

_____

_____

_____ **[2]**

(c) Plot a point that **could** represent week 14. Give a reason for your choice.

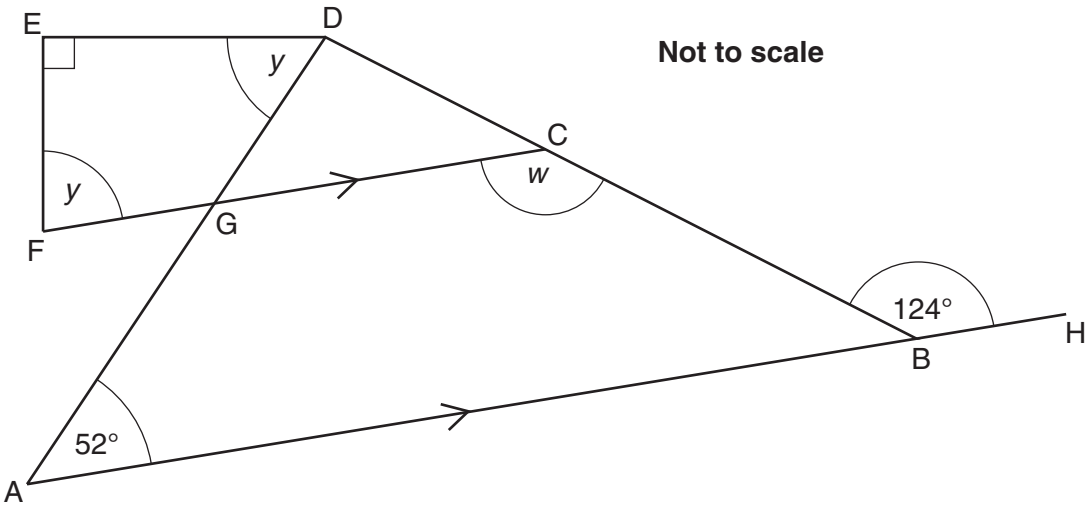
_____

_____

_____ **[2]**

TURN OVER FOR QUESTION 12

12 ABH and FGC are parallel straight lines.
Angle GFE = angle GDE = *y*.
Angle DEF = 90°.



(a) Write down the size of angle *w*.

(a) _____ ° **[1]**

(b) Work out the size of angle *y*.
Show your working clearly.

(b) _____ ° **[4]**

Answer **all** questions in the spaces provided.

*1 The pictogram shows how some people travel.

Key: ○ represents 10 people

Car	○ ○ ○ ○ ○
Bus	○ ○ ○ ◗
Bicycle	○ ○
Tram	○ ○ ◗

1 (a) How many of these people travel by car?

.....

Answer ..... *(1 mark)*

1 (b) Which is used by the fewest?
Circle your answer.

Car Bus Bicycle Tram

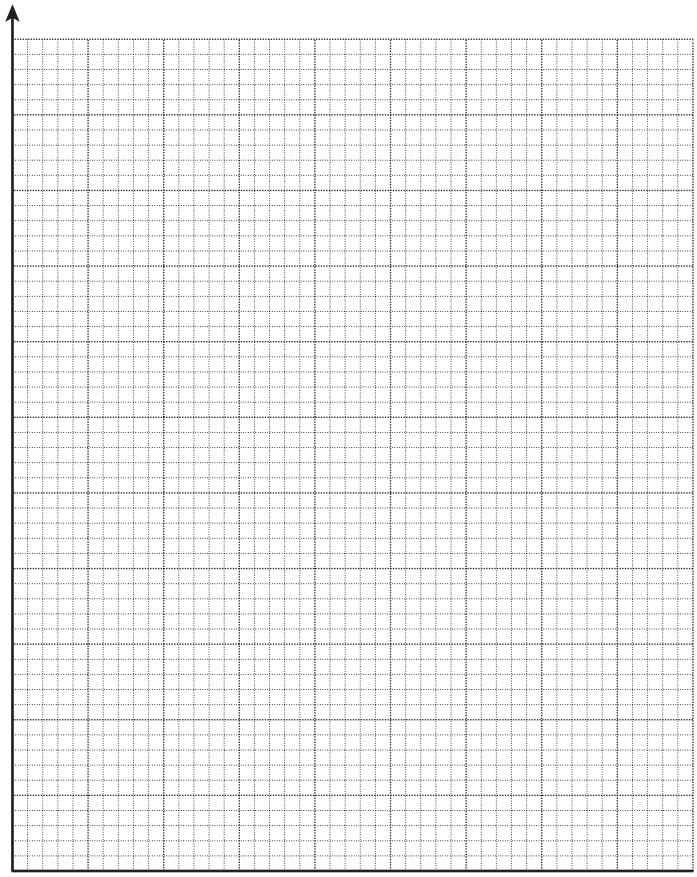
(1 mark)

1 (c) How many more people travel by bus than by tram?

.....

Answer ..... *(2 marks)*

1 (d) Show the data in a fully labelled bar chart.



(5 marks)

Turn over for the next question

9

2 Here are six numbers.

14 14 15 18 21 24

2 (a) Why is 14 the mode?

.....

(1 mark)

2 (b) Each number is doubled.

What is the new mode?

.....

.....

Answer ..... *(1 mark)*

2 (c) Here are the six numbers again.

14 14 15 18 21 24

Round each number to the nearest 10.

What is the mode now?

.....

.....

Answer ..... *(2 marks)*

3 (a) Use a suitable word from the list to complete each sentence.

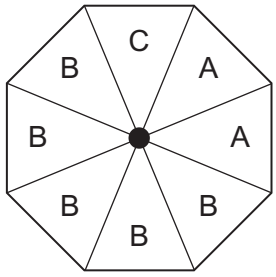
impossible unlikely evens likely certain

Rolling a 7 on a fair ordinary dice is .....

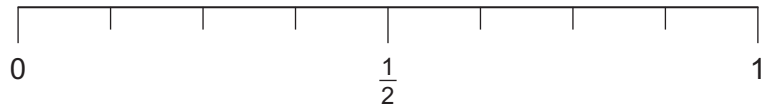
Rolling a 6 on a fair ordinary dice is .....

(2 marks)

3 (b) A fair spinner has eight equal sections.



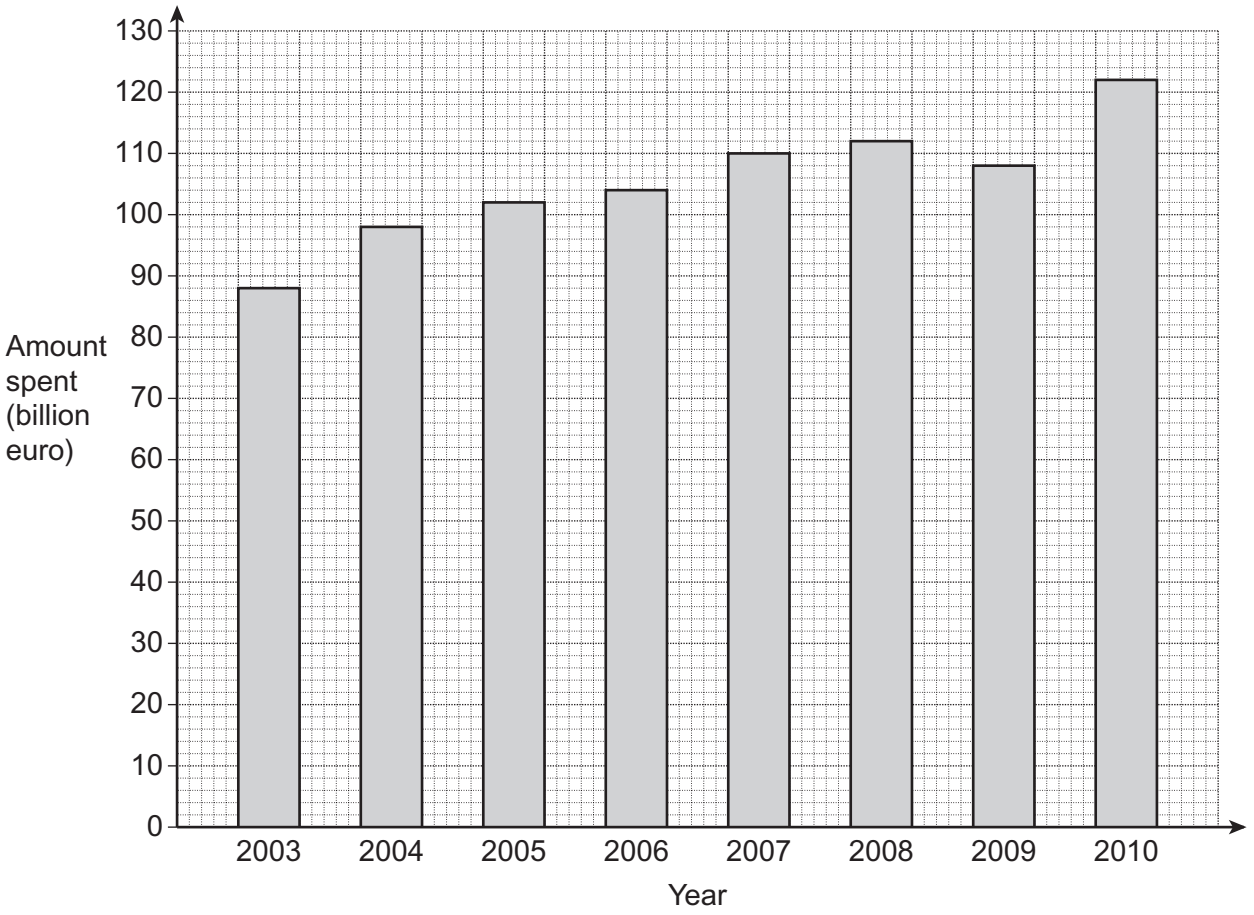
Put arrows on the scale to show the probability of landing on each letter.
Label each arrow with the correct letter.



(3 marks)

9

4 The graph shows the amount spent by the European Union.



4 (a) Which of these years was the first that over 100 billion euro was spent?

Answer ..... *(1 mark)*

4 (b) In which year did the amount spent fall?

Answer ..... *(1 mark)*

4 (c) $\frac{9}{20}$ of the amount spent in 2007 was on farming.

How much was spent in 2007 on farming?

.....

.....

.....

Answer ..... billion euro *(3 marks)*

5 Use your calculator to change $\frac{27}{64}$ to a decimal.

5 (a) Write down your full calculator display.

Answer ..... *(1 mark)*

5 (b) Give your answer to 3 decimal places.

Answer ..... *(1 mark)*

6 The stem-and-leaf diagram shows the number of visitors to a castle over 15 days.

Key: 7 | 0 represents 70 visitors

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

6 (a) How many days had more than 80 visitors?

.....

Answer ..... *(1 mark)*

6 (b) Work out the range.

.....

Answer ..... *(2 marks)*

10

7 In a game players score points.
The table shows the number of points Alex scored in 50 games.

Number of points	Number of games
0	13
1	8
2	6
3	8
4	15
	Total = 50

7 (a) In what fraction of the 50 games did Alex score 4 points?
Give your answer in its simplest form.

.....

Answer ..... *(2 marks)*

7 (b) Alex says he scored **more** than 100 points in total.

Show that he is correct.

.....

.....

.....

.....

.....

(3 marks)

8 (a) The number of cakes sold in a shop on 5 days is shown.

Day	Mon	Tue	Wed	Thu	Fri
Number of cakes sold	44	38	48	55	60

Work out the mean number of cakes sold.

.....

.....

.....

Answer ..... *(3 marks)*

***8 (b)** On Saturday the shop had 60 cakes to sell.
41 cakes were sold.

The profit on each cake sold is 40 p.
The loss on each cake **not** sold is 10 p.

Work out the overall profit for these 60 cakes.

.....

.....

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.....

.....

Answer £ ..... *(4 marks)*

12

9 A new road is planned.
There are two possible routes, A and B.

200 people are asked which route they prefer.

9 (a) Name a suitable data collection method to use.

Answer ..... *(1 mark)*

9 (b) Write a suitable question with a response section.

Question .....

.....

Response Section

(2 marks)

9 (c) 27% of the 200 people prefer route A.

How many people is this?

.....

.....

.....

.....

Answer ..... *(2 marks)*

10 The probability that Kate oversleeps is four times the probability that she does **not**.

Work out the probability that she oversleeps.

.....

.....

Answer ..... *(2 marks)*

11 A grocer has 100 boxes of strawberries.

He weighs 10 of the boxes.

Which **three** words describe the data he collects?
Circle your answers.

continuous discrete sample primary secondary

(2 marks)

12 A toy is made from red bricks and yellow bricks.

Number of red bricks : number of yellow bricks = 5 : 2
There are 210 **more** red bricks than yellow bricks.

How many red bricks are in the toy?

.....

.....

.....

Answer ..... *(3 marks)*

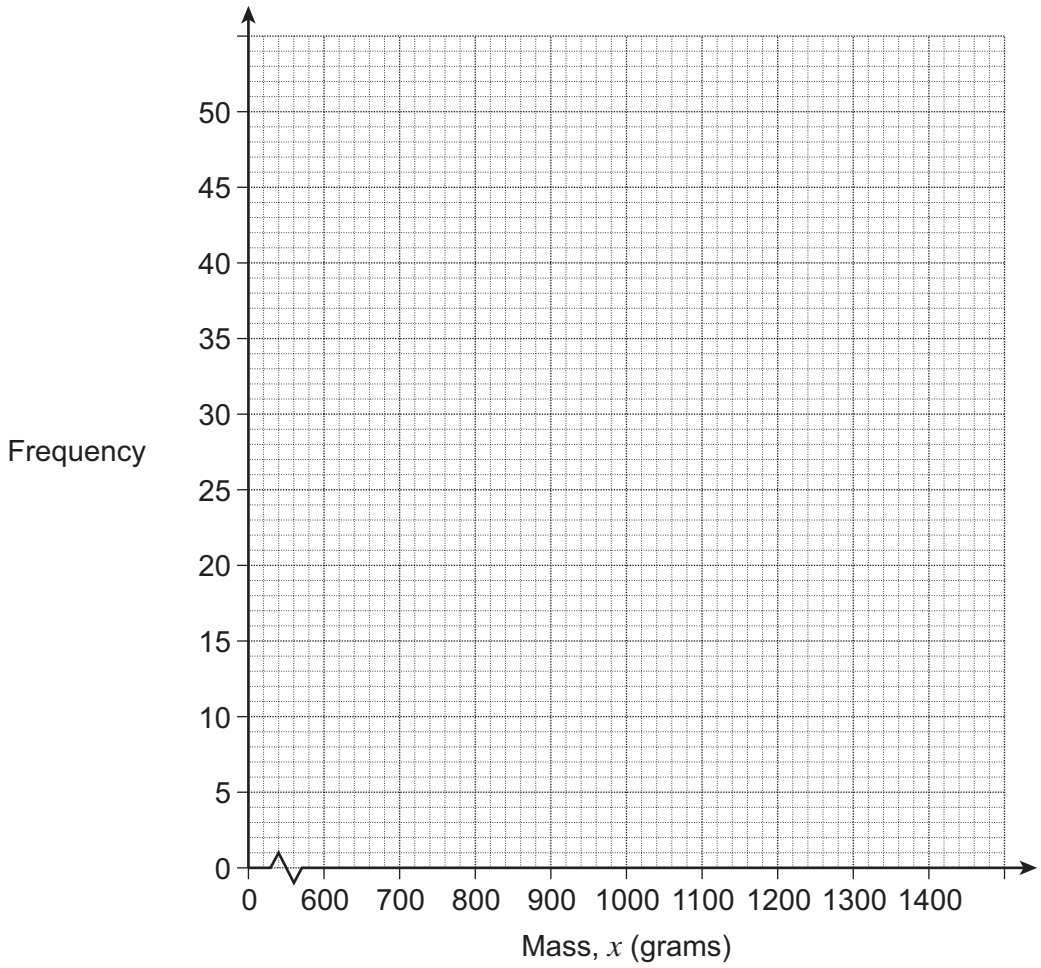
Turn over for the next question

12

13 The masses of 100 bags of sprouts are summarised in the table.

Mass, x (grams)	Frequency
$600 \leqslant x < 800$	10
$800 \leqslant x < 1000$	46
$1000 \leqslant x < 1200$	32
$1200 \leqslant x < 1400$	12

Show the data on a frequency polygon.



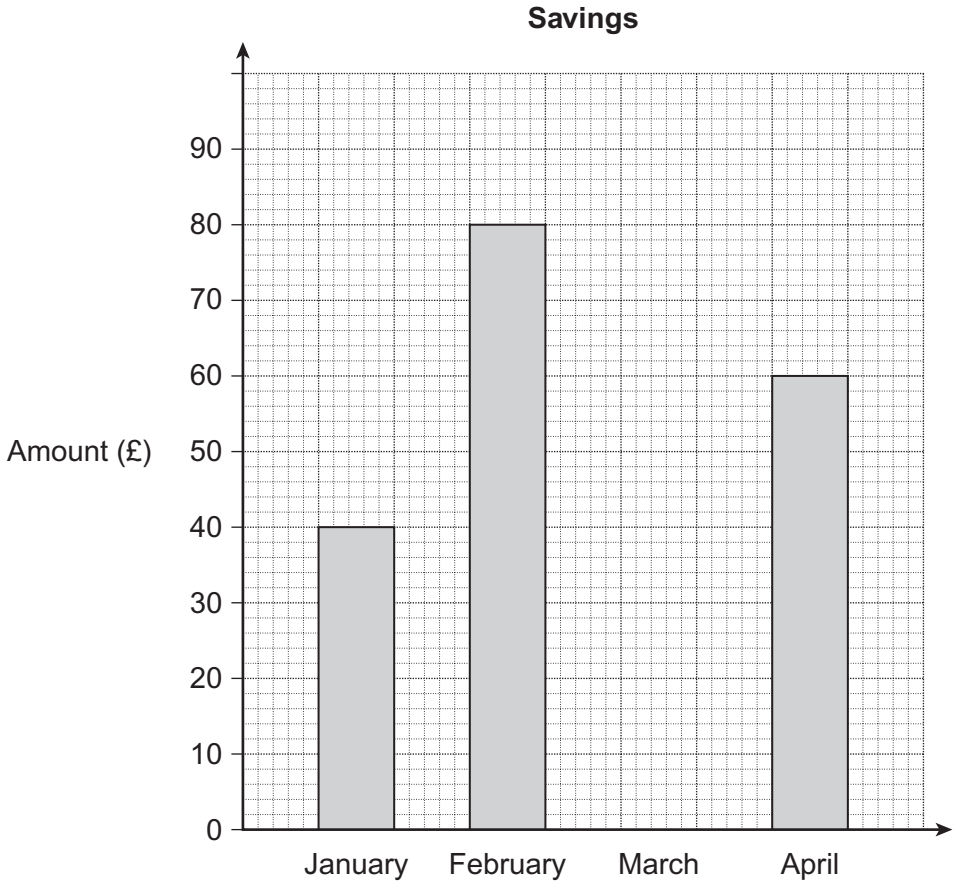
(2 marks)

END OF QUESTIONS

2

Answer **all** questions in the spaces provided.

1 (a) The bar chart shows the amounts Callum saves in January, February and April 2010.



1 (a) (i) How much does he save in January 2010?

Answer £ ..... *(1 mark)*

1 (a) (ii) From January to April he saves £250 in total.

Complete the bar chart by drawing the bar for March.

.....

.....

.....

.....

(3 marks)

1 (b) The pictogram shows the amounts Callum saves in the next four months.

Key: ▯▯ represents £20

May	▯▯ ▯▯ ▯▯ ▯▯
June	▯▯ ▯▯ ▯
July	▯▯ ▯
August	▯▯ ▯▯ ▯▯ ▯

Work out the range of the amount he saves in these four months.
You **must** show your working.

.....

.....

Answer £ ..... *(2 marks)*

1 (c) (i) For the rest of 2010 Callum saves £50 each month.

How much does he save in 2010 in total?

.....

.....

.....

.....

Answer £ ..... *(3 marks)*

1 (c) (ii) Callum spends 50% of these total savings to pay for a holiday.

How much does he pay for the holiday?

.....

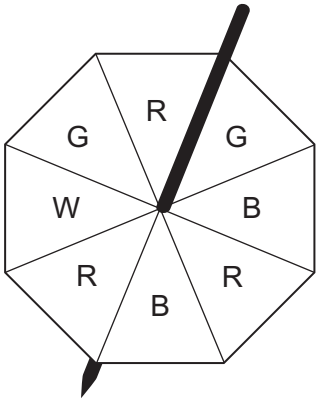
.....

Answer £ ..... *(2 marks)*

11

2 (a) Fair spinner X has eight equal sections.
The sections are either red (R), blue (B), green (G) or white (W).

Spinner X



2 (a) (i) The spinner is spun.

On which colour is it least likely to land?

Answer ..... *(1 mark)*

2 (a) (ii) Write down the probability that the spinner lands on green.
Give your answer in its simplest form.

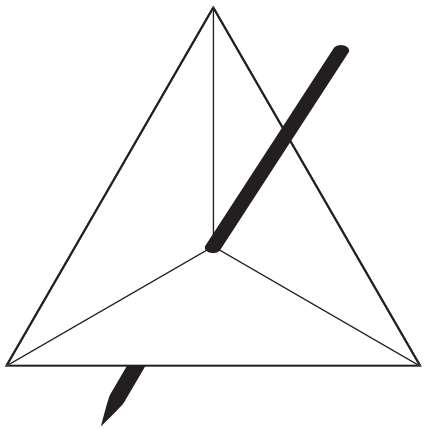
.....

Answer ..... *(2 marks)*

2 (b) Fair spinner Y has three equal sections.
It is certain to land on red (R).

Label spinner Y.

Spinner Y



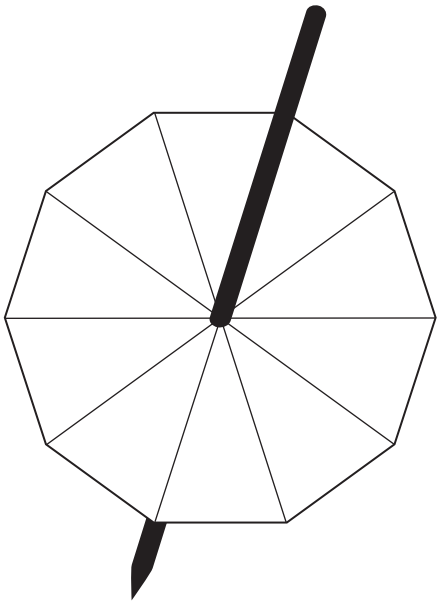
(1 mark)

2 (c) Fair spinner Z has 10 equal sections.

Label spinner Z so that

it has the same four colours as spinner X
white is less likely than on spinner X
white and green are equally likely on spinner Z
red and blue are equally likely on spinner Z.

Spinner Z



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(2 marks)

6

3 There are three types of Easter eggs.

Milk chocolate	M
Dark chocolate	D
White chocolate	W

The eggs come in three sizes.

Small	S
Large	L
King size	K

3 (a) List **all** possible combinations of chocolate type and size.
The first one has been done for you.

MS .....

.....

.....

.....

(3 marks)

3 (b) A box contains equal numbers of each egg.
One egg is chosen at random.

What is the probability that a small milk chocolate egg is chosen?

Answer ..... *(1 mark)*

4 Shola has **two** of these coins.

1p 2p 5p 10p 20p 50p £1

The value of one coin is 10% of the value of the other coin.

Work out the possible **total** amounts of money Shola could have.

.....

.....

.....

.....

Answer .....

(3 marks)

Turn over for the next question

7

5 A car park is open from 9 am to 6 pm.

5 (a) (i) 80 cars enter between 9 am and 10 am.
One-quarter of these cars are silver.

How many silver cars enter between 9 am and 10 am?

.....

Answer ..... *(1 mark)*

5 (a) (ii) 115 cars enter between 10 am and 11 am.
Kim says, "Exactly one-quarter of these cars are silver."

Show that she is wrong.

.....

.....

(1 mark)

5 (b) A data logging machine counts cars entering and leaving the car park.

Hour ending at	Cars entering	Cars leaving
10 am	80	5
11 am	115	25
12 noon	75	40
1 pm	35	35
2 pm	50	50
3 pm	40	45
4 pm	20	65
5 pm	10	115
6 pm	5	30

5 (b) (i) The car park is empty at 9 am.

How many cars are in the car park at 10 am?

.....

Answer ..... *(1 mark)*

5 (b) (ii) Barriers stop cars entering when the car park is full.
The car park is full at 12 noon.

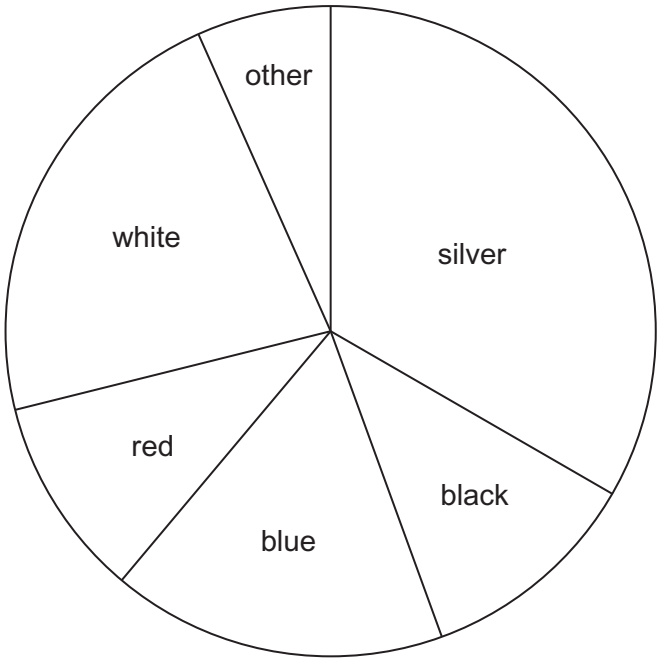
How many cars are in the car park when it is full?

.....

.....

Answer ..... *(3 marks)*

5 (c) The pie chart shows information about the colours of the cars in the car park one day.



Complete the sentences.

5 (c) (i) There are twice as many ..... cars as black cars.

(1 mark)

5 (c) (ii) $\frac{1}{3}$ of the cars are .....

(1 mark)

5 (d) Are there any purple cars in the car park on that day?
Tick a box.

☐ Yes ☐ No ☐ Cannot tell

Give a reason for your answer.

.....

.....

(1 mark)

9

6 Is money discrete or continuous?
Tick a box.

☐ Discrete ☐ Continuous

Give a reason for your answer.

.....

.....

(1 mark)

***7** A company pays people to visit shops and test customer service.
Paul works for this company.

His fees in October are shown.

Fee (£)	Frequency
8	10
10	18
12	7
15	4
20	1

7 (a) Calculate his mean fee.

.....

.....

.....

Answer £ ..... *(3 marks)*

7 (b) Paul says that his modal fee and his median fee are both £10.

Is he correct?
Give reasons and working to show how you decide.

.....

.....

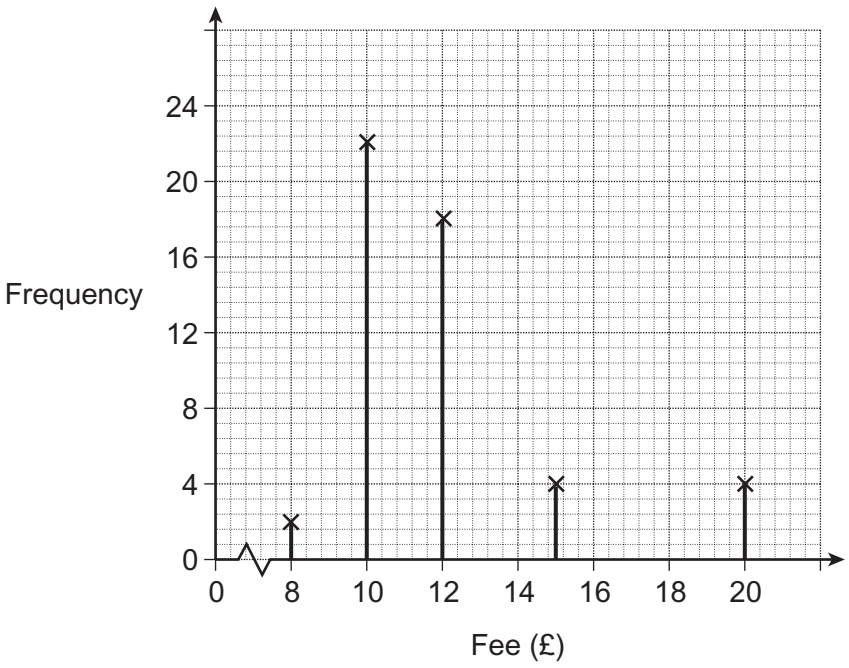
.....

.....

(2 marks)

7 (c) Shelley also works for this company.
Her fees in the same month are shown.

Shelley's fees



Give **one** similarity and **one** difference in the fees of Paul and Shelley.

Similarity .....

.....

Difference .....

.....

(2 marks)

8 120 adults complete a survey.
45 are men.

Write the ratio men : women in its simplest form.

.....

.....

Answer ..... *(2 marks)*

10

***9** Each day 147 trains leave Lea Road station.
One day, most trains are on time (0 minutes late).
19 trains are late.

9 (a) What percentage of trains are late?
Give your answer to 1 decimal place.

.....

.....

.....

Answer ..... % *(3 marks)*

9 (b) The station manager records the number of minutes late for each of the 19 trains.

6	11	1	21	8	10	17	4	35	22
2	3	41	8	23	7	16	28	19	

9 (b) (i) Draw an ordered stem-and-leaf diagram to show the data for the late trains.
Complete the key.

Key: ..... | ..... represents ..... minutes late

.....	.....
.....	.....
.....	.....
.....	.....
.....	.....

(4 marks)

9 (b) (ii) For the 19 late trains, write down the modal number of minutes late.

Answer ..... minutes *(1 mark)*

9 (b) (iii) Write down the modal number of minutes late for all 147 trains.

Answer ..... minutes *(1 mark)*

9 (c) The station manager says,
''The late times are all one minute less than I recorded.
For example, the train I recorded as 6 minutes late was actually only 5 minutes late.''

Which modal number of minutes late changes?
Tick a box.

- ☐ The 19 late trains
- ☐ All 147 trains
- ☐ Both
- ☐ Neither

Give a reason for your answer.

.....

.....

(2 marks)

END OF QUESTIONS