

Answer ALL questions.

Write your answers in the spaces provided.

You must write down all the stages in your working.

1 Work out the value of 2^4

.....

(Total for Question 1 is 1 mark)

2 Write 7.26451 correct to 3 decimal places.

.....

(Total for Question 2 is 1 mark)

3 (a) Simplify $7 \times e \times f \times 8$

.....

(1)

(b) Solve $\frac{x}{5} = 2\frac{1}{2}$

$x =$

(1)

(Total for Question 3 is 2 marks)

4 Write $\frac{4}{5}$ as a percentage.

.....%

(Total for Question 4 is 1 mark)

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA



DO NOT WRITE IN THIS AREA

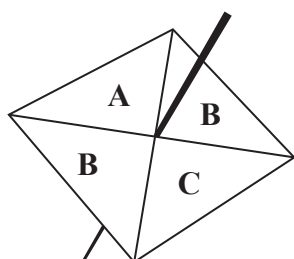
DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

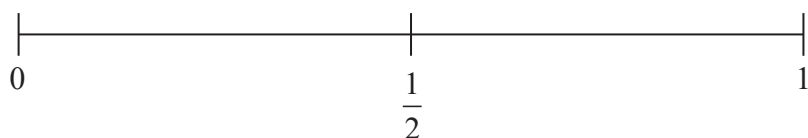
5 Work out 60% of 70

(Total for Question 5 is 2 marks)

6 Sammy spins a fair 4-sided spinner.

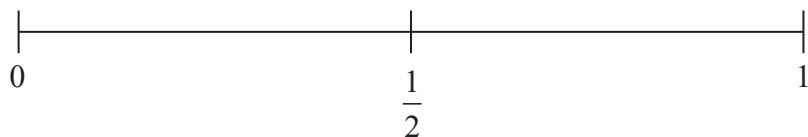


(i) On the probability scale, mark with a cross (×) the probability that the spinner will land on B.



(1)

(ii) On the probability scale, mark with a cross (×) the probability that the spinner will land on F.



(1)

(Total for Question 6 is 2 marks)



7 Fahima buys

2 packets of bread rolls costing £1.50 for each packet

1 bottle of ketchup costing £1.60

3 packets of sausages

Fahima pays with a £10 note.

She gets 30p change.

Fahima works out that one packet of sausages costs £2.30

Is Fahima right?

You must show how you get your answer.

(Total for Question 7 is 3 marks)

8 (a) Work out $\frac{5}{8} \times \frac{3}{4}$

.....
(1)

(b) Work out $\frac{2}{3} - \frac{1}{4}$

.....
(2)

(Total for Question 8 is 3 marks)



DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

9 Sean works for a company.
His normal rate of pay is £12 per hour.

When Sean works more than 8 hours a day, he is paid overtime for each hour he works more than 8 hours.

Sean's rate of overtime pay per hour is $1\frac{1}{4}$ times his normal rate of pay per hour.

On Monday Sean worked for 10 hours.

Work out the total amount of money Sean earned on Monday.

£.....

(Total for Question 9 is 4 marks)



10 A farmer has 20 boxes of eggs.
There are 6 eggs in each box.

Write, as a ratio, the number of eggs in two boxes to the total number of eggs.
Give your answer in its simplest form.

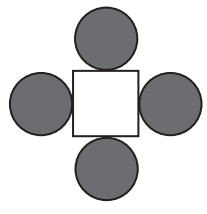
.....

(Total for Question 10 is 2 marks)

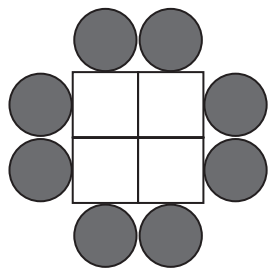


11 A sequence of patterns is made from circular tiles  and square tiles 

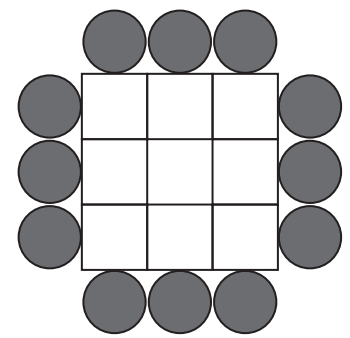
Here are the first three patterns in the sequence.



pattern number 1



pattern number 2



pattern number 3

(a) How many square tiles are needed to make pattern number 6?

.....
(2)

(b) How many circular tiles are needed to make pattern number 20?

.....
(2)

Derek says,

“When the pattern number is odd, an odd number of square tiles is needed to make the pattern.”

(c) Is Derek right?
You must give reasons for your answer.

.....
.....
(2)

(Total for Question 11 is 6 marks)



DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

12 There are only 7 blue pens, 4 green pens and 6 red pens in a box.

One pen is taken at random from the box.

Write down the probability that this pen is blue.

.....

(Total for Question 12 is 2 marks)

13 The diagram shows a tree and a man.



The man is of average height.

The tree and the man are drawn to the same scale.

(a) Write down an estimate for the real height, in metres, of the man.

..... metres

(1)

(b) Find an estimate for the real height, in metres, of the tree.

..... metres

(2)

(Total for Question 13 is 3 marks)

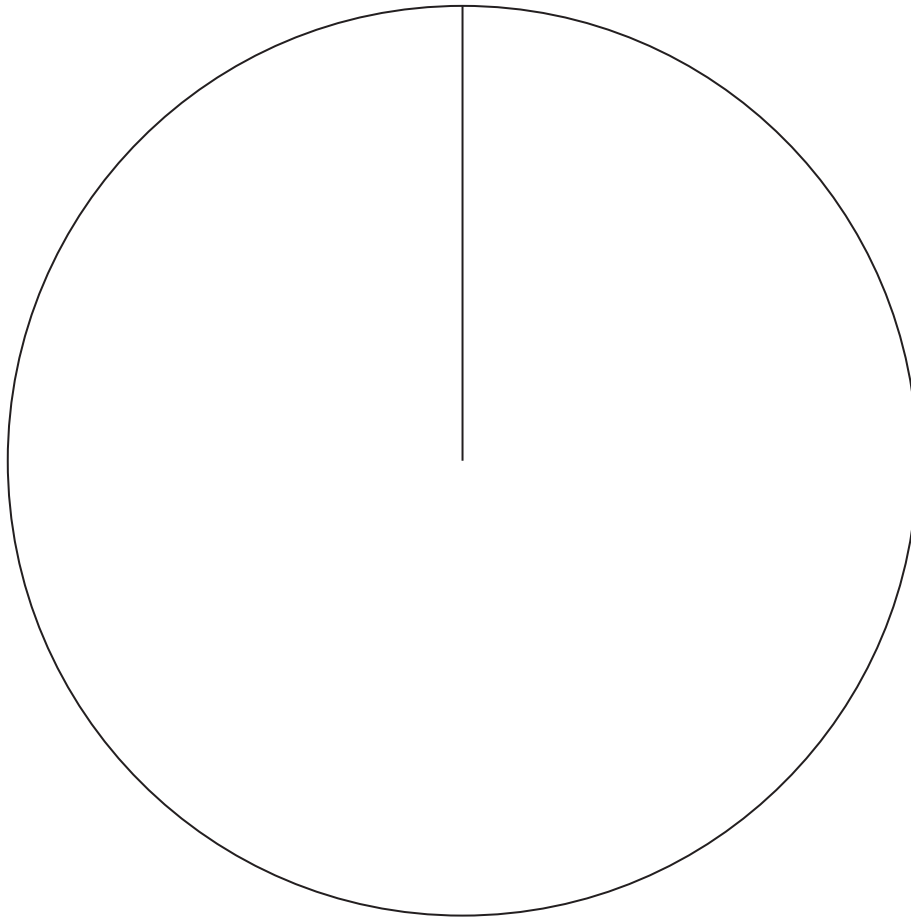


14 Year 9 students from Halle School were asked to choose one language to study.

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)

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

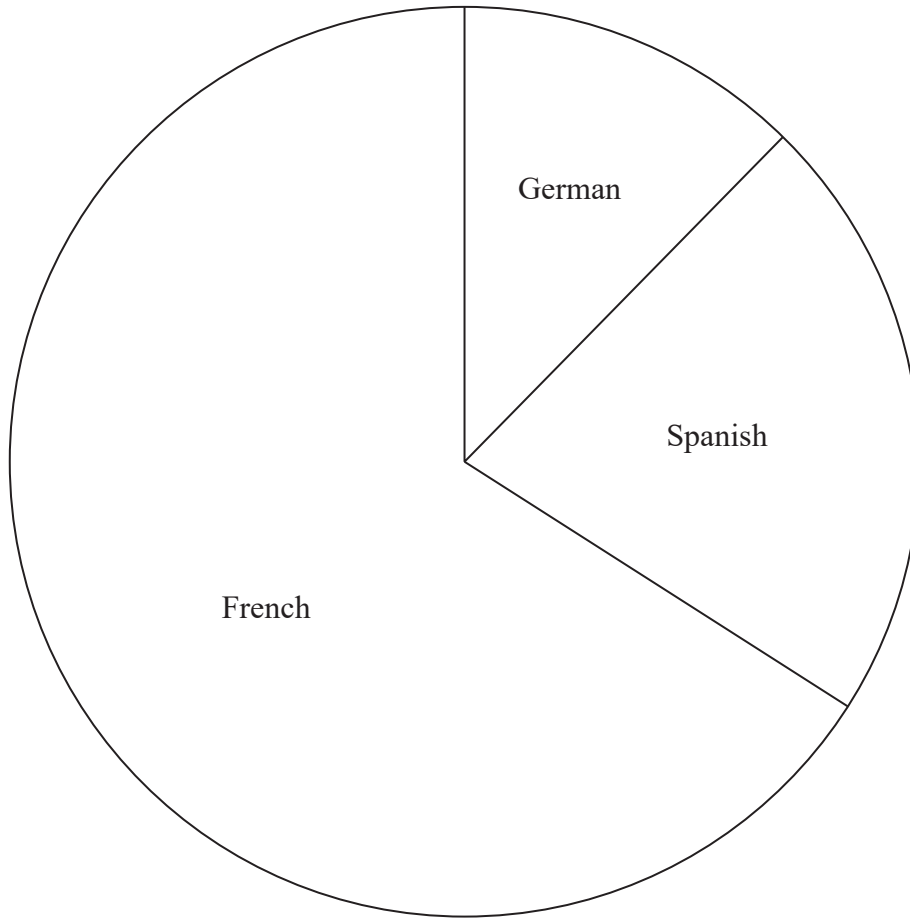


DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

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)



Answer ALL questions.

Write your answers in the spaces provided.

You must write down all the stages in your working.

1 (a) Change 365 cm into metres.

..... m
(1)

(b) Change 2.7 kg into grams.

..... g
(1)

(Total for Question 1 is 2 marks)

2 Work out $2 + 7 \times 10$

.....

(Total for Question 2 is 1 mark)

3 Solve $\frac{y}{4} = 10.5$

$y =$

(Total for Question 3 is 1 mark)

4 Here are four numbers.

-9 -2 2 9

Write one of these numbers in each box to make a correct calculation.

$$\begin{array}{|c|} \hline \\ \hline \dots\dots\dots \\ \hline \end{array} + \begin{array}{|c|} \hline \\ \hline \dots\dots\dots \\ \hline \end{array} = -7$$

(Total for Question 4 is 1 mark)

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA



DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

5 Here are the first four terms of a number sequence.

2 5 11 23

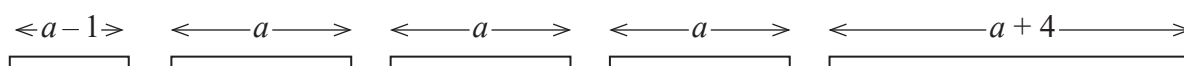
The rule to continue this sequence is

multiply the previous term by 2 and then add 1

Work out the 5th term of this sequence.

.....
(Total for Question 5 is 1 mark)

6 Here are five straight rods.



All measurements are in centimetres.

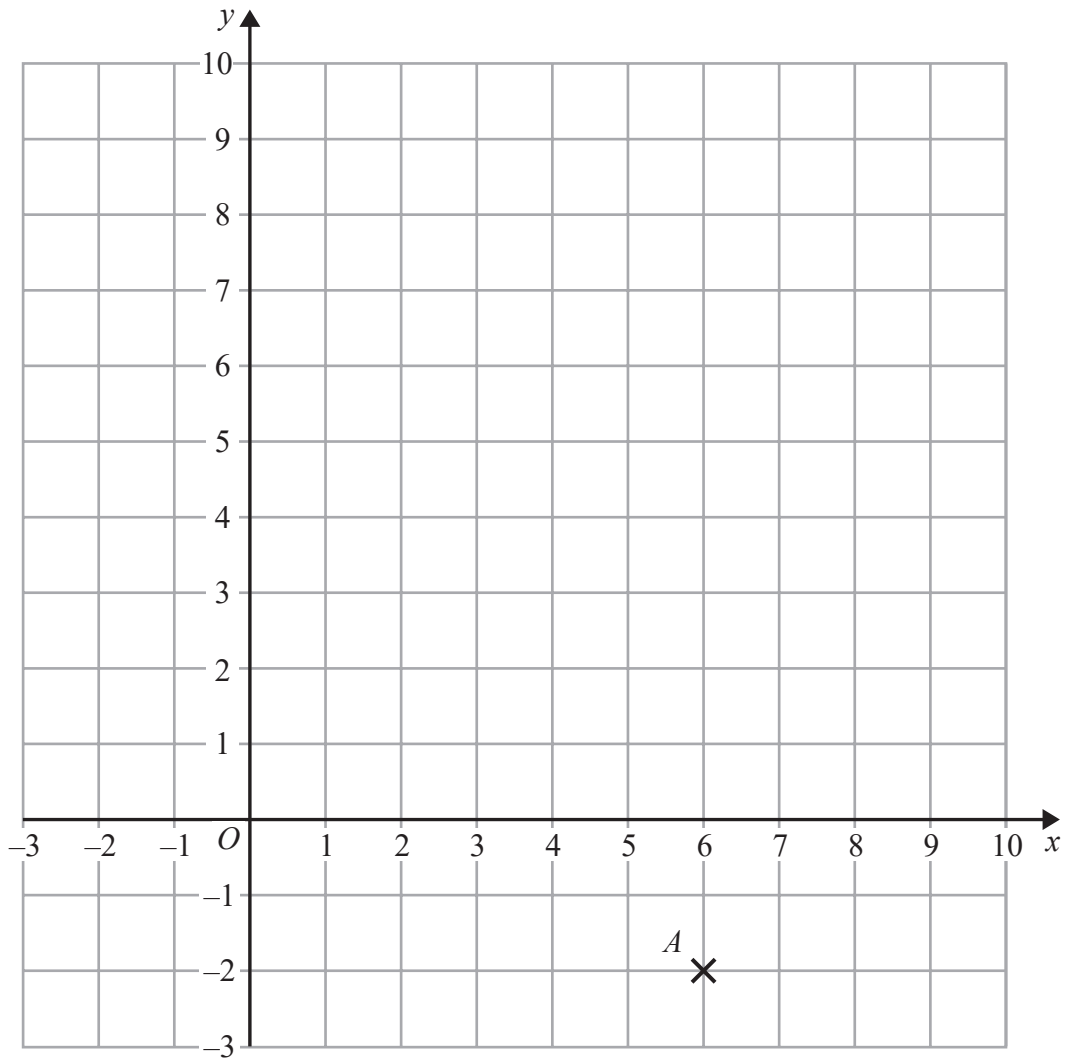
The total length of the five rods is L cm.

Find a formula for L in terms of a .

Write your formula as simply as possible.

.....
(Total for Question 6 is 3 marks)





(a) Write down the coordinates of the point *A*.

(.....,)
(1)

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA



(b) (i) Plot the point with coordinates $(2, 9)$.
Label this point B .

(1)

(ii) Does point B lie on the straight line with equation $y = 4x + 1$?
You must show how you get your answer.

(1)

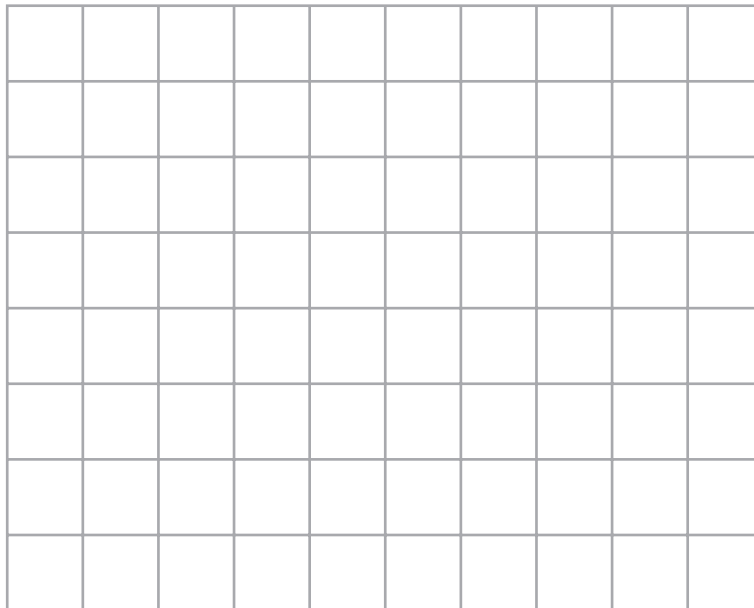
(c) On the grid, draw the line with equation $x = -2$

(1)

(Total for Question 7 is 4 marks)

8 The length of a rectangle is twice as long as the width of the rectangle.
The area of the rectangle is 32 cm^2 .

Draw the rectangle on the centimetre grid.



(Total for Question 8 is 2 marks)



9 Jacqui wants to work out $3480 \div 5$

She knows that $3480 \div 10 = 348$

Jacqui writes $3480 \div 5 = 174$

because $10 \div 5 = 2$

and $348 \div 2 = 174$

What mistake did Jacqui make in her method?

.....

.....

(Total for Question 9 is 1 mark)

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA



DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

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

Their scores for each game are shown below.

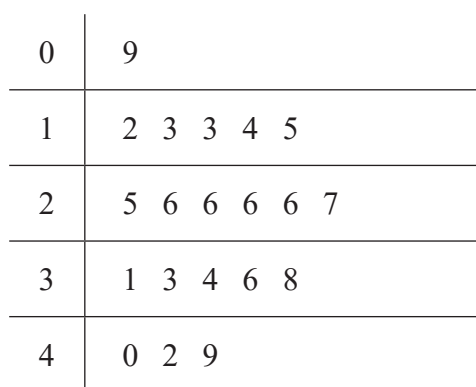
Jake	10	9	8	11	12	8
Sarah	2	10	7	14	4	10

(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.



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)



Answer ALL questions.

Write your answers in the spaces provided.

You must write down all the stages in your working.

1 (a) Simplify $5p - 3p + p$

.....
(1)

(b) Simplify $m^3 + m^3$

.....
(1)

(c) Simplify $10 + 3c + 5d - 7c + d$

.....
(2)

(Total for Question 1 is 4 marks)

2 Write 56.78 correct to one significant figure.

.....
(Total for Question 2 is 1 mark)

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

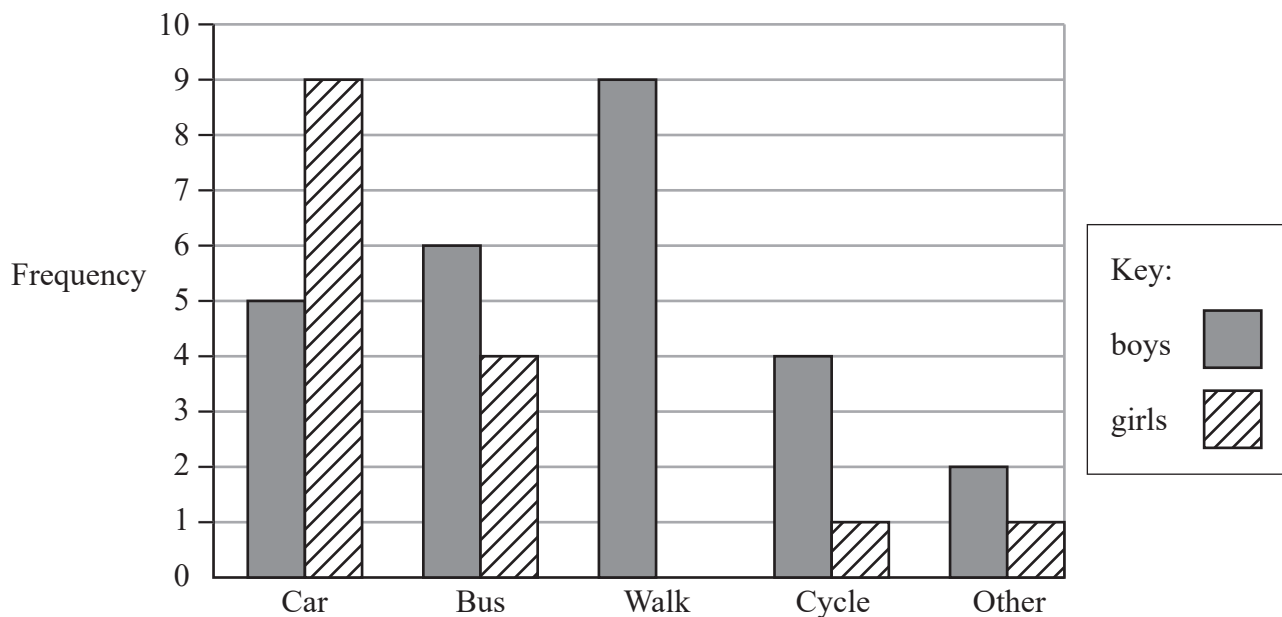


DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

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)



4 Here are four fractions.

$$\frac{2}{5}$$

$$\frac{11}{30}$$

$$\frac{1}{2}$$

$$\frac{7}{15}$$

Write these fractions in order of size.
Start with the smallest fraction.

(Total for Question 4 is 2 marks)

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA



DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

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		12
Tuesday		18
Wednesday		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)



6 There are 495 coins in a bottle.

$\frac{1}{3}$ of the coins are £1 coins.

124 of the coins are 50p coins.

The rest of the coins are 20p coins.

Work out the total value of the 495 coins.

£.....

(Total for Question 6 is 4 marks)

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA



DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

7 The probability that a new fridge has a fault is 0.015

What is the probability that a new fridge does **not** have a fault?

.....

(Total for Question 7 is 1 mark)

8 Here is a list of numbers.

21 22 23 24 25 26 27 28 29

(a) From the numbers in the list, write down a square number.

.....

(1)

(b) From the numbers in the list, write down a number that is a multiple of **both** 4 and 6

.....

(1)

(c) Write down all the prime numbers in the list.

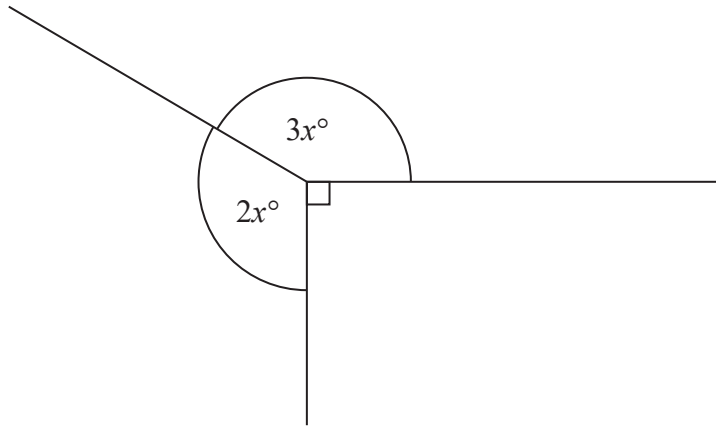
.....

(1)

(Total for Question 8 is 3 marks)



9



Find the value of x .

(Total for Question 9 is 3 marks)

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA



Answer ALL questions.

Write your answers in the spaces provided.

You must write down all the stages in your working.

1 Write $\frac{4}{50}$ as a percentage.

.....%

(Total for Question 1 is 1 mark)

2 Write 1.59 correct to 1 decimal place.

.....

(Total for Question 2 is 1 mark)

3 Work out the value of 3^5

.....

(Total for Question 3 is 1 mark)

4 Write down a 6 digit number that has 4 as its thousands digit.
You can only use the digit 4 once.

.....

(Total for Question 4 is 1 mark)

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA



DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

5 (a) Change 35 cm to mm.

..... mm
(1)

(b) Change 7700 millilitres to litres.

..... litres
(1)

(c) Change 0.32 kilograms to grams.

..... grams
(1)

(Total for Question 5 is 3 marks)

6 Margaret is thinking of a number.
She says,

“My number is odd. It is a factor of 36 and a multiple of 3”

There are two possible numbers Margaret can be thinking of.

Write down these two numbers.

.....
(Total for Question 6 is 3 marks)



- 7 Mohsin, Yusuf and Luke are going to play a game.
At the end of the game, one of them will be in First place, one of them will be in Second place and one of them will be in Third place.

Use the table below to list all the possible outcomes of the game.

First place	Second place	Third place

(Total for Question 7 is 2 marks)

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA



DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

8 Neil buys 30 pens, 30 pencils, 30 rulers and 30 pencil cases.

Price list	
pens	6 for 82p
pencils	15 for 45p
rulers	10 for £1.25
pencil cases	37p each

What is the total amount of money Neil spends?

£.....

(Total for Question 8 is 5 marks)



9 Emily drives 186 miles in 3 hours.

(a) What is her average speed?

..... mph
(2)

Sarah drives at an average speed of 58 mph for 4 hours.

(b) How many miles does Sarah drive?

..... miles
(2)

(Total for Question 9 is 4 marks)

10 (a) Write down all the prime numbers between 20 and 30

.....
(2)

Catherine says,

“2 is the only even prime number.”

(b) Is Catherine right?

You must give a reason for your answer.

.....
.....
(1)

(Total for Question 10 is 3 marks)



DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

11 (a) Solve $x + x + x = 51$

$x = \dots\dots\dots$
(1)

(b) Solve $\frac{y}{4} = 3$

$y = \dots\dots\dots$
(1)

(c) Solve $2f + 7 = 18$

$f = \dots\dots\dots$
(1)

(Total for Question 11 is 3 marks)

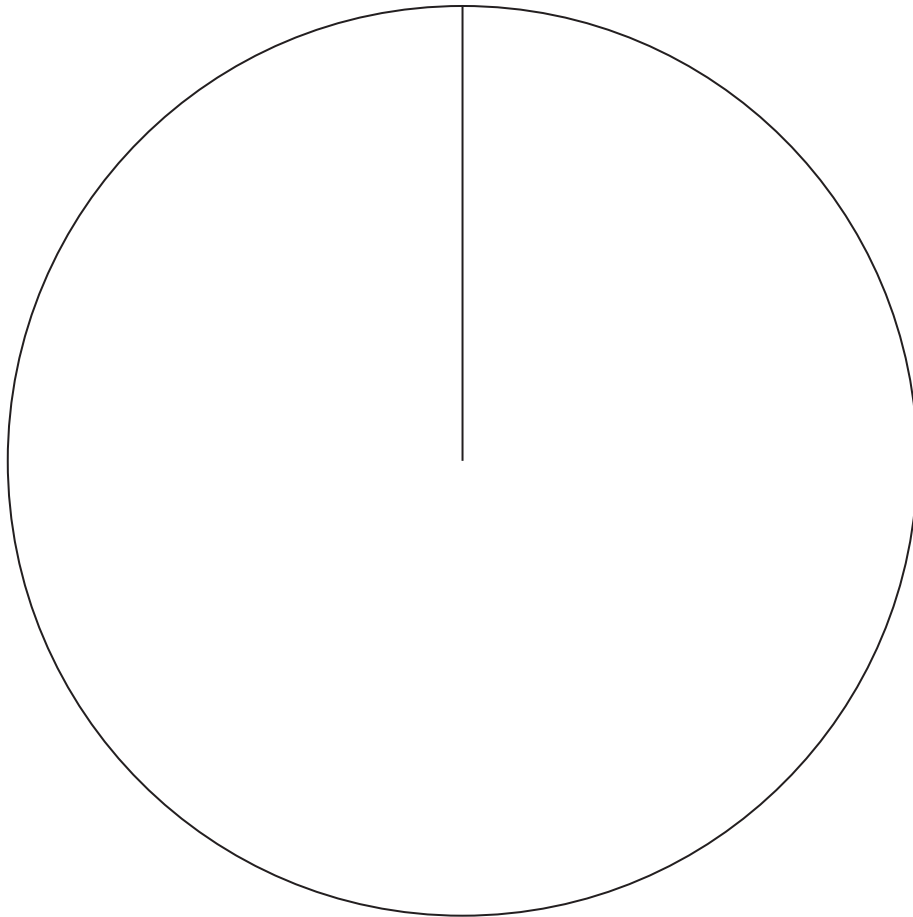


12 A group of football fans were asked what their half time snack was.

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)



DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

13 A scout group has a raffle to raise money for charity.
There is 1 prize to be won in the raffle.

Laura buys 12 raffle tickets.
A total of 350 raffle tickets are sold.

Find the probability that Laura does **not** win the prize.

.....
(Total for Question 13 is 2 marks)

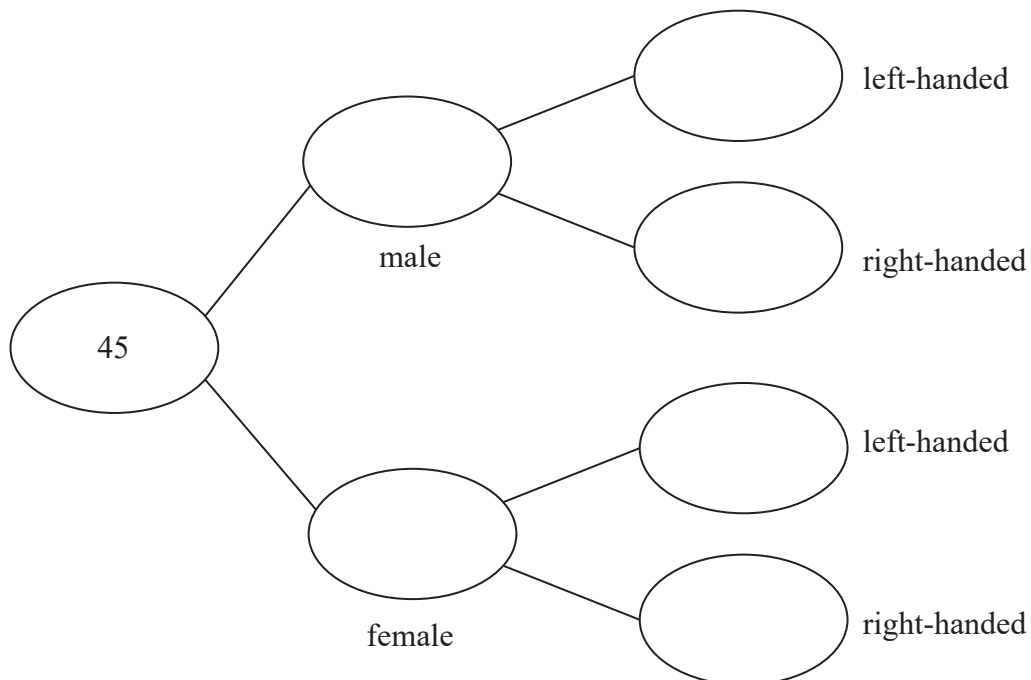


14 Each worker in a factory is either left-handed or right-handed.

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)

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA



Answer ALL questions.

Write your answers in the spaces provided.

You must write down all the stages in your working.

- 1 Write $\frac{7}{100}$ as a decimal.

.....

(Total for Question 1 is 1 mark)

- 2 Write down a multiple of 6 that is between 40 and 50

.....

(Total for Question 2 is 1 mark)

- 3 (a) Simplify $3f \times 5g$

.....

(1)

- (b) Simplify $t \times t$

.....

(1)

- (c) Simplify $\frac{2n + 6n}{2}$

.....

(1)

(Total for Question 3 is 3 marks)

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA



DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

4 Ken buys some fruit.

He buys apples, bananas, peaches and oranges.

Ken buys

- 4 apples weighing 125 g each
- 2 bananas weighing 170 g each
- 3 peaches weighing 135 g each

Each orange has a weight of 90 g.

The fruit has a total weight of 1.785 kg.

(a) Work out how many oranges Ken buys.

.....
(3)

Jane wants to buy 15 tomatoes.

She asks for 1 kg of tomatoes at a shop.

Jane assumes that each tomato has a weight of 75 g.

(b) (i) If Jane's assumption is correct, will she get 15 tomatoes?

You must show how you get your answer.

(2)

(ii) If Jane's assumption is **not** correct, could she get 15 tomatoes?

Justify your answer.

.....
.....
(1)

(Total for Question 4 is 6 marks)



5 60 students were asked how they get to school.

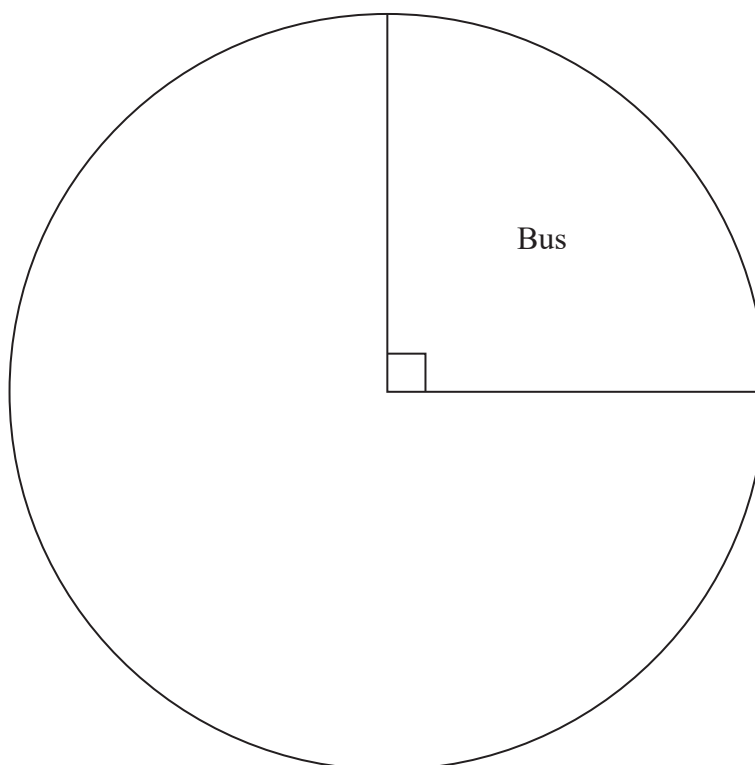
The table shows the results.

	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)



DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

6 Annie and Lily share some money in the ratio 4 : 3

(a) What fraction of the money does Lily get?

.....
(1)

Rosie and Dan share some sweets.

Dan gets $\frac{1}{4}$ of the sweets.

(b) Write down the ratio of the number of sweets Rosie gets to the number of sweets Dan gets.

.....
(1)

(Total for Question 6 is 2 marks)

7 Steve says,

“There are more prime numbers between 20 and 30
than there are between 10 and 20”

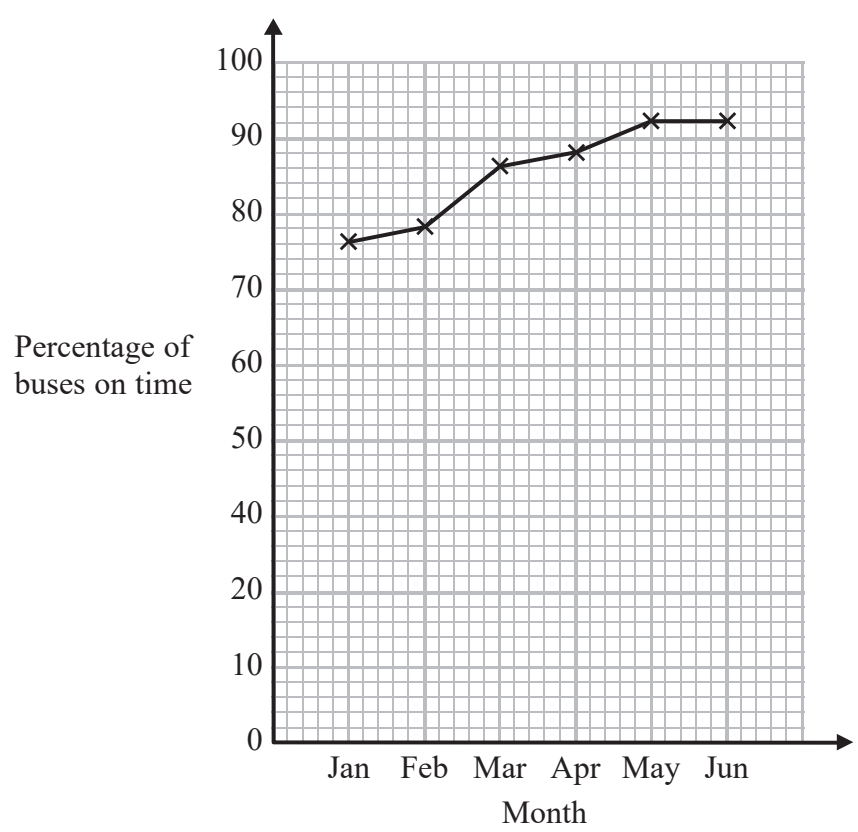
Is Steve right?

You must show how you get your answer.

(Total for Question 7 is 2 marks)



8 Chrissy drew this graph to show the percentage of buses that got to a bus stop on time for six months.



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

(1)

(b) Describe the trend in the percentage of buses that got to the bus stop on time.

(1)

(Total for Question 8 is 2 marks)



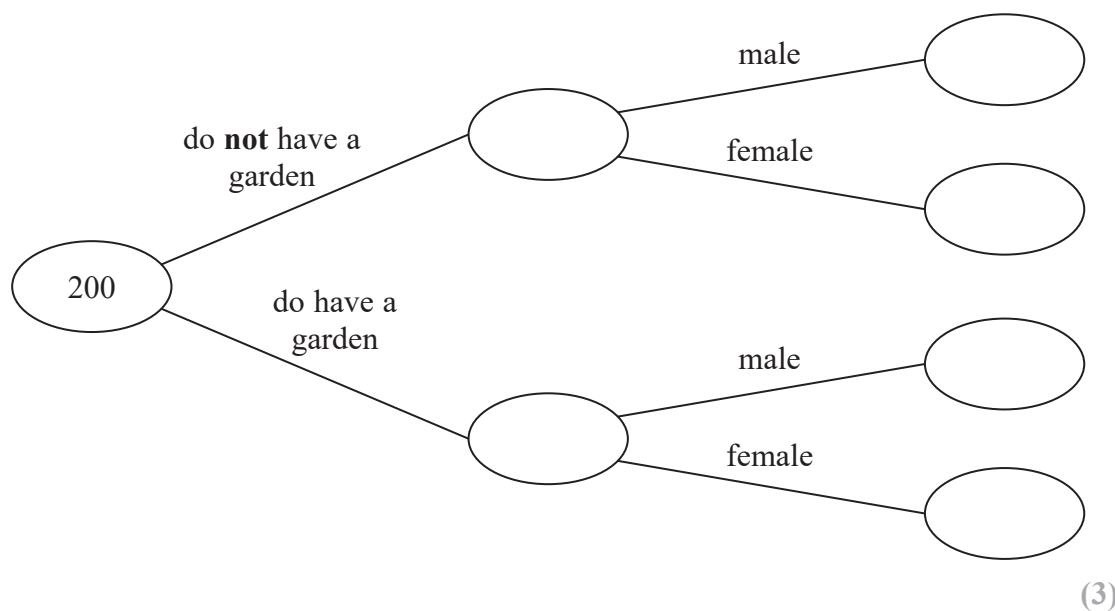
12 200 people live in a village.

23 people do **not** have a garden.

10 males do **not** have a garden.

95 people are male.

(a) Use this information to complete the frequency tree.



One of the people who does **not** have a garden is chosen at random.

(b) Write down the probability that this person is female.

.....
(2)

(Total for Question 12 is 5 marks)



Answer ALL questions.

Write your answers in the spaces provided.

You must write down all the stages in your working.

1 Write 0.75 as a fraction.

.....

(Total for Question 1 is 1 mark)

2 Write the following numbers in order of size.
Start with the smallest number.

-3 4 0 -1 2

.....

(Total for Question 2 is 1 mark)

3 Write down two factors of 15

.....

(Total for Question 3 is 1 mark)

4 Change 1756 grams to kilograms.

.....kg

(Total for Question 4 is 1 mark)

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA



DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

5 Write the number two million in figures.

.....

(Total for Question 5 is 1 mark)

6 Dave goes into a cafe and buys 2 cups of coffee and a piece of cake.

Each cup of coffee costs £2.75

The cake costs £2.90

Dave pays with a £10 note.

He thinks he will get more than £1.50 in change.

Is Dave correct?

You must show how you get your answer.

(Total for Question 6 is 3 marks)



- 7 There are y boats on a lake.
There are 7 people in each boat.

Write an expression, in terms of y , for the total number of people in the boats.

.....
(Total for Question 7 is 1 mark)

- 8 (a) Simplify $a \times b \times 7$

.....
(1)

- (b) Simplify $y \times y \times y$

.....
(1)

- (c) Simplify fully $\frac{e \times e \times e \times f}{e \times e \times f \times f}$

.....
(2)

(Total for Question 8 is 4 marks)

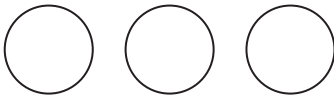
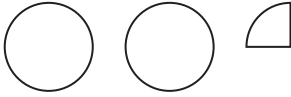


DO NOT WRITE IN THIS AREA


DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

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)



DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

12 Here is part of a train timetable.

Brighton	07 22	07 29	07 32
London	09 00	08 32	08 48

Graham gets to the station in Brighton at 07 15

(a) Work out how many minutes he has to wait until 07 22

..... minutes
(1)

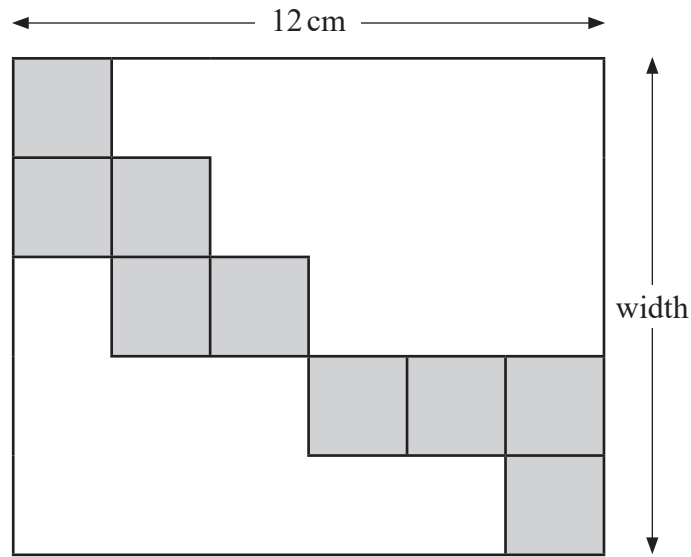
(b) Work out how long it will take the 07 22 train to get to London.

.....
(2)

(Total for Question 12 is 3 marks)



13 The diagram shows nine identical squares inside a rectangle.



The length of the rectangle is 12 cm.

Work out the width of the rectangle.

.....cm

(Total for Question 13 is 3 marks)

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA



DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

14 Write the ratio $4.5 : 2.25$ in the form $n : 1$

.....

(Total for Question 14 is 1 mark)

15 A garden is in the shape of a rectangle 90 m by 60 m.

90 m

Flowers are grown in 40% of the garden.
The rest of the garden is grass.



60 m

Work out the area of the garden that is grass.

.....m²

(Total for Question 15 is 4 marks)



Answer ALL questions.

Write your answers in the spaces provided.

You must write down all the stages in your working.

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)

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA



DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

2 Cups are sold in packs and in boxes.

There are 12 cups in each pack.

There are 18 cups in each box.

Alison buys p packs of cups and b boxes of cups.

Write down an expression, in terms of p and b , for the total number of cups Alison buys.

.....

(Total for Question 2 is 2 marks)

3 Here are four digits.

5 6 1 9

(i) Write down the smallest possible two digit number that can be made with two of the digits.

.....

(1)

(ii) Write down the three digit number closest to 200 that can be made with three of the digits.

.....

(1)

(Total for Question 3 is 2 marks)



4 $\frac{4}{5}$ of a number is 32

Find the number.

.....
(Total for Question 4 is 2 marks)

5 A path is made of white tiles and grey tiles.

$\frac{1}{4}$ of the tiles are white.

(a) Write down the ratio of white tiles to grey tiles.

.....
(1)

There is a total of 56 tiles.

(b) Work out the number of grey tiles.

.....
(2)

(Total for Question 5 is 3 marks)

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA



DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

6 Here is a list of numbers.

12 15 14 17 22 19 13

Bridgit says,

“To work out the median you find the middle number,
so the median of these numbers is 17”

Bridgit’s answer is **not** correct.

(a) What is wrong with Bridgit’s method?

.....
.....
(1)

(b) Work out the range of the numbers in the list.

.....
(2)

(c) Work out the mean of the numbers in the list.

.....
(2)

(Total for Question 6 is 5 marks)



7 Priti is going to have a meal.
She can choose one starter and one main course from the menu.

Menu	
Starter	Main Course
Salad	Pasta
Fish	Rice
Melon	Burger

Write down all the possible combinations Priti can choose.

.....

.....

.....

(Total for Question 7 is 2 marks)

8 Joanne wants to buy a dishwasher.
The dishwasher costs £372
Joanne will pay a deposit of £36
She will then pay the rest of the cost in 4 equal monthly payments.
How much is each monthly payment?

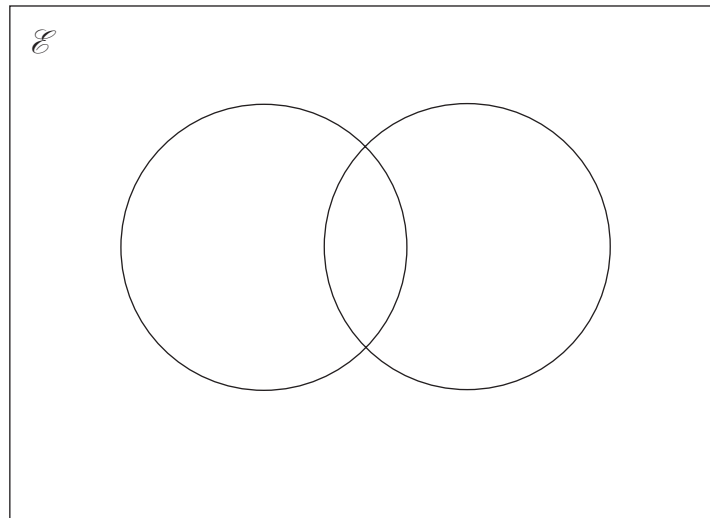
£.....

(Total for Question 8 is 2 marks)



- 15 $\mathcal{E} = \{\text{odd numbers less than } 30\}$
 $A = \{3, 9, 15, 21, 27\}$
 $B = \{5, 15, 25\}$

(a) Complete the Venn diagram to represent this information.



(4)

A number is chosen at random from the universal set, \mathcal{E} .

(b) What is the probability that the number is in the set $A \cup B$?

(2)

(Total for Question 15 is 6 marks)



16 Solve the simultaneous equations

$$\begin{aligned}3x + y &= -4 \\3x - 4y &= 6\end{aligned}$$

$x =$

$y =$

(Total for Question 16 is 3 marks)

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA



17 The table shows some information about the dress sizes of 25 women.

Dress size	Number of women
8	2
10	9
12	8
14	6

(a) Find the median dress size.

.....
(1)

3 of the 25 women have a shoe size of 7

Zoe says that if you choose at random one of the 25 women, the probability that she has either a shoe size of 7 or a dress size of 14 is $\frac{9}{25}$ because

$$\frac{3}{25} + \frac{6}{25} = \frac{9}{25}$$

(b) Is Zoe correct?

You must give a reason for your answer.

.....
.....
(1)

(Total for Question 17 is 2 marks)



DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

18 Daniel bakes 420 cakes.
He bakes only vanilla cakes, banana cakes, lemon cakes and chocolate cakes.

$\frac{2}{7}$ of the cakes are vanilla cakes.

35% of the cakes are banana cakes.

The ratio of the number of lemon cakes to the number of chocolate cakes is 4:5

Work out the number of lemon cakes Daniel bakes.

.....
(Total for Question 18 is 5 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)



Answer ALL questions.

Write your answers in the spaces provided.

You must write down all the stages in your working.

1 Write 3758 correct to the nearest 1000

.....
(Total for Question 1 is 1 mark)

2 Simplify $y + 3y - 2y$

.....
(Total for Question 2 is 1 mark)

3 Write down all the factors of 18

.....
(Total for Question 3 is 2 marks)

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA



DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

4 The table gives information about the prices of cinema tickets.

Cinema ticket	Price
adult ticket	£7.80
child ticket	£5.80
family ticket (for 4 people)	£24.30

Mr Edwards and his 3 children go to the cinema.

It is cheaper for Mr Edwards to buy 1 family ticket rather than 4 separate tickets.

(a) How much cheaper?

.....
(3)

The film starts at 6.45 pm.
The film lasts 102 minutes.

(b) What time does the film finish?

.....
(2)

(Total for Question 4 is 5 marks)






- 5 Thais has a large bottle of shampoo.
There are 2 litres of shampoo in the large bottle.

Thais also has some empty small bottles.
Each small bottle can be completely filled with 150 ml of shampoo.

How many small bottles can be completely filled with shampoo from the large bottle?

(Total for Question 5 is 3 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.

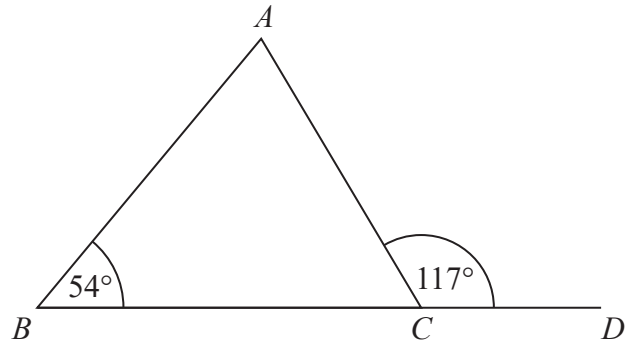
15 cycles were sold on Saturday.

Use this information to complete the pictogram.

(Total for Question 6 is 3 marks)



7



BCD is a straight line.

ABC is a triangle.

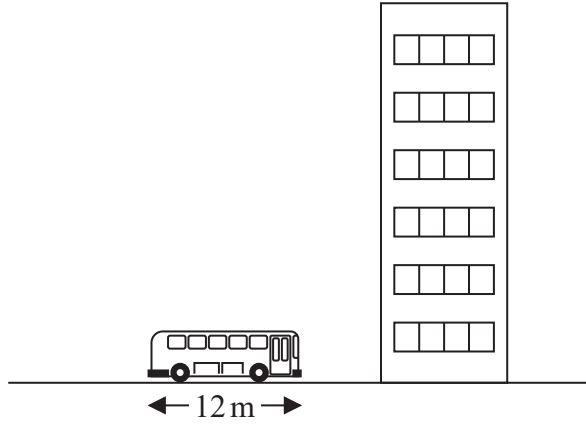
Show that triangle ABC is an isosceles triangle.

Give a reason for each stage of your working.

(Total for Question 7 is 4 marks)



8



The picture shows a bus next to a building.
The bus has a length of 12 m.

The bus and the building are drawn to the same scale.

Work out an estimate for the height, in metres, of the building.

..... m

(Total for Question 8 is 2 marks)

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA



DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

9 Nidah writes down two different prime numbers.

She adds together her two numbers.
Her answer is a square number less than 30

Find two prime numbers that Nidah could have written down.

..... ,

(Total for Question 9 is 2 marks)

10 Jim thinks of a number.

$\frac{2}{3}$ of Jim's number is 48

Work out $\frac{5}{6}$ of Jim's number.

.....

(Total for Question 10 is 2 marks)



11 Jack's driving school has two offers.

Offer 1
First driving lesson free
All other driving lessons normal price

Offer 2
All driving lessons
5% off the normal price

The normal price of a driving lesson is £24

Douglas is going to have 12 driving lessons.

Which is the cheaper offer for 12 driving lessons, Offer 1 or Offer 2?

You must show how you get your answer.

(Total for Question 11 is 3 marks)

12 2.5 kg of apples cost £3.60

Work out the cost of 3.5 kg of apples.

£.....

(Total for Question 12 is 2 marks)



DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

Answer ALL questions.

Write your answers in the spaces provided.

You must write down all stages in your working.

You must NOT use a calculator.

1 (a) Write the number **six thousand and thirty seven** in figures.

.....
(1)

(b) Write the number 8377 correct to the nearest ten.

.....
(1)

(c) Write these numbers in order of size.
Start with the smallest number.

43 37 19 26 21

.....
(1)

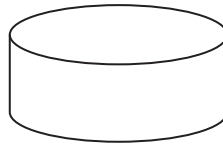
(Total for Question 1 is 3 marks)



- 2 (a) Write down the name of a quadrilateral that has 4 right angles.

.....
(1)

The diagram shows a solid shape.



- (b) Write down the mathematical name of this shape.

.....
(1)

- (c) In the space below, draw accurately a circle of radius 4 cm.
Use the cross (×) as the centre of your circle.

×

(1)

(Total for Question 2 is 3 marks)

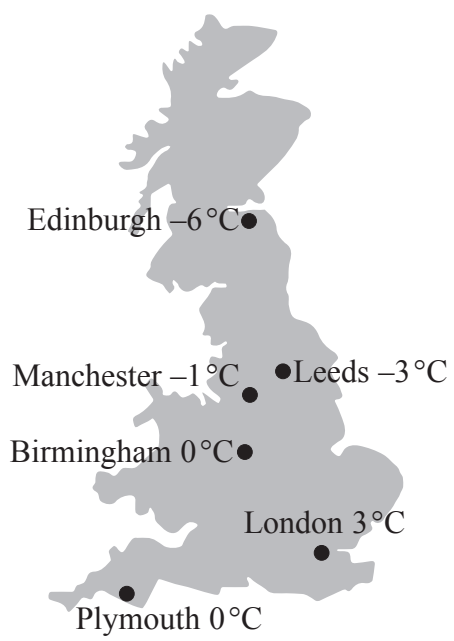


DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

3



The diagram shows the temperatures in 6 cities at midnight one day.

(a) Which city had the highest temperature?

.....
(1)

(b) Work out the difference in temperature between

(i) Manchester and Edinburgh,

..... °C

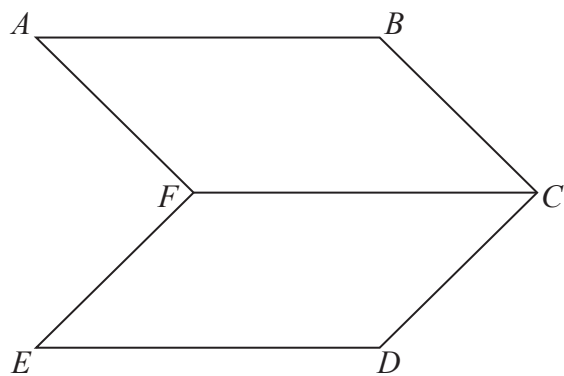
(ii) London and Leeds.

..... °C
(2)

(Total for Question 3 is 3 marks)



4 The diagram shows two parallelograms.



- (a) Measure the length of the line AB .
Give your answer in cm.

..... cm

(1)

- (b) Mark with arrows (\gg) one pair of parallel lines.

(1)

- (c) Mark with the letter x an acute angle.

(1)

- (d) Mark with the letter y the angle EDC .

(1)

(Total for Question 4 is 4 marks)



DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

*5 A second class stamp costs 53 pence.

Hazel wants to buy 10 second class stamps.
She has £5 to spend on stamps.

Does Hazel have enough money to buy the stamps?

(Total for Question 5 is 2 marks)

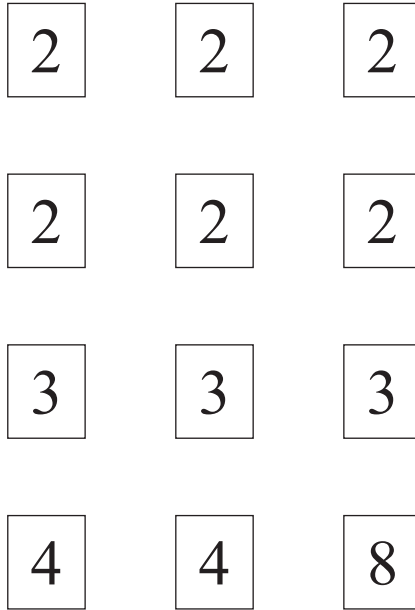


Answer ALL questions.

Write your answers in the spaces provided.

You must write down all stages in your working.

- 1 The diagram shows 12 cards.
There is a number on each card.



Riki takes at random one of these cards.

- (a) Which number is **most** likely to be on the card?

.....
(1)

- (b) Which number is **least** likely to be on the card?

.....
(1)

(Total for Question 1 is 2 marks)



2 (a) Write 35 mm in cm.

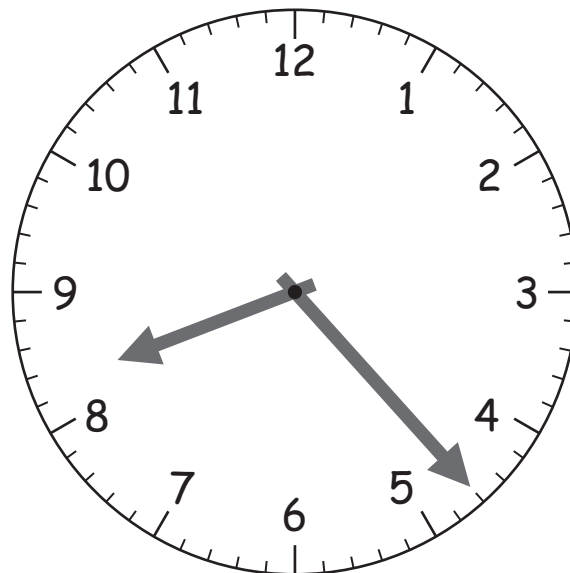
..... cm
(1)

(b) Write 2.4 kg in g.

..... g
(1)

(Total for Question 2 is 2 marks)

3



(a) Write down the time shown on the clock.

.....
(1)

Lisa got on a bus at 08 45
Lisa got off the bus at 10 20

(b) How long was Lisa on the bus?

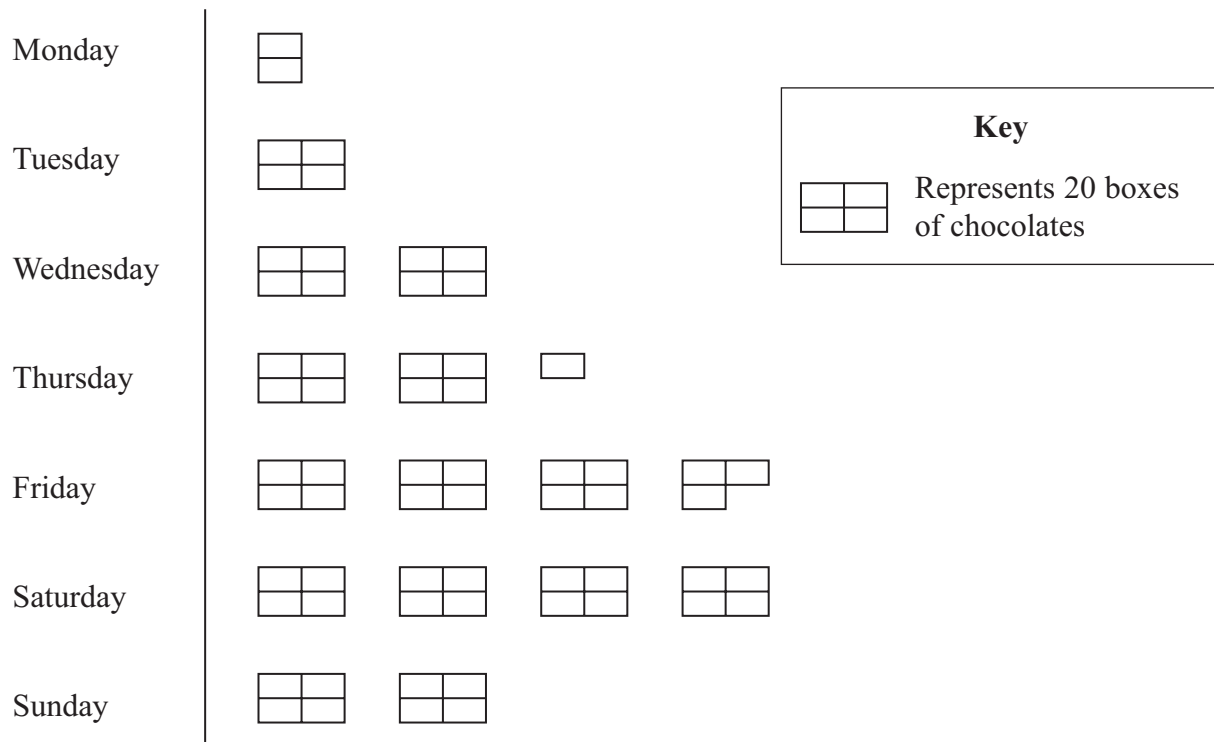
.....
(2)

(Total for Question 3 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)



5 Here is a list of 12 numbers.

20 45 15 12 18 32 25 40 20 15 22 24

(a) Work out the range.

.....
(2)

(b) Find the median.

.....
(2)

(c) Work out the mean.

.....
(2)

(Total for Question 5 is 6 marks)

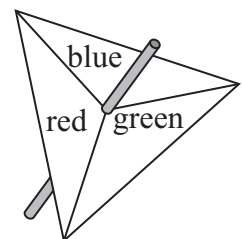
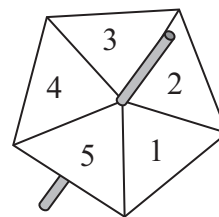
6 Hamish has two spinners.

One spinner is labelled 1, 2, 3, 4, 5

The other spinner is labelled red, blue, green.

Hamish spins both spinners once.

List **all** the possible combinations Hamish could get.



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

(Total for Question 6 is 2 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)



*8 Here is part of Sheila's electric bill.

Electric Bill	
New reading	3546 units
Old reading	3298 units
Price per unit	12p

Work out how much Sheila has to pay for the units of electricity she used.

(Total for Question 8 is 4 marks)

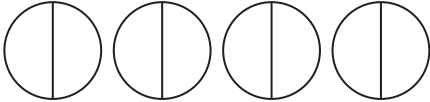

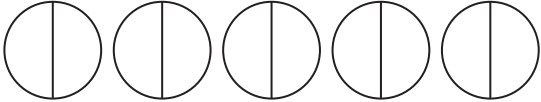


Answer ALL questions.

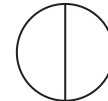
Write your answers in the spaces provided.

You must write down all stages in your working.

- 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)



2 The table shows information about 5 bicycles for sale in a shop.

Name	Price	Weight (kg)	Number of Gears	Frame Size (inches)	Colour
Rushmore	£269	13.5	21	20	white
Bowfell	£379	14.6	24	18	grey
Grisdale	£449	13.8	27	20	white
Fairfield	£499	14.1	27	18	red
Skiddaw	£379	14.8	21	20	orange

(a) How many of these bicycles have a weight less than 14 kg?

.....
(1)

Richard wants to buy one of the bicycles with a frame size of 18 inches.

(b) Write down the colours of the bicycles he could buy.

.....
(1)

Two of the bicycles have the same price.

Leonard wants to buy the one that has the greater number of gears.

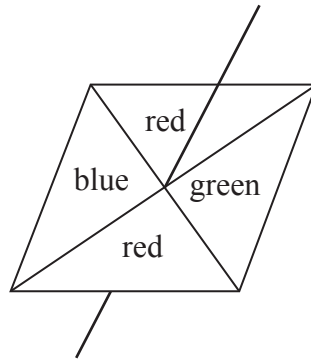
(c) Write down the name of the bicycle that Leonard should buy.

.....
(1)

(Total for Question 2 is 3 marks)

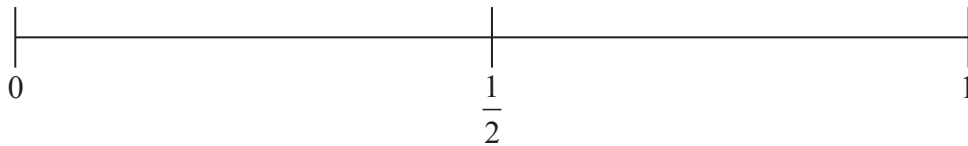


- 4 Here is a fair 4-sided spinner.
The spinner can land on blue or on red or on green.



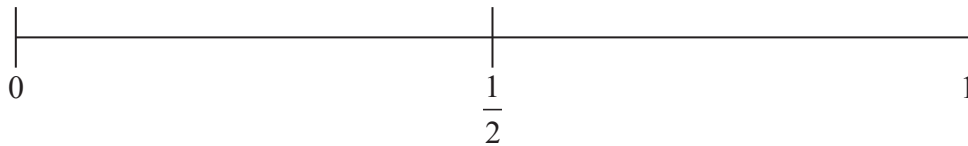
Lance spins the spinner once.

- (a) On the probability scale, mark with a cross (×) the probability that the spinner will land on red.



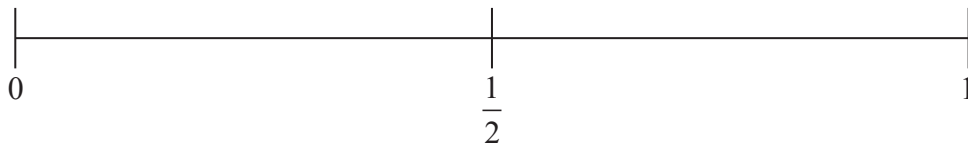
(1)

- (b) On the probability scale, mark with a cross (×) the probability that the spinner will land on yellow.



(1)

- (c) On the probability scale, mark with a cross (×) the probability that the spinner will **not** land on green.



(1)

(Total for Question 4 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)

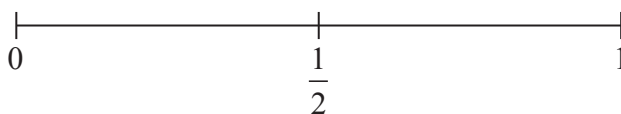
(c) What type of weed is there most of?

.....
(1)

(Total for Question 2 is 6 marks)

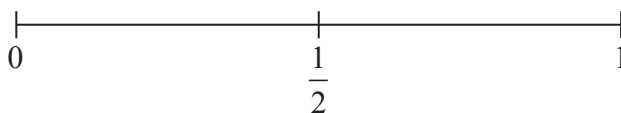


- 3 (a) On the probability scale, mark with a cross (×) the probability that the next baby born in England will be a boy.



(1)

- (b) On the probability scale, mark with a cross (×) the probability that when an ordinary dice is thrown it will land on the number 7



(1)

Here is a list of words.

impossible unlikely evens likely certain

Chen throws 3 fair coins.

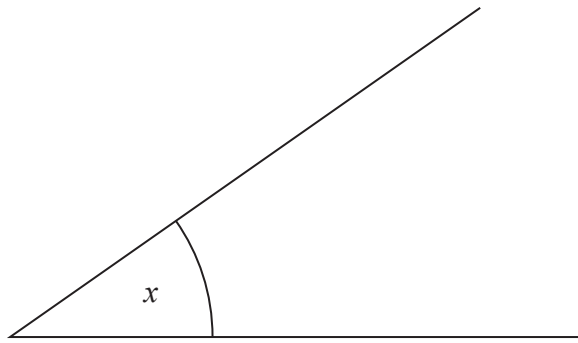
- (c) Choose one word from the list that best describes the likelihood that Chen will get heads with all 3 coins.

.....
(1)

(Total for Question 3 is 3 marks)



4



(a) Measure the size of the angle marked x .

.....
(1)

(b)



On the line, mark with a cross (\times) the point 6.4 cm from the point P .

(1)

(Total for Question 4 is 2 marks)



*5 Leandros goes swimming to keep fit.

Here is his swimming plan for the next four weeks

- Each Monday, each Wednesday and each Friday swim 30 lengths of the swimming pool.
- Each Saturday swim 60 lengths of the swimming pool.

The length of the swimming pool is 25 metres.

Leandros will start his swimming plan on Monday.
He wants to swim at least 14 km in four weeks.


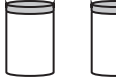
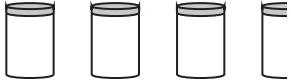
Leandros follows his swimming plan.

Does he swim at least 14 km in the four weeks?
You must show all of your working.


(Total for Question 5 is 4 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)



Answer ALL questions.

Write your answers in the spaces provided.

You must write down all stages in your working.

You must NOT use a calculator.

- 1** Mary buys three tickets for a theatre show.
Each ticket costs £50

Mary also has to pay a booking fee.
The booking fee is £2.50 per ticket.

Work out the total amount Mary has to pay.


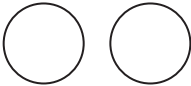

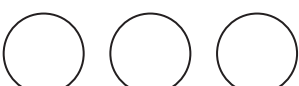
£.....


(Total for Question 1 is 3 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.

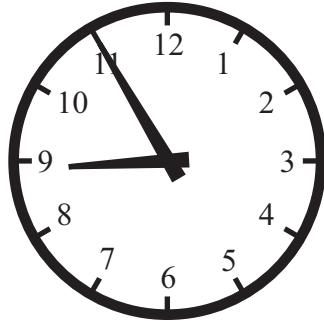
- (c) Complete the pictogram for Friday.

(1)

(Total for Question 2 is 3 marks)



3 Here is a clock in a school.



(a) (i) School starts 15 minutes earlier than the time shown on the clock.

What time does school start?

.....

(ii) The first lesson ends 45 minutes after the time shown on the clock.

What time does the first lesson end?

.....

(2)

(b) School finishes at 3.20 pm.

Write 3.20 pm using the 24-hour clock.

.....

(1)

(Total for Question 3 is 3 marks)



4 $a = 5$
 $b = 3$

Work out the value of $4a + 2b$

.....
(Total for Question 4 is 2 marks)

5 Here are four digits.

8 2 4 3

(a) (i) Use two of these digits to make the smallest possible two-digit number.

.....
(ii) Use three of these digits to make the three-digit number closest to 300

.....
(2)

Here are four different digits.

5 1 7 9

(b) (i) Put one digit in each box to make the largest total.
You may only use each digit once.

		+		
--	--	---	--	--

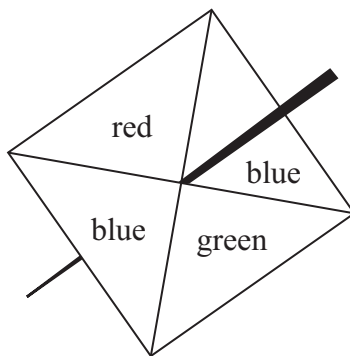
(ii) Write down the total.

.....
(2)

(Total for Question 5 is 4 marks)

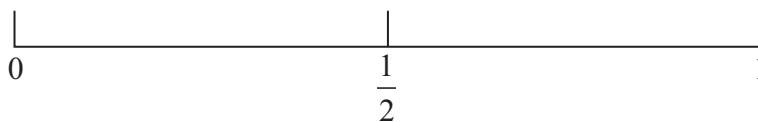


6 Here is a fair 4-sided spinner.



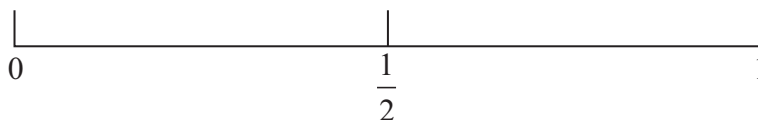
Lily will spin the spinner once.
The spinner will land on one of the colours.

(a) On the probability scale, mark with a cross (×) the probability that the spinner will land on green.



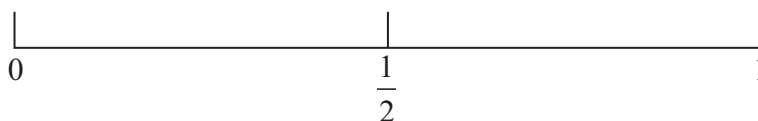
(1)

(b) On the probability scale, mark with a cross (×) the probability that the spinner will land on blue.



(1)

(c) On the probability scale, mark with a cross (×) the probability that the spinner will land on yellow.

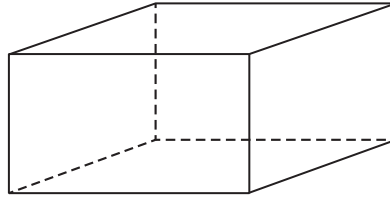


(1)

(Total for Question 6 is 3 marks)



7 Here is a cuboid.



The following sentences are about cuboids.

Complete each sentence by writing the correct number in the gap.

- (a) (i) A cuboid has faces.
- (ii) A cuboid has edges.
- (iii) A cuboid has vertices.

(3)

Here is a different cuboid.

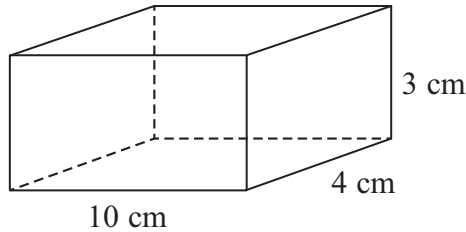


Diagram **NOT**
accurately drawn

(b) Work out the volume of the cuboid.

..... cm³

(2)

(Total for Question 7 is 5 marks)



8 (a) Work out $15 \div 5 + 7$

.....
(1)

(b) Work out $2 + 7 \times 2$

.....
(1)

(c) Work out $-5 + -6$

.....
(1)

(d) Work out $14 - -3$

.....
(1)

(e) Add brackets () to make this statement correct.

$$12 - 2 \times 3 + 1 = 4$$

(1)

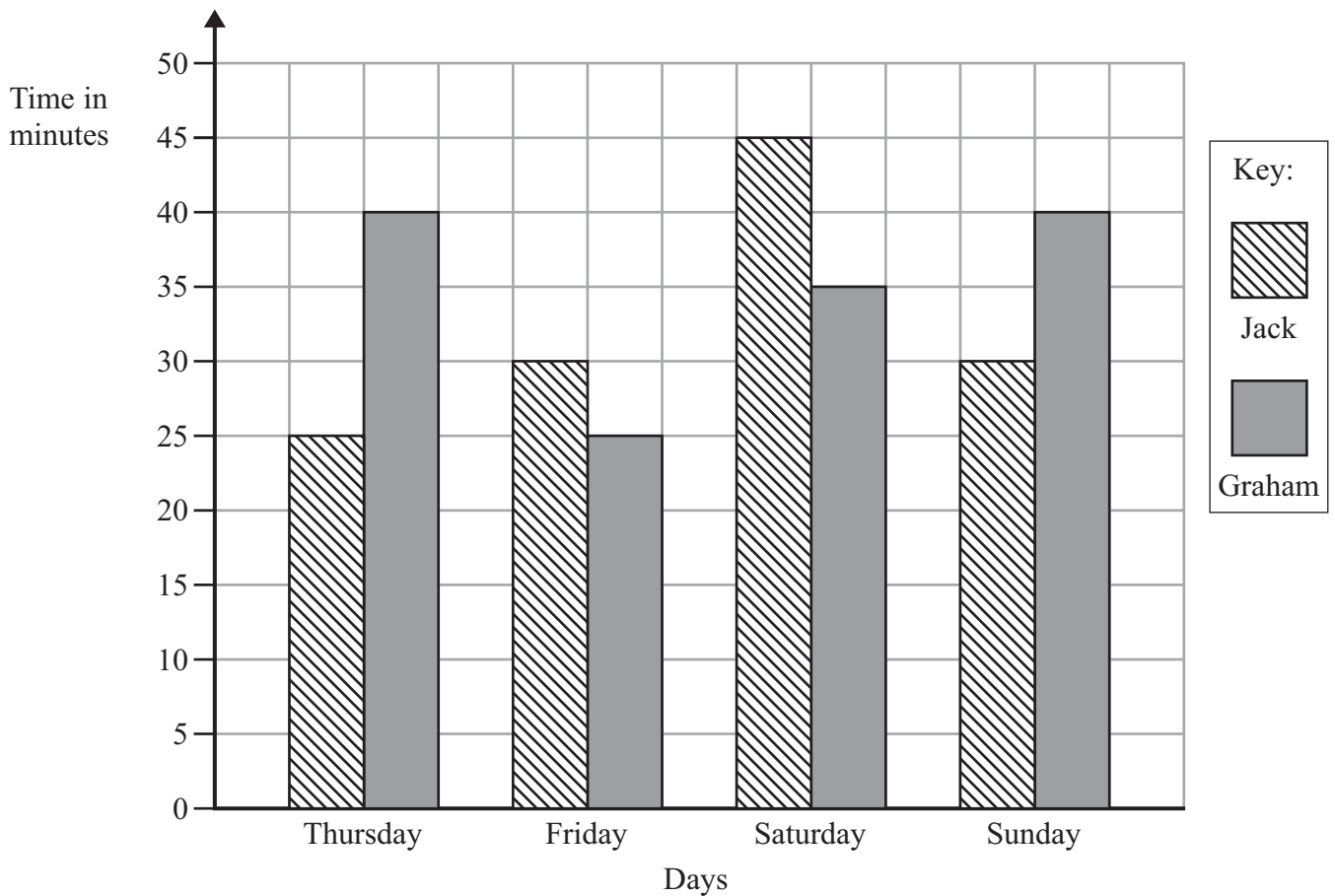
(f) Why does $\frac{1}{4} = \frac{2}{8}$?

(1)

(Total for Question 8 is 6 marks)



- 9 Jack and Graham each recorded the time, in minutes, they each spent sending messages on Thursday, on Friday, on Saturday and on Sunday last week.



- (a) How many minutes did Graham spend sending messages on Saturday?

..... minutes
(1)

- (b) On which day did Jack spend exactly 25 minutes sending messages?

.....
(1)



*(c) Who spent the greater total time sending messages?
You must show your working.

(3)

(Total for Question 9 is 5 marks)

10 Valentina is going to have a meal.
She can choose one starter and one main course from the menu.

Menu	
Starter	Main course
Soup	Beef
Prawns	Tuna
Mushrooms	Vegetarian

Write down all the possible combinations Valentina can choose.

.....

.....

.....

(Total for Question 10 is 2 marks)



11 (a) Simplify $b + b + b + b$

.....
(1)

(b) Simplify $8n - 3n$

.....
(1)

(c) Simplify $3 \times c \times d$

.....
(1)

(d) Simplify $3x + 7y + 2x - y$

.....
(2)

(Total for Question 11 is 5 marks)

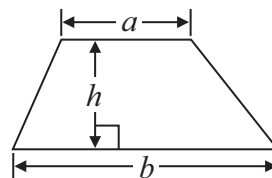


GCSE Mathematics 2MB01

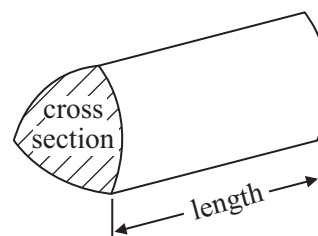
Formulae: Foundation Tier

**You must not write on this formulae page.
Anything you write on this formulae page will gain NO credit.**

Area of trapezium = $\frac{1}{2}(a + b)h$



Volume of prism = area of cross section \times length








Answer ALL questions.

Write your answers in the spaces provided.

You must write down all stages in your working.

- 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)



2 Jose throws a fair coin once.

(a) Choose the word that best describes the likelihood he will get a tail.

impossible unlikely evens likely certain

.....
(1)

Grace rolls an ordinary dice once.

(b) Choose the word that best describes the likelihood she will get a 6

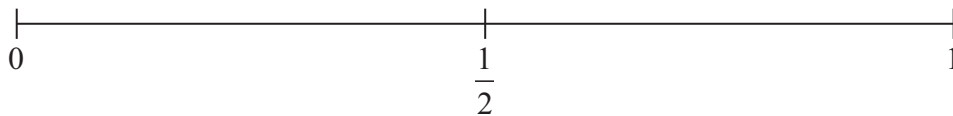
impossible unlikely evens likely certain

.....
(1)

There are only red sweets in a bag.

Stella takes at random one sweet from the bag.

(c) On the probability scale below, mark with a cross (×) the probability that she takes a red sweet.

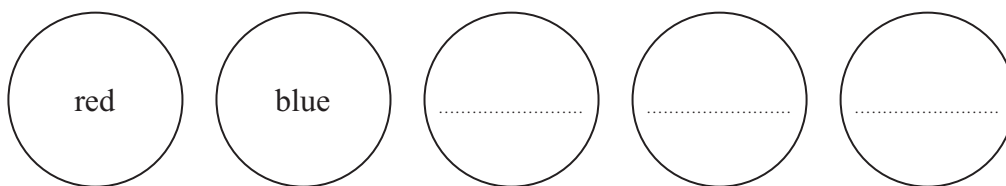


(1)

Here are some counters.

The counters are coloured either red or blue.

Three of the counters have not been marked with a colour.



Gill is going to take at random one of the counters.

She is more likely to take a red counter than a blue counter.

(d) Write a suitable colour on each of the unmarked counters.

(1)

(Total for Question 2 is 4 marks)

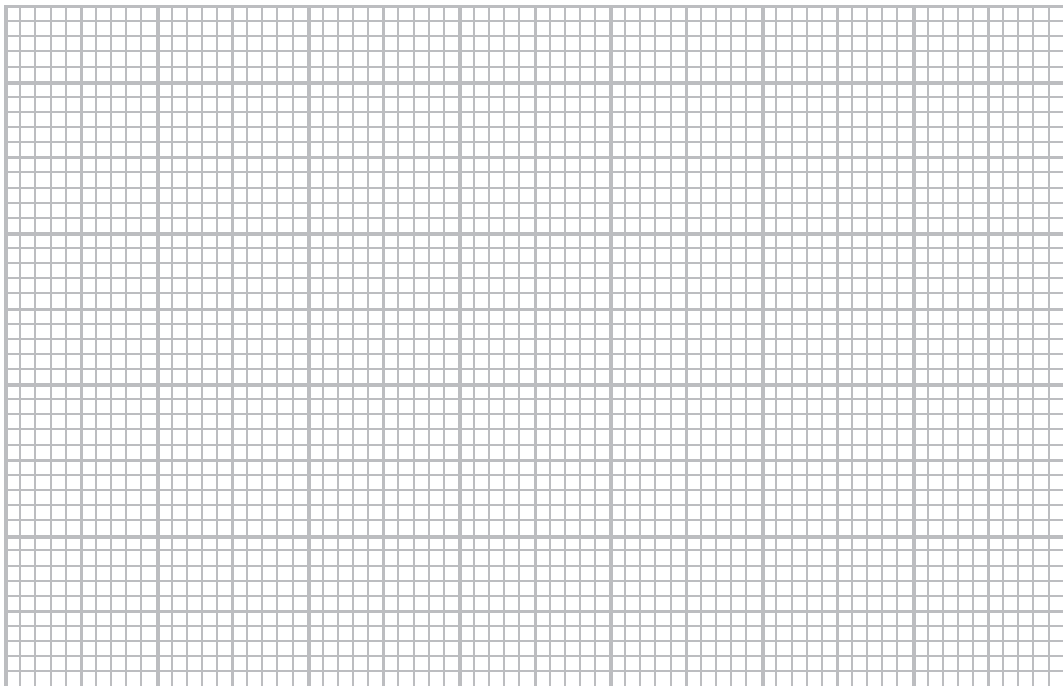


*3 Harry and Shamus recorded the number of minutes they each spent watching TV on Monday to Thursday last week.

The table shows information about their results.

	Monday	Tuesday	Wednesday	Thursday
Harry	35	30	25	20
Shamus	10	20	25	40

(a) Show this information in a suitable diagram.



(4)

(b) Compare the numbers of minutes Harry and Shamus each spent watching TV on Monday to Thursday last week.
Write down two comparisons.

1

.....

2

.....

(2)

(Total for Question 3 is 6 marks)



4 The diagram shows the cost of a bag of soil and the cost of a box of seeds.



Kate buys two bags of soil and three boxes of seeds.

She gets $\frac{1}{4}$ off the total cost.

Kate pays with a £20 note.

How much change should Kate get?

£

(Total for Question 4 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		
1		
2		
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)

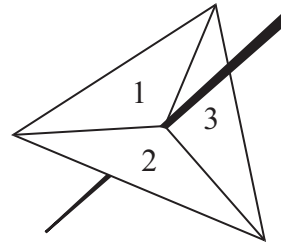
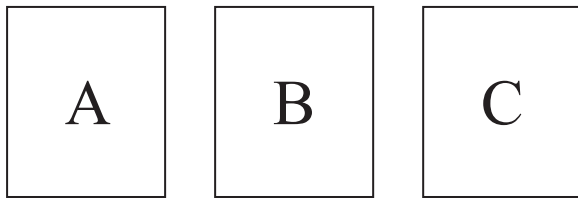


- *6 Jasmine wants to record a film on a DVD.
The film is 95 minutes long.
Jasmine's DVD has $1\frac{1}{2}$ hours of recording time left.
Can Jasmine record all of the film on this DVD?
You must show your working.

(Total for Question 6 is 2 marks)



7 Steve has three cards and a fair 3-sided spinner.



The cards are labelled A, B and C.
The sides of the spinner are labelled 1, 2 and 3

Steve is going to take at random one card.
He is then going to spin the spinner.

- (a) List all the possible outcomes he can get.
The first one is done for you.

(A, 1)

.....

.....

(2)

- (b) Write down the probability the card will be labelled B and the spinner will land on 2

.....

(1)

(Total for Question 7 is 3 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.

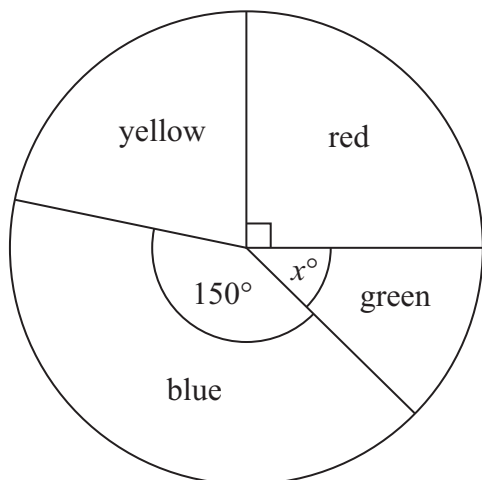


Diagram **NOT** accurately drawn

(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)



6 (a) Simplify $m + m + m$

.....
(1)

(b) Simplify $9e - 2e$

.....
(1)

(c) Simplify $5 \times 3g$

.....
(1)

(Total for Question 6 is 3 marks)

7 (a) $L = 3a + 2c$

$a = 5$

$c = 8$

Work out the value of L .

$L =$
(2)

(b) Kirsty buys some buns.

She buys x packs of currant buns and y boxes of iced buns.

There are 6 currant buns in a pack of currant buns.

There are 8 iced buns in a box of iced buns.

Write down an expression, in terms of x and y , for the total number of buns Kirsty buys.

.....
(2)

(Total for Question 7 is 4 marks)



*8 Becky wants to buy a table and six chairs.

Three shops sell the same types of tables and chairs.

Tables-R-Us	
Table	£120
Total for 4 chairs	£120
Each extra chair	£40

Fred's Furniture	
Table	£120
Each chair	£32

Tables 'n Chairs	
Table	£120
Total for 2 chairs	£70

Becky wants to buy the table and six chairs from the same shop.
She wants to pay the lowest total price.

Which shop should Becky buy the table and six chairs from?
You must show all your working.

(Total for Question 8 is 4 marks)

9 David is going to buy a cooker.
The cooker has a price of £320
David pays a deposit of 15% of the price of the cooker.

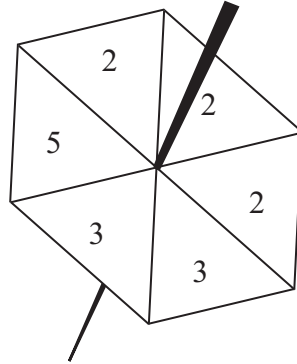
How much money does David pay as a deposit?

£.....

(Total for Question 9 is 2 marks)



- 10 Meela has a fair 6-sided spinner.
The sides of the spinner are numbered 2, 2, 2, 3, 3, 5



Meela spins the spinner once.

- (a) Which number is the spinner **least** likely to land on?

.....
(1)

- (b) From the following list, choose the word that best describes the likelihood that the spinner will land on 2

impossible unlikely evens likely certain

.....
(1)

- (c) Write down the probability that the spinner will land on 3

.....
(2)

(Total for Question 10 is 4 marks)



11 Susan and Joe are going on holiday.
They can take two cases onto the plane free of charge if the total weight of the two cases is no more than 40 kg.

Susan's case has a weight of 22.8 kg.
Joe's case has a weight of 19.5 kg.

*(a) Can they take their two cases onto the plane free of charge?

(2)

Susan and Joe want to be at the airport terminal at 14 30

It will take 1 hour and 20 minutes to drive from home to the airport.
It will then take a total of 30 minutes to park the car and go into the airport terminal.

(b) What is the latest time they can leave home?

.....
(3)

(Total for Question 11 is 5 marks)



- 12 Harry is going to plant some bean plants in his garden.
The garden is in the shape of a rectangle 3 metres by 2 metres.

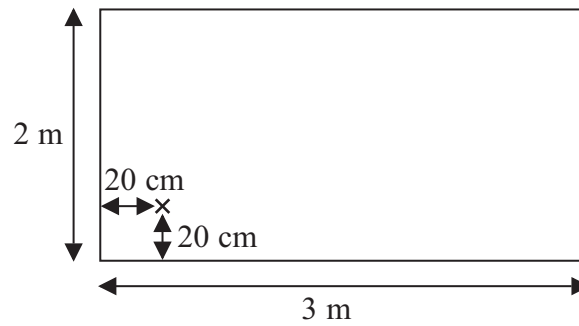


Diagram **NOT**
accurately drawn

Harry will plant the first bean plant 20 cm from the edges of the garden, as shown in the diagram.

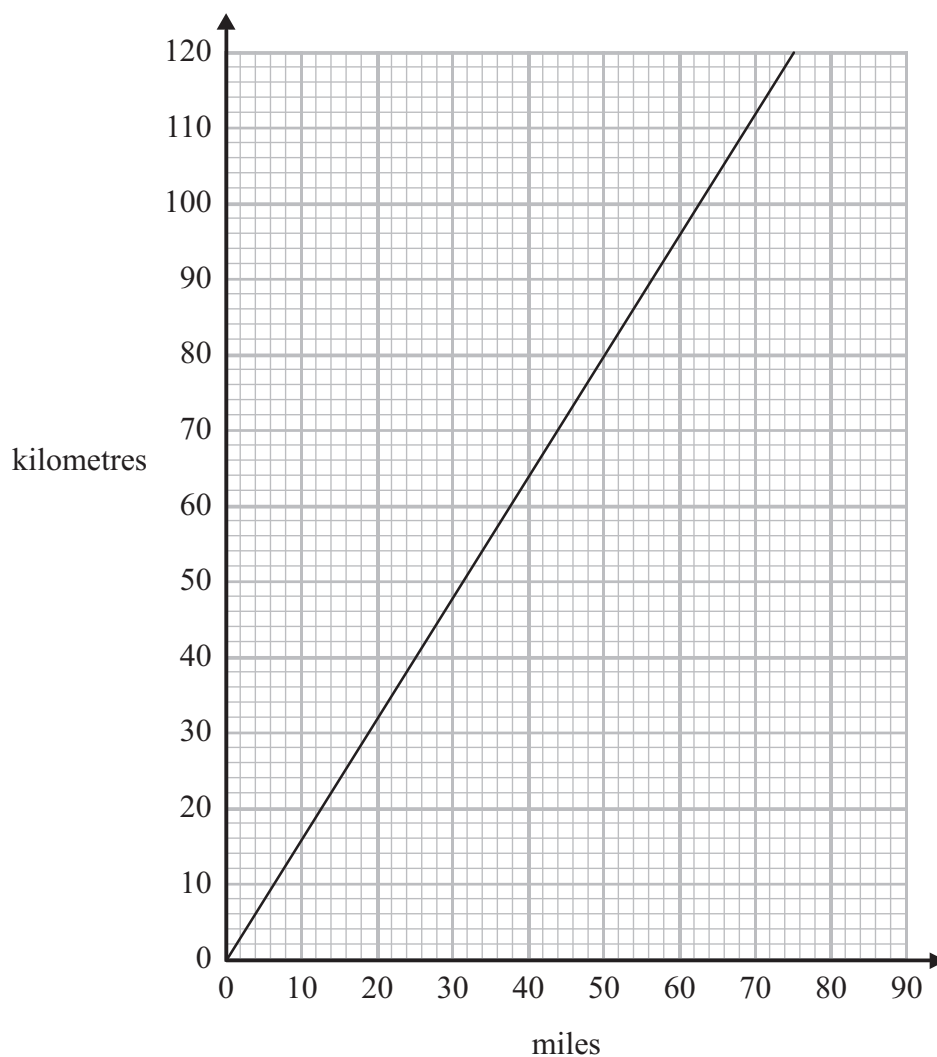
Harry will plant the bean plants in rows.
In each row, the space between plants will be 20 cm.
The space between rows will be 20 cm.

Work out the greatest number of bean plants Harry can plant in his garden.

.....
(Total for Question 12 is 4 marks)



*13 You can use this graph to change between miles and kilometres.



The distance from Paris to London is 280 miles.
The distance from Paris to Amsterdam is 500 kilometres.

Is Paris further from London or further from Amsterdam?
You must show how you get your answer.

(Total for Question 13 is 3 marks)





On the grid, draw an enlargement of the shaded shape with scale factor 3

(Total for Question 14 is 2 marks)



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



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)

*16 Here are the first four terms in a number sequence.

5 8 11 14

Kasey thinks that the number 34 is in this sequence.

Is Kasey correct?

You must show how you get your answer.

(Total for Question 16 is 3 marks)

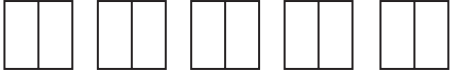
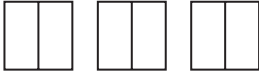
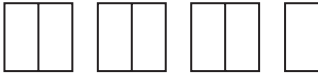


Answer ALL questions.

Write your answers in the spaces provided.

You must write down all stages in your working.

- 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)



2 Here are the ages of 10 children at a party.

6 5 8 6 7 7 8 8 8 6

(a) Write down the mode.

.....
(1)

(b) Work out the mean age of the children.

.....
(2)

(c) Work out the range of the ages of the children at the party.

.....
(2)

Another child comes to the party.
This child is 7 years old.

(d) Does this change the range of the ages of the children at the party?
Explain your answer.

.....
.....
(1)

(Total for Question 2 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)



Answer ALL questions.

Write your answers in the spaces provided.

You must write down all the stages in your working.

- 1** Write the following numbers in order of size.
Start with the smallest number.

0.4 0.02 0.37 0.152 0.2

.....
(Total for Question 1 is 1 mark)

- 2** Write 0.6 as a percentage.

..... %

(Total for Question 2 is 1 mark)

- 3** Here is a list of numbers.

3 5 7 12 15 18 20

From the list, write down a factor of 10

.....
(Total for Question 3 is 1 mark)

- 4** Write 7829 to the nearest 1000

.....
(Total for Question 4 is 1 mark)

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA



5 (a) Work out $3 \times 5 + 7$

.....
(1)

(b) Work out 2^3

.....
(1)

(c) Write brackets () in this statement to make it correct.

$$7 \times 2 + 3 = 35$$

(1)

(Total for Question 5 is 3 marks)

6 Sue has 2 cats.

Each cat eats $\frac{1}{4}$ of a tin of cat food each day.

Sue buys 8 tins of cat food.

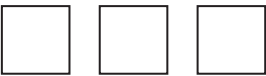
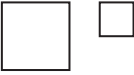

Has Sue bought enough cat food to feed her 2 cats for 14 days?
You must show how you get your answer.

(Total for Question 6 is 3 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:

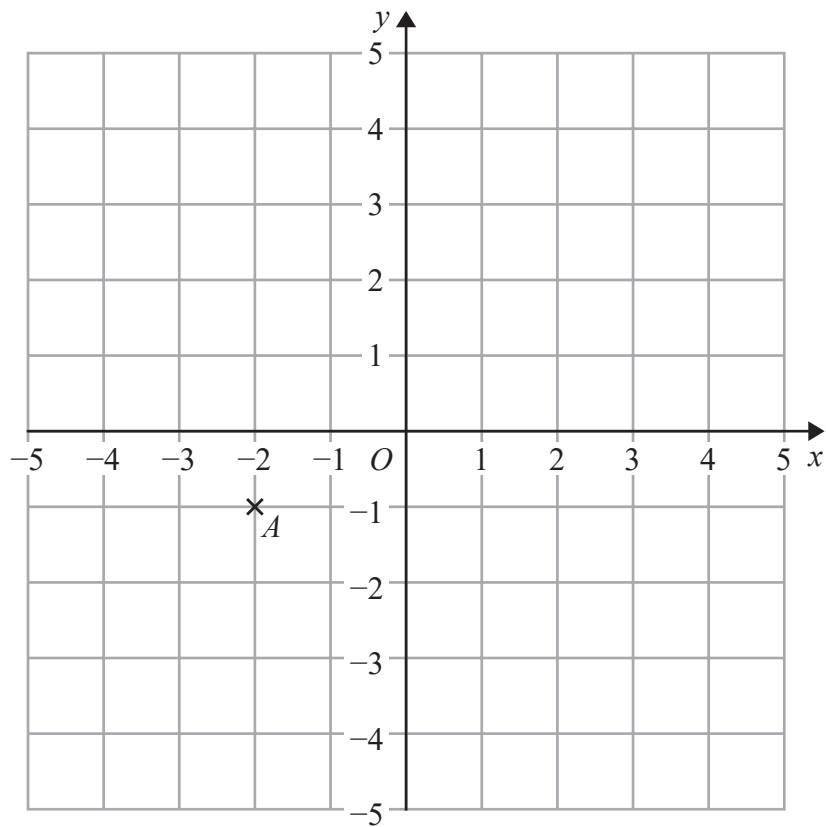
 represents 4 trees

There is a total of 30 trees in the orchard.

Complete the pictogram.

(Total for Question 7 is 3 marks)





(a) Write down the coordinates of point A .

(.....,)
(1)

(b) On the grid, mark with a cross (\times) the point $(2, 3)$
Label this point B .

(1)

(c) On the grid, draw the line with equation $x = -4$

(1)

(Total for Question 8 is 3 marks)



9 $g = 9$
 $h = 4$

Work out the value of $2g + 3h$

.....
(Total for Question 9 is 2 marks)

10 Write down two prime numbers that have a sum of 32

..... ,
(Total for Question 10 is 2 marks)

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA



DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

11 Here are some fractions.

$$\frac{9}{12} \quad \frac{6}{8} \quad \frac{18}{24} \quad \frac{10}{16} \quad \frac{15}{20}$$

One of these fractions is **not** equivalent to $\frac{3}{4}$

(a) Which fraction?

.....
(1)

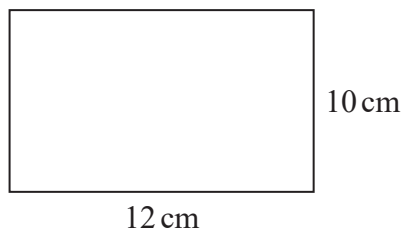
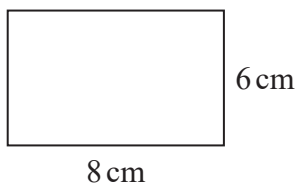
(b) Work out $\frac{1}{12} + \frac{5}{6}$

.....
(2)

(Total for Question 11 is 3 marks)



16 Here are two rectangles.



Jim says,

“The two rectangles are similar because $8 + 4 = 12$ and $6 + 4 = 10$ ”

Is Jim correct?

Explain your answer.

.....

.....

(Total for Question 16 is 1 mark)

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA



DO NOT WRITE IN THIS AREA

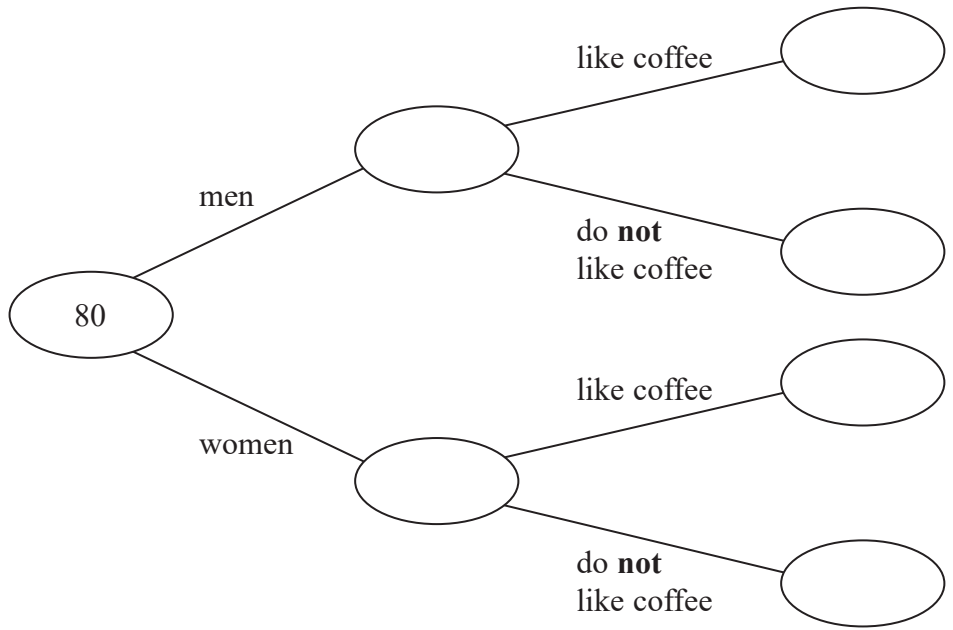
DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

17 80 people are asked if they like coffee.

- 48 of these people are women.
- 61 of the 80 people like coffee.
- 8 of the men do **not** like coffee.

(a) Use this information to complete the frequency tree.



(3)

One of the people who like coffee is chosen at random.

(b) Find the probability that this person is a woman.

.....
(2)

(Total for Question 17 is 5 marks)



Answer ALL questions.

Write your answers in the spaces provided.

You must write down all stages in your working.

1 (a) Write the number **two thousand and eighty five** in figures.

.....
(1)

(b) Write the number 5108 in words.

.....
(1)

(c) Write down the value of **9** in the number 2.96

.....
(1)

(d) Write down 157 correct to the nearest 10

.....
(1)

(Total for Question 1 is 4 marks)

2 Complete this table.

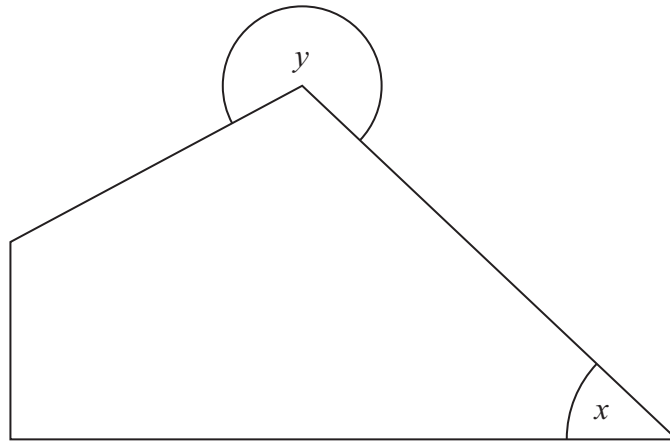
Write a sensible unit for each measurement.

	Metric	Imperial
The length of a pencil	centimetres
The weight of a tomato	ounces
The amount of milk in a bottle	pints

(Total for Question 2 is 3 marks)



3



(a) (i) On this diagram mark, with a letter R, a right angle.

(ii) What type of angle is angle x ?

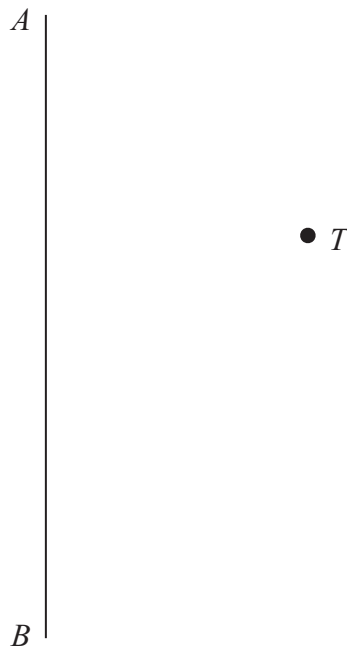
.....

(iii) What type of angle is angle y ?

.....

(3)

(b) AB is a straight line.



Draw a line from the point T perpendicular to the line AB .

(1)

(Total for Question 3 is 4 marks)

4



4 (a) Simplify $m + m + m + m + m$

.....
(1)

(b) Simplify $2p + 7p$

.....
(1)

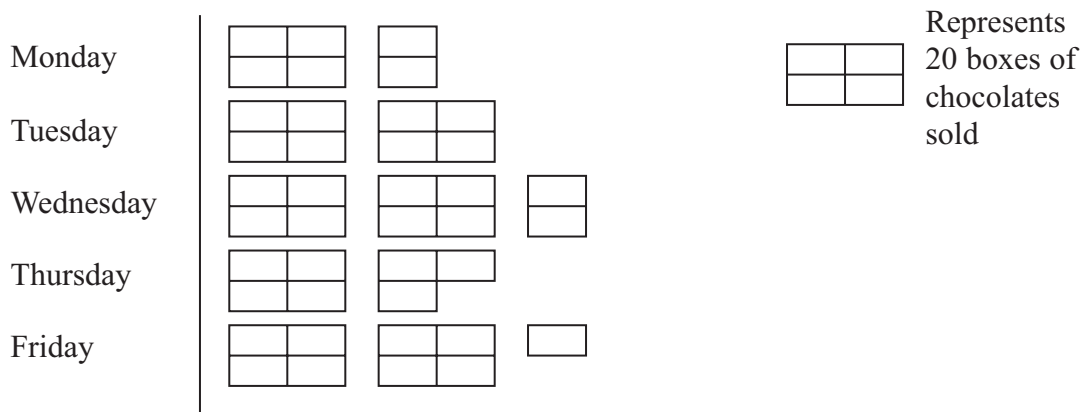
(c) Simplify $t \times w \times 4$

.....
(1)

(Total for Question 4 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.



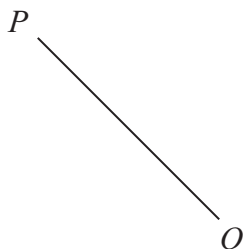
What fraction of the total number of these boxes of chocolates did Mr Fenn sell on Tuesday?

.....
(Total for Question 5 is 3 marks)



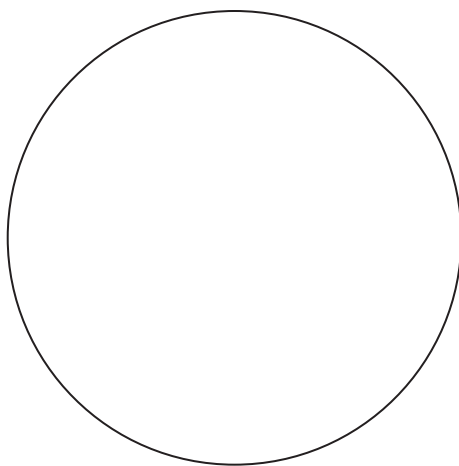
6 The line OP is a radius of a circle, centre O .

(a) Draw accurately the circle.



(1)

(b) On the circle below, draw a chord.



(1)

(Total for Question 6 is 2 marks)



Answer ALL questions.

Write your answers in the spaces provided.

You must write down all stages in your working.

You must NOT use a calculator.

1 (a) Write the number 3460 in words.

.....
(1)

(b) Write the number 258 correct to the nearest hundred.

.....
(1)

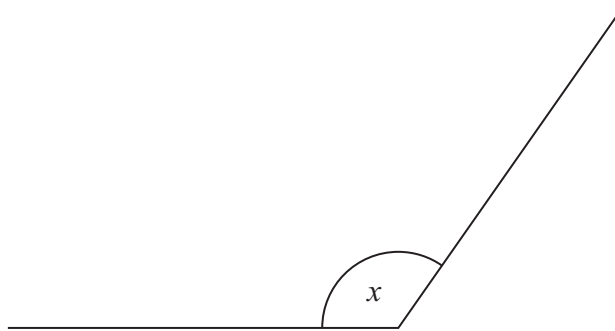
(c) Write these numbers in order of size.
Start with the smallest number.

6.37 6.5 6.48 6.04 6.59

.....
(1)

(Total for Question 1 is 3 marks)

2



(a) Write down the special name for the angle marked x .

.....
(1)

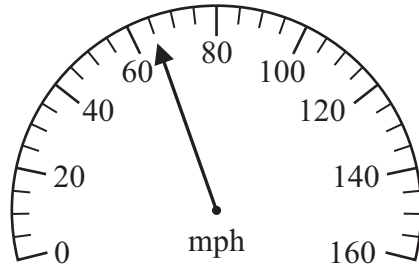
(b) Measure the size of the angle marked x .

.....
(1)

(Total for Question 2 is 2 marks)



3

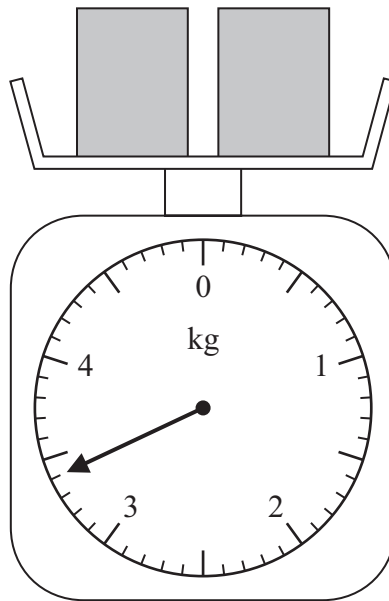


The diagram shows the speed of a car.

(a) Write down the speed.

..... mph
(1)

The diagram shows two boxes on some scales.



Each box has the same weight.

(b) Work out the weight of each box.

..... kg
(2)

(Total for Question 3 is 3 marks)

4



4 The table shows the minimum temperature on each of six days in January.

	Mon	Tues	Wed	Thurs	Fri	Sat
Minimum temperature	5°C	-1°C	-2°C	-3°C	-3°C	-4°C

(a) Write down the lowest temperature.

..... °C
(1)

(b) Work out the difference between the temperature on Tuesday and the temperature on Saturday.

..... °C
(1)

On Sunday, the temperature was 8°C higher than the temperature on Saturday.

(c) Work out the temperature on Sunday.

..... °C
(1)

(Total for Question 4 is 3 marks)

5 (a) Simplify $y + y + y + y$

.....
(1)

(b) Simplify $c \times d \times 5$

.....
(1)

(c) Simplify $2a + 4b + 3a - b$

.....
(2)

(Total for Question 5 is 4 marks)



6 (a) Write down the value of $\sqrt{49}$

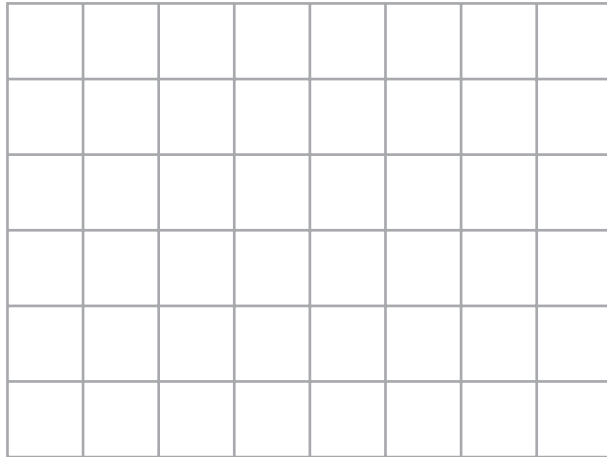
.....
(1)

(b) Write down the cube of 3

.....
(1)

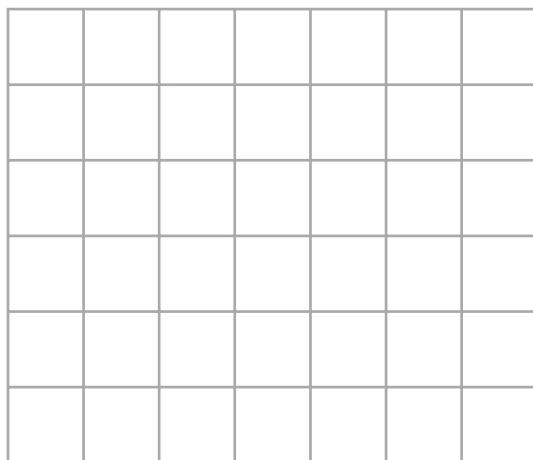
(Total for Question 6 is 2 marks)

7 (a) On the grid of centimetre squares, draw an isosceles triangle.



(1)

(b) On the grid of centimetre squares, draw a rectangle with a perimeter of 10 cm.



(2)

(Total for Question 7 is 3 marks)



Answer ALL questions.

Write your answers in the spaces provided.

You must write down all stages in your working.

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)



2 (a) In the space below, draw a straight line 10 cm long.

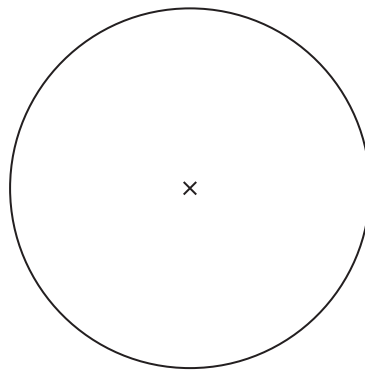
(1)

(b) Mark with a cross (\times), the midpoint of the line below.



(1)

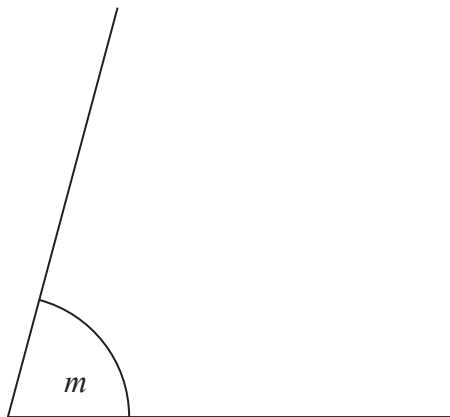
Here is a diagram of a circle, with centre marked \times .



(c) On the diagram, draw a radius of the circle.

(1)

(d) Measure the size of angle m .



(1)

(Total for Question 2 is 4 marks)



3 Edwin goes to a restaurant with some friends.

Here are the meals they have

2 fish and chips at £9.25 each

1 chicken and chips at £9.50

1 roast lamb at £10.55

4 puddings at £4.55 each.

Edwin pays for the meals with three £20 notes.

How much change should Edwin get?

£.....

(Total for Question 3 is 3 marks)

4 Work out the number that is halfway between 2.9 and 3.6

.....

(Total for Question 4 is 1 mark)

