Write your name here

Surname	Other names

Pearson Edexcel GCSE

Centre Number | | | | | |

Candidate Number | | | | |

Mathematics A

Paper 1 (Non-Calculator)

Foundation Tier

Wednesday 5 November 2014 – Morning
Time: 1 hour 45 minutes

Paper Reference
1MA0/1F

You must have: Ruler graduated in centimetres and millimetres, protractor, pair of compasses, pen, HB pencil, eraser. Tracing paper may be used.

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided – *there may be more space than you need.*
- **Calculators must not be used.**



Information

- The total mark for this paper is 100
- The marks for **each** question are shown in brackets – *use this as a guide as to how much time to spend on each question.*
- Questions labelled with an **asterisk** (*) are ones where the quality of your written communication will be assessed.

Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end.

Turn over ▶

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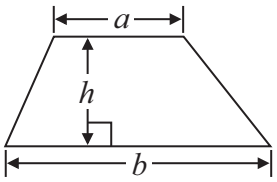
PEARSON

GCSE Mathematics 1MA0

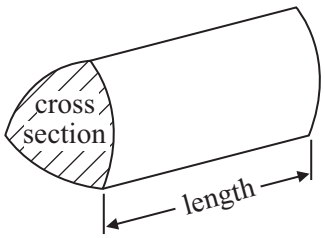
Formulae: Foundation Tier

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 × length



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 The table shows the heights of six mountains.

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

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

.....

(1)

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

.....

(1)

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

.....

(1)

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

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

.....

(1)

(Total for Question 1 is 4 marks)

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

Here are her results.

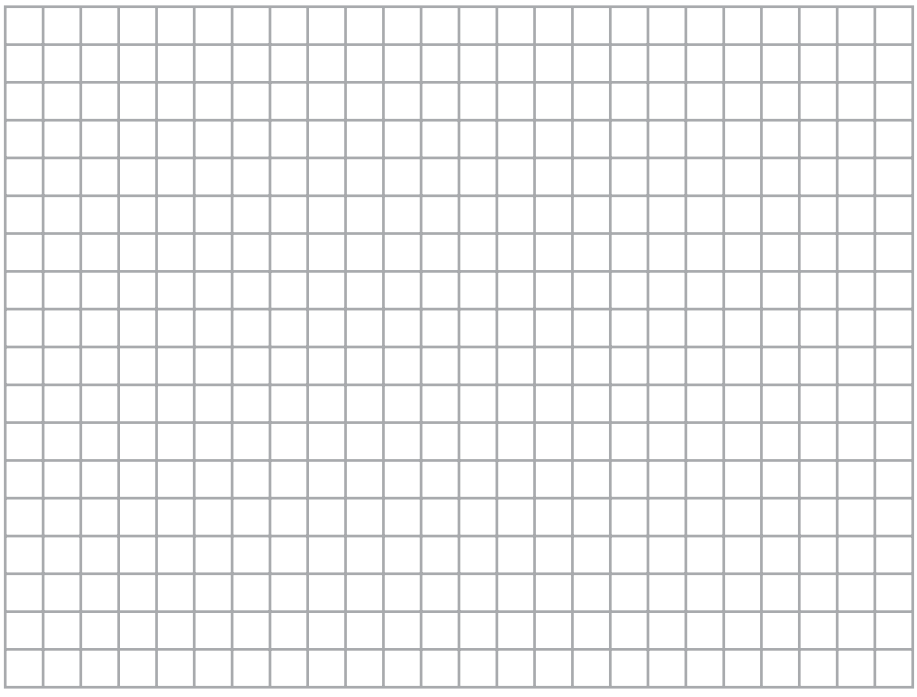
milk	plain	orange	plain	milk
coffee	white	milk	milk	orange
white	coffee	plain	milk	milk
milk	plain	coffee	milk	orange

(a) Complete the frequency table.

Flavour of chocolate	Tally	Frequency
plain		
milk		
coffee		
orange		
white		

(2)

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



(3)

(Total for Question 2 is 5 marks)

3 (a) Work out 56×1000

.....

(1)

(b) Work out $600 - 324$

.....

(1)

(c) Work out $\frac{1}{4}$ of 24 kg

..... kg

(1)

(d) Work out $4 \times 5 + 9$

.....

(1)

(e) Work out $18 - 10 \div 2$

.....

(1)

(Total for Question 3 is 5 marks)

4 Sarah has saved 254 pound coins.
She puts the pound coins into bags.
There are 20 pound coins in each full bag of coins.

Sarah is going to take all her full bags of coins to the bank.
She can only take up to 5 full bags of coins to the bank each day.

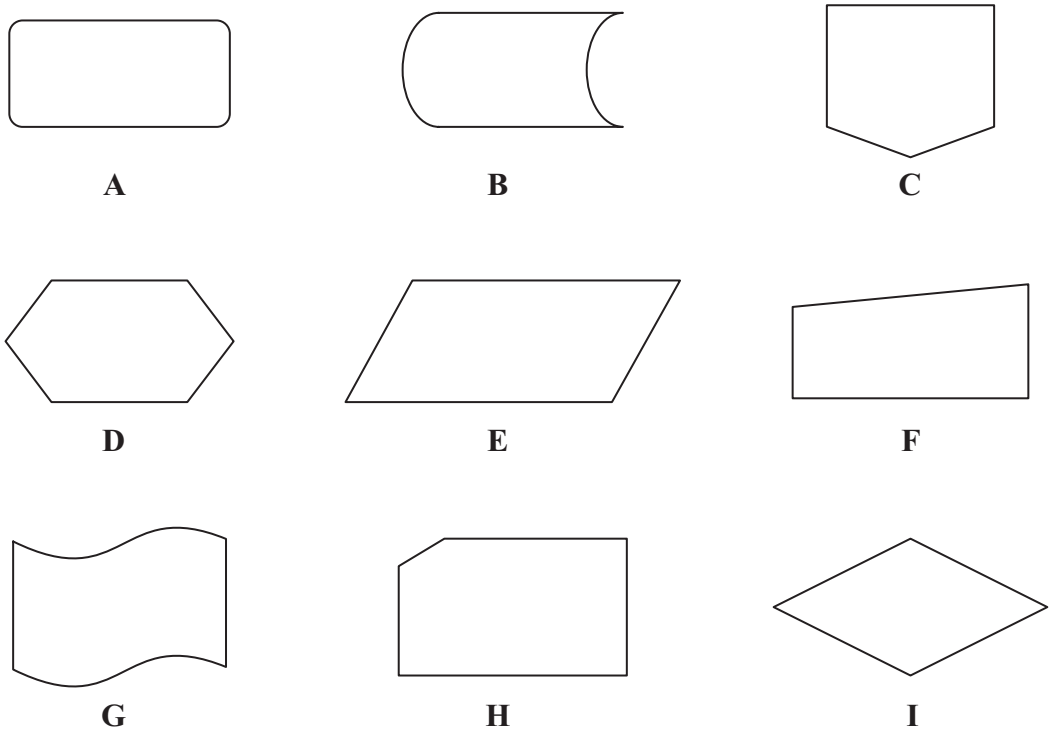
Sarah wants to go to the bank on as few days as possible.

On how many days will Sarah need to go to the bank?

.....

(Total for Question 4 is 3 marks)

5 Here are nine shapes.



(a) Write down the letter of a shape that has exactly one line of symmetry.

.....

(1)

Two of these shapes have rotational symmetry of order 2 and no lines of symmetry.

(b) Write down the letters of these two shapes.

..... and .....

(2)

Shape **D** is a polygon.

(c) Write down the mathematical name of this type of polygon.

.....

(1)

Shape **E** is a quadrilateral.

(d) Write down the mathematical name of this type of quadrilateral.

.....

(1)

(Total for Question 5 is 5 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)

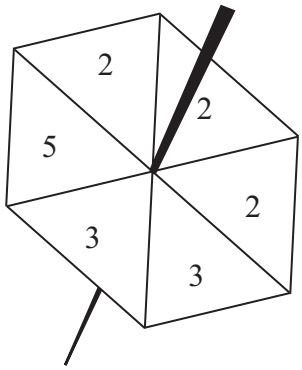
9 David is going to buy a cooker.
The cooker has a price of £320
David pays a deposit of 15% of the price of the cooker.

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.

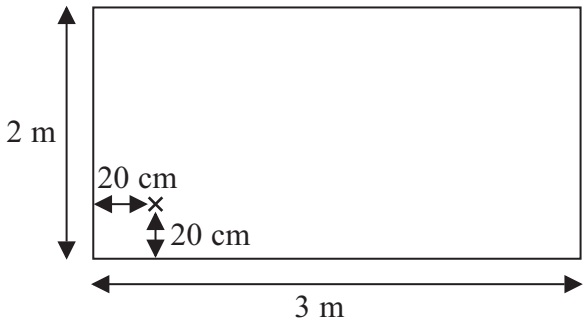


Diagram **NOT** accurately drawn

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

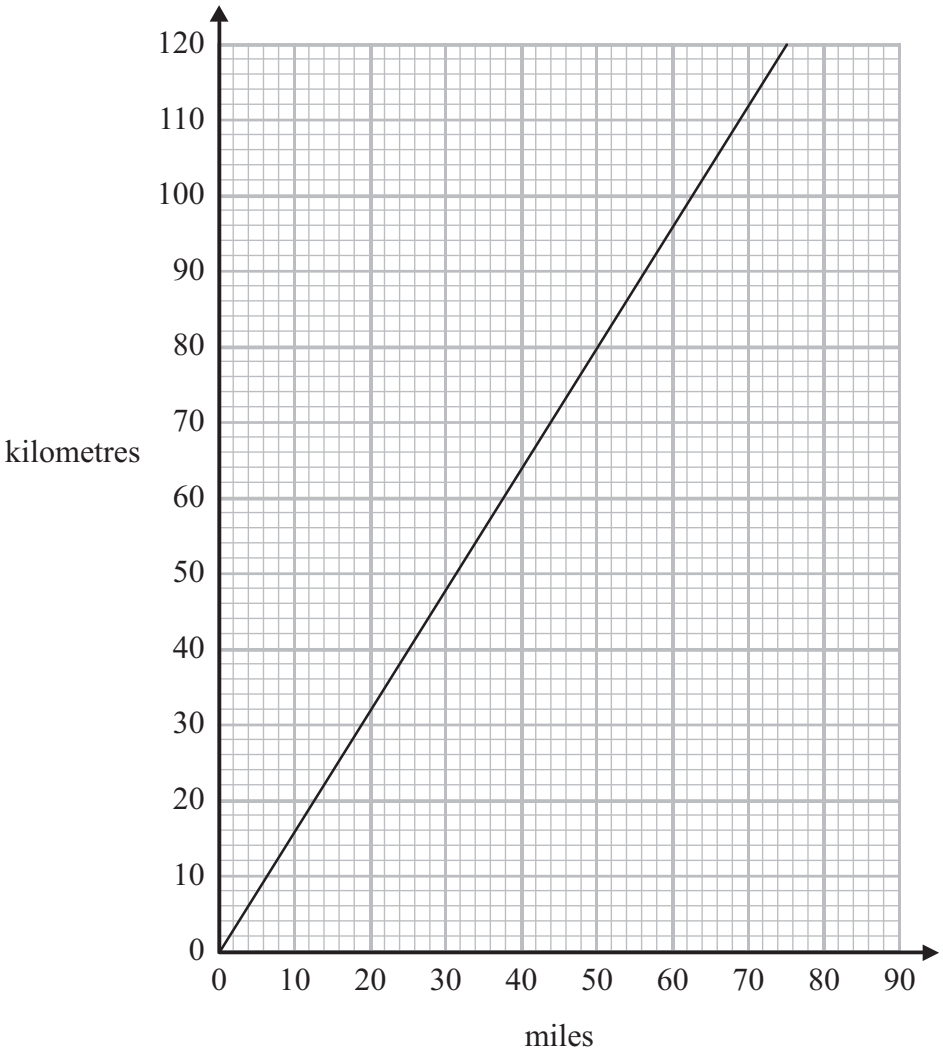
Harry will plant the bean plants in rows.
In each row, the space between plants will be 20 cm.
The space between rows will be 20 cm.

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.

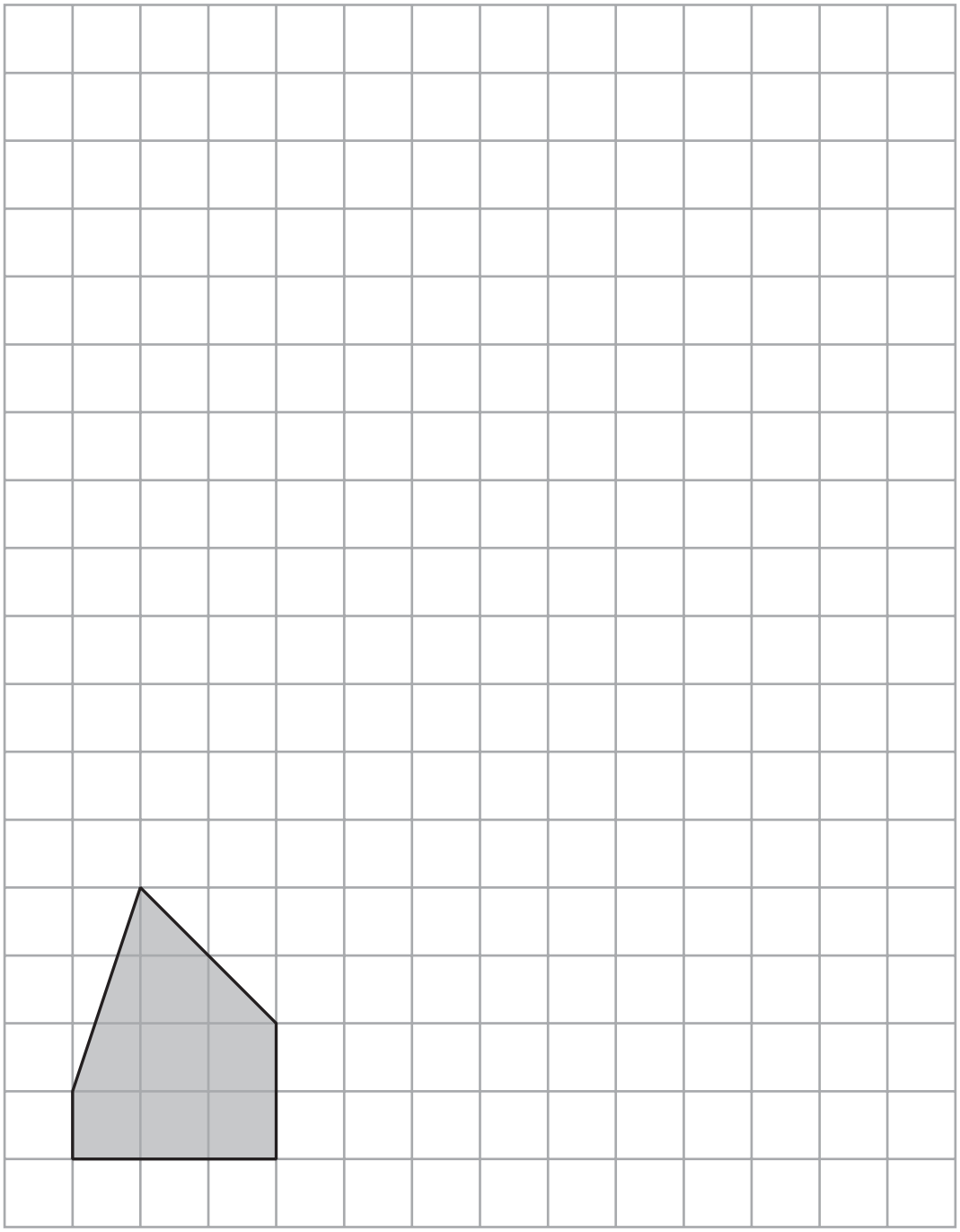


The distance from Paris to London is 280 miles.
The distance from Paris to Amsterdam is 500 kilometres.

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

(Total for Question 13 is 3 marks)

14



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.

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

Key : 3 | 1 means 31 cm

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

.....

(1)

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

..... cm

(1)

(c) Work out the range of the heights.

..... cm

(2)

(Total for Question 15 is 4 marks)

***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)

17 The diagram shows a cuboid.

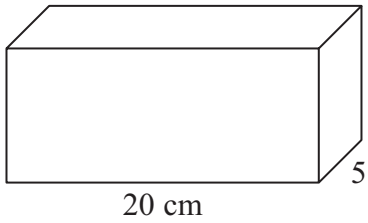


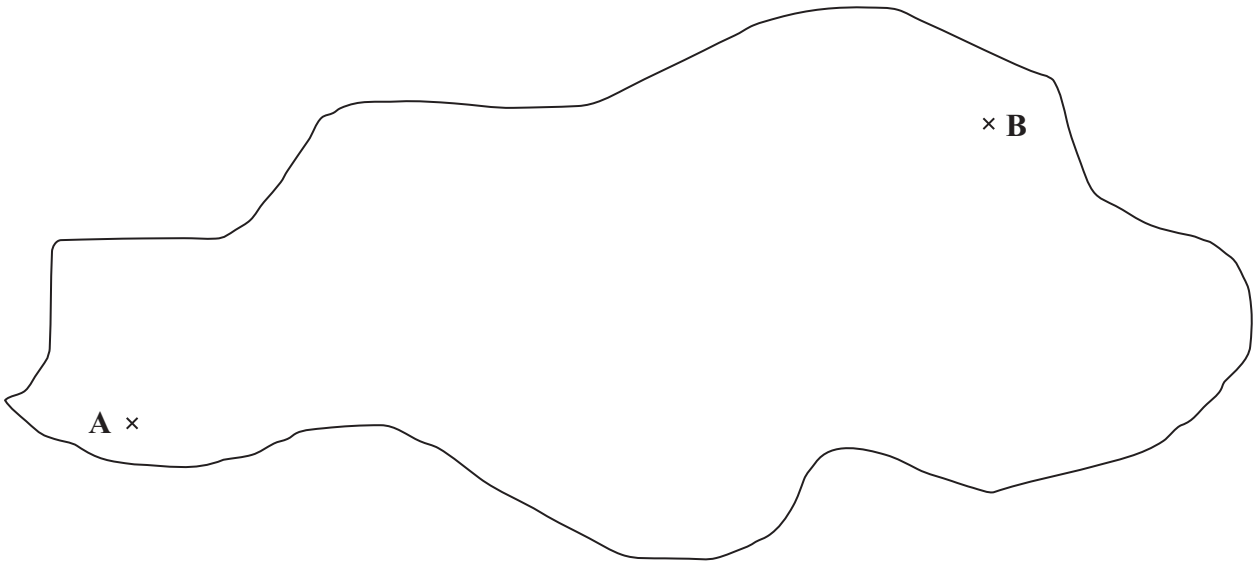
Diagram **NOT** accurately drawn

Work out the volume of the cuboid.

.....

(Total for Question 17 is 3 marks)

18 The map shows two airports, **A** and **B**.



Scale: 1 cm to 100 km

A plane flies directly from **A** to **B**.
The average speed of the plane is 300 km/h.

How long does the plane take to fly from **A** to **B**?
You must show all your working.

..... hours

(Total for Question 18 is 3 marks)

19 Miss Martins is organising a school play.

The total cost of putting on the play is £960

The school pays £300 of this cost.
Miss Martins sells tickets to pay the rest of the cost.

Miss Martins sells 500 tickets.
Each ticket costs £4

Miss Martins has enough money to pay the rest of the costs and to give all the money left over to charity.

Work out how much money Miss Martins gives to charity.

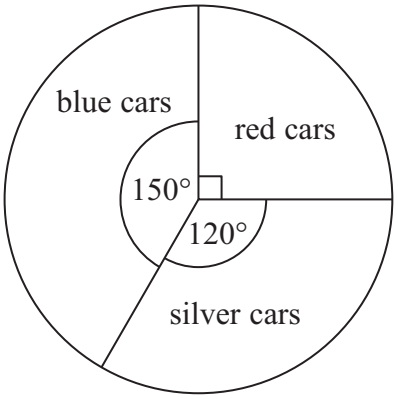
£.....

(Total for Question 19 is 4 marks)

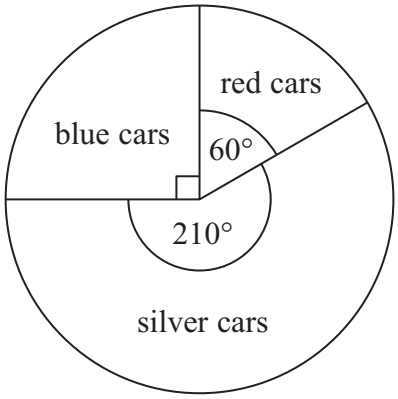
20 There are only silver cars, blue cars and red cars in the car parks at Allerton School and at Bragdon School.

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

Allerton School



Bragdon School



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

.....

(2)

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

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

.....

(2)

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

Tick (✓) one box to show your answer.

☐ Allerton School ☐ Bragdon School ☐ Not enough information

Explain your answer.

.....

.....

.....

(1)

(Total for Question 20 is 5 marks)

21 Suha has a full 600 m*l* bottle of wallpaper remover.
She is going to mix some of the wallpaper remover with water.

Here is the information on the label of the bottle.

Wallpaper remover
600 m*l*

Mix $\frac{1}{4}$ of the wallpaper remover with 4500 m*l* of water

Suha is going to use 750 m*l* of water.

How many millilitres of wallpaper remover should Suha use?
You must show your working.

..... m*l*

(Total for Question 21 is 4 marks)

***22**

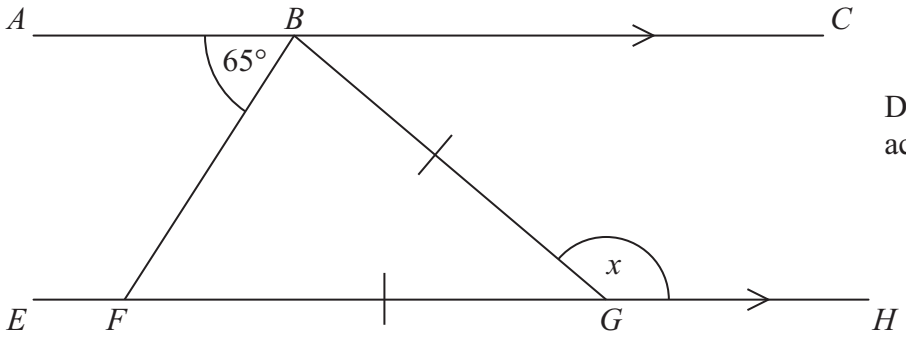


Diagram **NOT** accurately drawn

ABC is parallel to *EFGH*.

GB = *GF*
Angle *ABF* = 65°

Work out the size of the angle marked *x*.
Give reasons for your answer.

(Total for Question 22 is 4 marks)

23 Jack wants to find out how far people live from their nearest supermarket.

He uses this question on a questionnaire.

How far do you live from your nearest supermarket?

☐ 0 to 2 ☐ 2 to 3 ☐ 3 to 4 ☐ 5 to 6

(a) Write down **two** things wrong with this question.

1 .....

.....

2 .....

.....

(2)

Jack also wants to find out how often people go shopping.

(b) Write a question Jack could use on his questionnaire to find out how often people go shopping.

(2)

(Total for Question 23 is 4 marks)

24 (a) Factorise $3e^2 + 5e$

.....

(1)

(b) Solve $7(k - 3) = 3k - 5$

$k =$ .....

(3)

(c) Make a the subject of the formula $f = \dfrac{a + 1}{2}$

.....

(2)

(Total for Question 24 is 6 marks)

25 Express 180 as a product of its prime factors.

.....

(Total for Question 25 is 3 marks)

26 The diagram shows the plan of a floor.

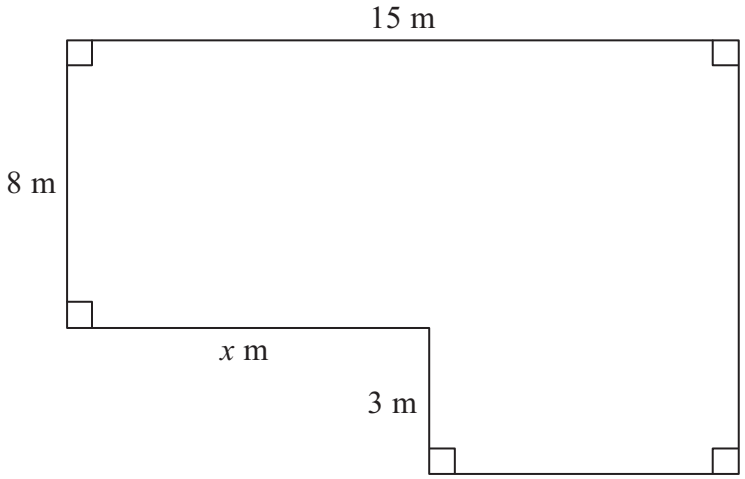


Diagram **NOT** accurately drawn

The area of the floor is 138 m^2.

Work out the value of x.

.....

(Total for Question 26 is 4 marks)

TOTAL FOR PAPER IS 100 MARKS

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