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4MA1 Nov 2026 Paper 2 Best Guess Paper

———————————- Disclaimer ———————————-

This paper has been created based on topics from previous years and careful analysis of what topics are highly likely to appear in paper 2H. The paper should be excellent at helping students revise for exams. This paper is specifically targeted at students aiming for a Grade 5, so it intentionally avoids some of the grade 7 to 9 real exam paper. The topics from this paper may well appear in the real exams, however there is absolutely no guarantee of this. There are deliberately more questions at a higher grade than you would expect.
Despite what you might see on social media it is not possible to "predict" the paper perfectly. This is usually what people say when they are selling you something...

The best way to prepare for the exams is to revise all topics
You can find a link to this paper and more completely free resources at www.mygrade9mathstutor.com

If you find this paper help please support me, by buying me a coffee

The Playlist for Solutions can be found

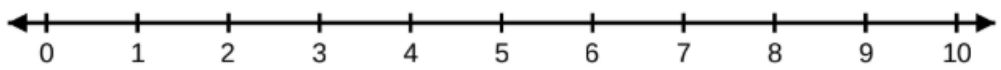
The best way to work with this paper is work though it all, watch the Clip. If you get the question incorrect watch the clip again and then try the similar questions from the worksheets

Answer ALL TWENTY FIVE questions.
Write your answers in the spaces provided.

You must write down all the stages in your working.

1. (a) Solve the inequality $3x - 5 > 10$

(b) Represent your solution on the number line below.



(Total for Question 1 is 3 marks)

Model Solution	Practice Perfect Questions

2. A plane has a length of 78 metres.

A scale model is made of the plane.
The scale of the model is 1: 200

Work out the length of the scale model.
Give your answer in centimetres.

..... cm

(Total for Question 2 is 3 marks)

Model Solution	Practice Perfect Questions

3. Here are eight numbers written in order of size:

$$p, \quad 4, \quad 7, \quad 10, \quad q, \quad 15, \quad r, \quad r$$

where p, q, and r are integers.
The median of the eight numbers is **11**
The mode of the eight numbers is **19**
The range of the eight numbers is **16**
Work out the value of p, the value of q and the value of r.

p = ...

q = ...

r = ...

Total for Question 3 is 3 marks)

Model Solution	Practice Perfect Questions

4 (a) Simplify $(2p^3)^5$

.....

(2)

Model Solution	Practice Perfect Questions

(b) Expand and simplify $2p(4p - 3) - p(p - 4)$

.....

(2)

Model Solution	Practice Perfect Questions

(c) Make c the subject of t= 4c + d

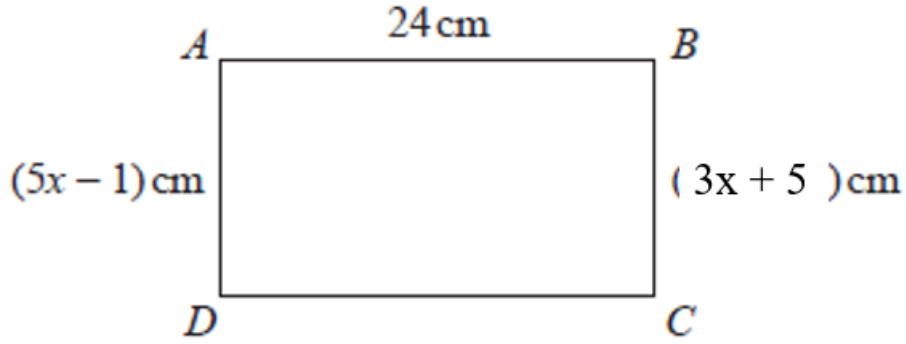
.....

(2)

(Total for Question 4 is 6 marks)

Model Solution	Practice Perfect Questions

5. The diagram shows rectangle *ABCD*



Work out the Area of the rectangle.
Show your working clearly.

..... cm^2

(Total for Question 5 is 4 marks)

Model Solution	Practice Perfect Questions

6. John plants 720 bulbs in a garden.
He plants tulip bulbs, crocus bulbs and daffodil bulbs so that

number of tulip bulbs : number of crocus bulbs : number of daffodil bulbs $= 7 : 3 : 2$

- 40% of the tulip bulbs are for yellow flowers.
- $\frac{2}{3}$ of the crocus bulbs are for yellow flowers.
- $\frac{3}{4}$ of the daffodil bulbs are for yellow flowers.

Work out the total number of bulbs that are for yellow flowers.

.....

(Total for Question 6 is 5 marks)

Model Solution	Practice Perfect Questions

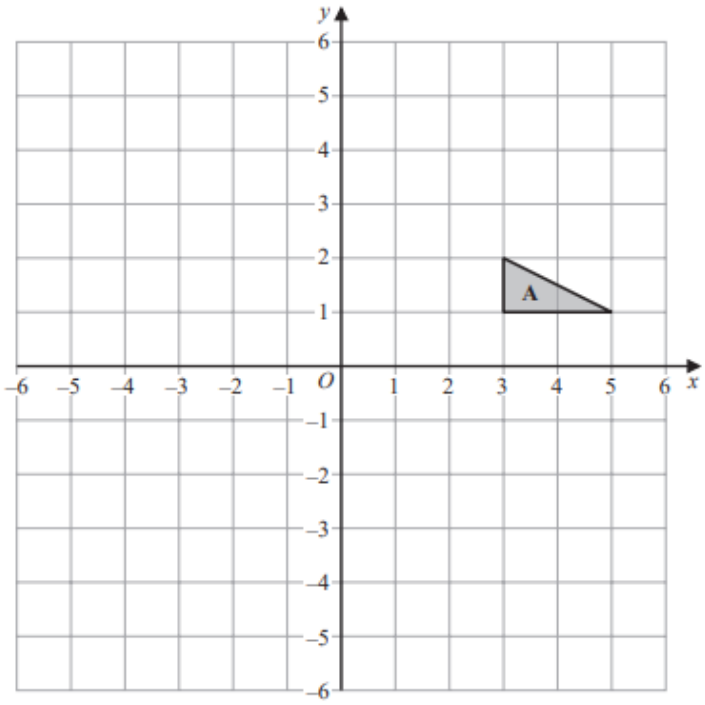
7. Mark manages a sports shop.
In October, he sold 600 pairs of running shoes.
In November, he sold 432 pairs of running shoes.
Work out the percentage decrease in the number of pairs of running shoes sold from October to November.

.....%

(Total for Question 7 is 3 marks)

Model Solution	Practice Perfect Questions

8



(a) Rotate triangle **A** 90° anticlockwise about the origin $(0,0)$.
Label the image **C**.

(2)

Model Solution	Practice Perfect Questions

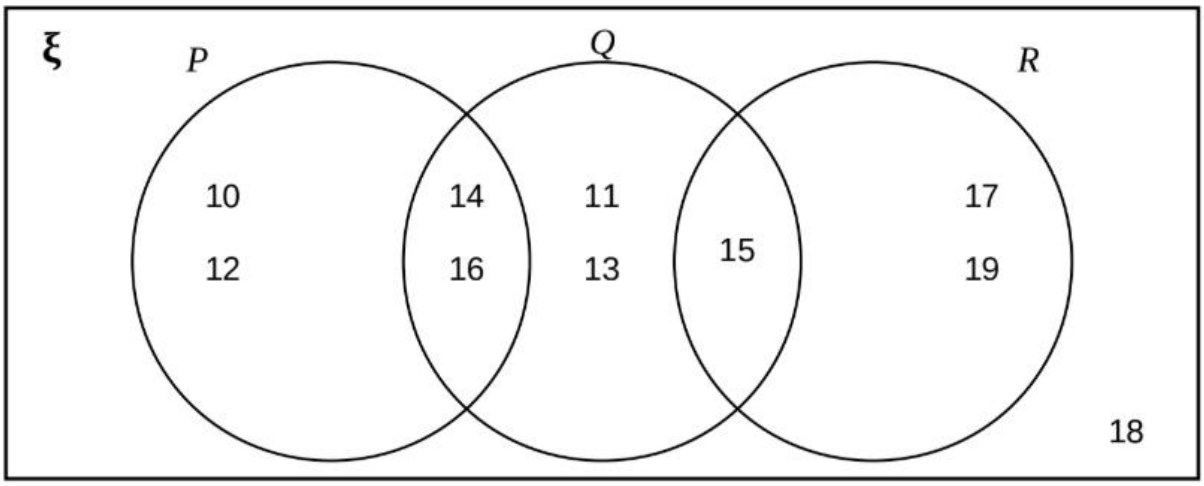
(b) Enlarge triangle **A** by scale factor 3 with centre $(5,1)$.
Label the image **B**.

(3)

(Total for Question 8 is 5 marks)

Model Solution	Practice Perfect Questions

9 Here is a Venn diagram.



(a) Write down the numbers that are in the set

(i) Q

.....

(ii) $P \cup R$

.....

Alice writes down the statement $P \cap R = \varnothing$

(b) Is Alice's statement correct?

You must give a reason for your answer.

.....

.....

One of the numbers in the Venn diagram is picked at random.

(c) Find the probability that this number is in set Q'.

.....

(Total for Question 9 is 5 marks)

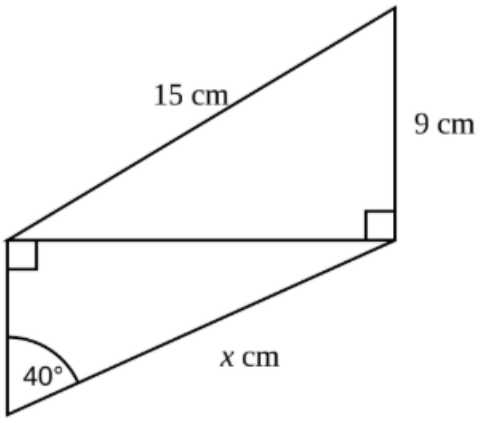
Model Solution	Practice Perfect Questions

10. In a spring sale, the normal price of a television is reduced by 20%.
The sale price of the television is £344.
Work out the normal price of the television.

(Total for Question 10 is 2 marks)

Model Solution	Practice Perfect Questions

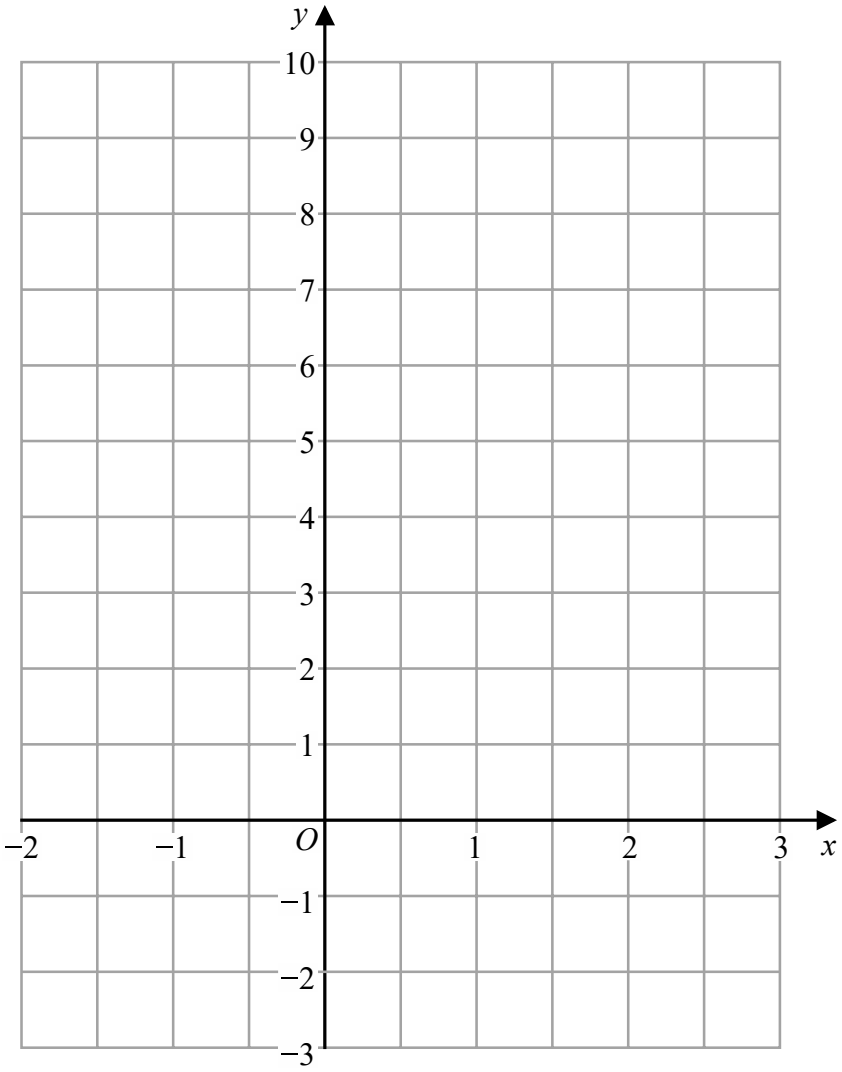
11. Work out the value of x.
Give your answer to 1 decimal place.



(Total for Question 11 is 4 marks)

Model Solution	Practice Perfect Questions

12. On the grid, draw the graph of $y = -2x + 4$ for values of x from -2 to 3.



(3)

(*b*) Show, by shading on the grid, the region that satisfies **all three** of the inequalities

$x \geqslant 0$ $y \geqslant -1$ $y \leqslant -2x+4$

Label the region **R**.

(2)

(Total for Question 12 is 5 marks)

Model Solution	Practice Perfect Questions

13. (a) Find the value of k when $5^k = 1$.

k = ...

(1)

$\frac{27}{3^8} = 3^m$

(b) Find the value of m.

m = ...

(2)

$(7^{-4})^3 \times 7^5 = 7^p$

(c) Find the value of p.

P = ...

(2)

(Total for Question 13 is 5 marks)

Model Solution	Practice Perfect Questions

14. $ABCDEFGHIJK$ is a regular 11-sided polygon.

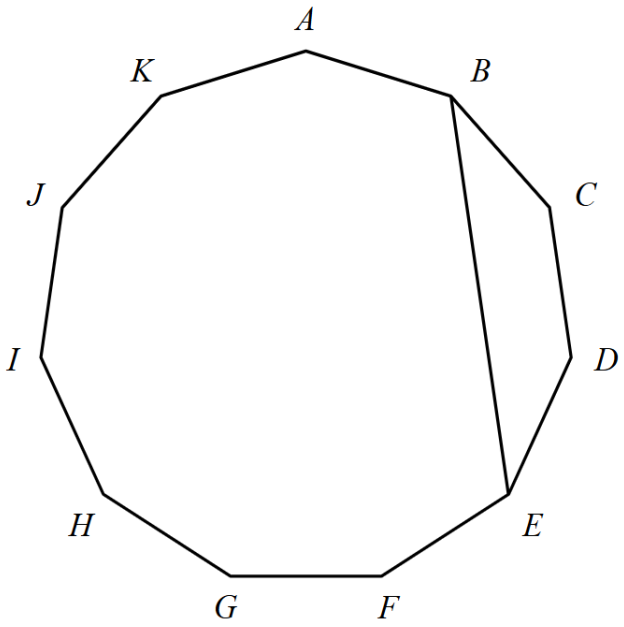


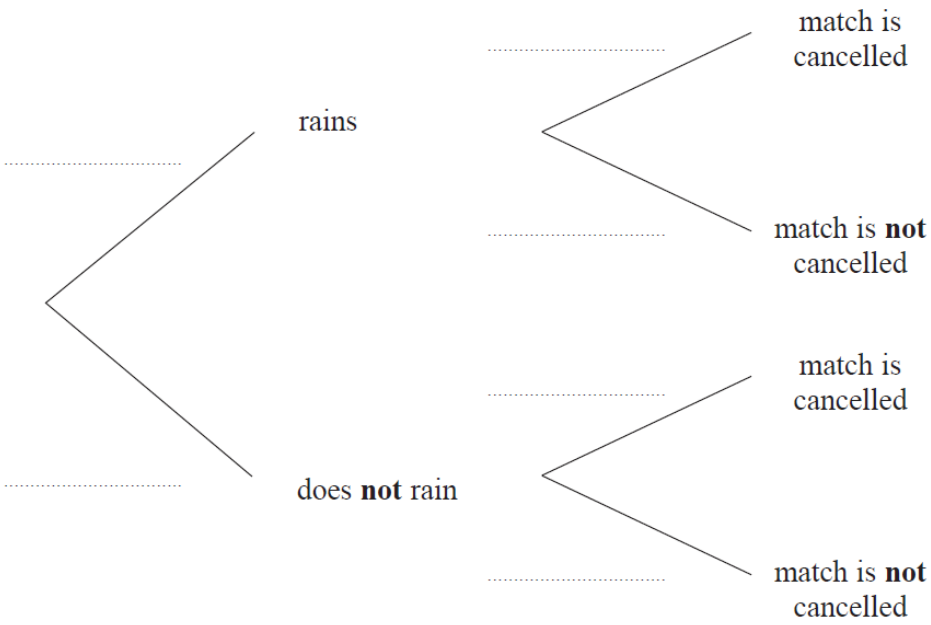
Diagram NOT accurately drawn

The vertices B and E are joined with a straight line.
Work out the size of angle BEF.
Give your answer correct to 1 decimal place.
You must show how you get your answer.

(Total for Question 14 is 4 marks)

Model Solution	Practice Perfect Questions

15. The probability that it will rain on a day in August is 0.35.
When it rains, the probability that my cricket match is cancelled is 0.8.
When it does not rain, the probability that my cricket match is not cancelled is 0.9.
(*a*) Complete the probability tree diagram for this information.



(2)

(b) Work out the probability that, on a day in August, my cricket match is cancelled.

(3)

(Total for Question 15 is 5 marks)

Model Solution	Practice Perfect Questions

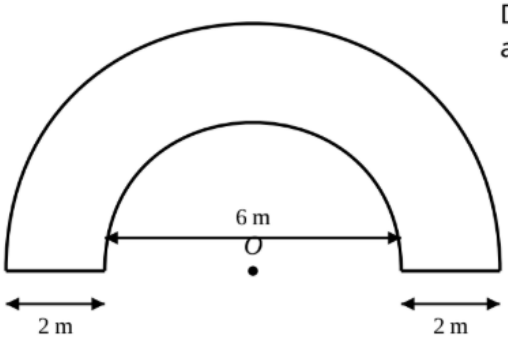
16.

The diagram shows a plan of a patio.
The edge of the patio consists of two semicircles and two straight lines.
Each semicircle has centre O.
The diameter of the large semicircle is 10 m.
The diameter of the small semicircle is 6 m.

Paving Stones
£24 per m^2

Jo is going to cover the patio with paving stones.
Jo has a budget of £1200.
Has Jo got enough money to buy all the paving stones she needs?
You must show all your working.

Diagram NOT accurately drawn



(Total for Question 16 is 5 marks)

Model Solution	Practice Perfect Questions

17. A solid metal sphere has radius 2.4 cm.
The mass of the sphere is 385 grams.
Work out the density of the sphere.
Give your answer correct to 3 significant figures.

..... g / cm^3

(Total for Question 17 is 3 marks)

Model Solution	Practice Perfect Questions

18. Solve $5x^2 - 6x - 3 = 0$.
Give your solutions correct to 3 significant figures.
Show your working clearly.

(3 marks)
(Total for Question 18 is 3 marks)

Model Solution	Practice Perfect Questions

19. Sarah recorded the number of emails she received each day for 11 days.
Here are the results in numerical order.

3 5 8 10 11 14 15 18 20 21 25

Find the interquartile range of the number of emails.

(2 marks)
(Total for Question 19 is 2 marks)

Model Solution	Practice Perfect Questions

20. The functions f and g are defined such that:

$$f(x) = \frac{3x - 5}{2}$$
$$g(x) = 2x^2 + 1$$

(a) Find $f^{-1}(x)$.

(2 marks)

(b) Work out the value of $gf(3)$.

(2 marks)
(Total for Question 20 is 4 marks)

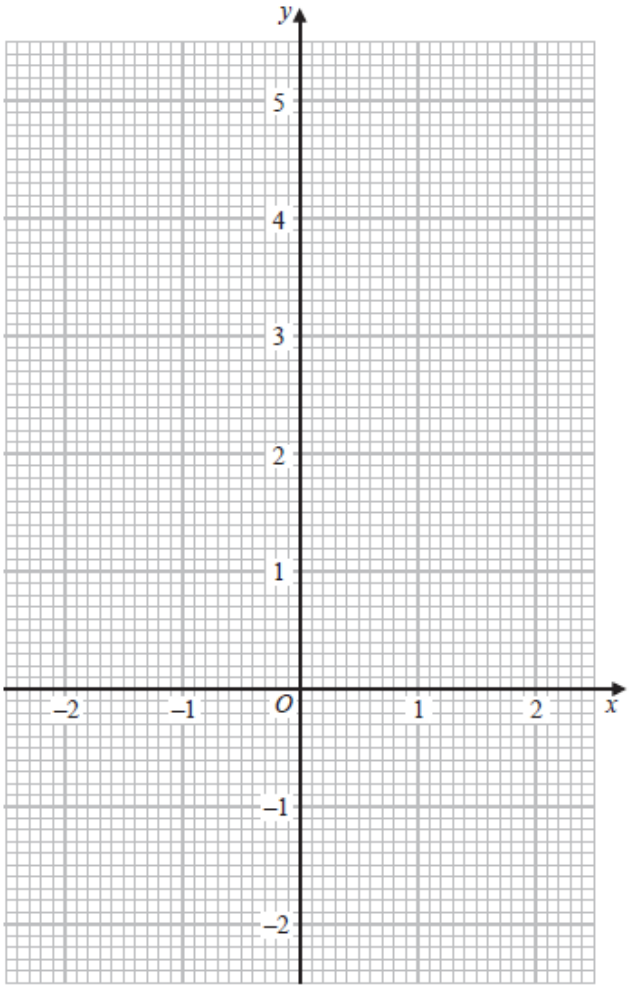
Model Solution	Practice Perfect Questions

21. *a*)Complete the table of values for $y = x^3 - 3x + 1$

x	–2	–1	–0.5	0		1	1.5	2
y		3	2.4			-1	-0.1	

(2)

(*b*) On the grid, draw the graph of $y = x^3 - 3x + 1$ for values of x from –2 to 2



(2)

(*c*) By drawing a suitable straight line on the grid, use your graph to find an estimate for the solution of $x^3 - 3x - 1 = 0$
Give your answer correct to one decimal place.

(2)

Model Solution	Practice Perfect Questions

(Total for Question 21 is 6 marks)

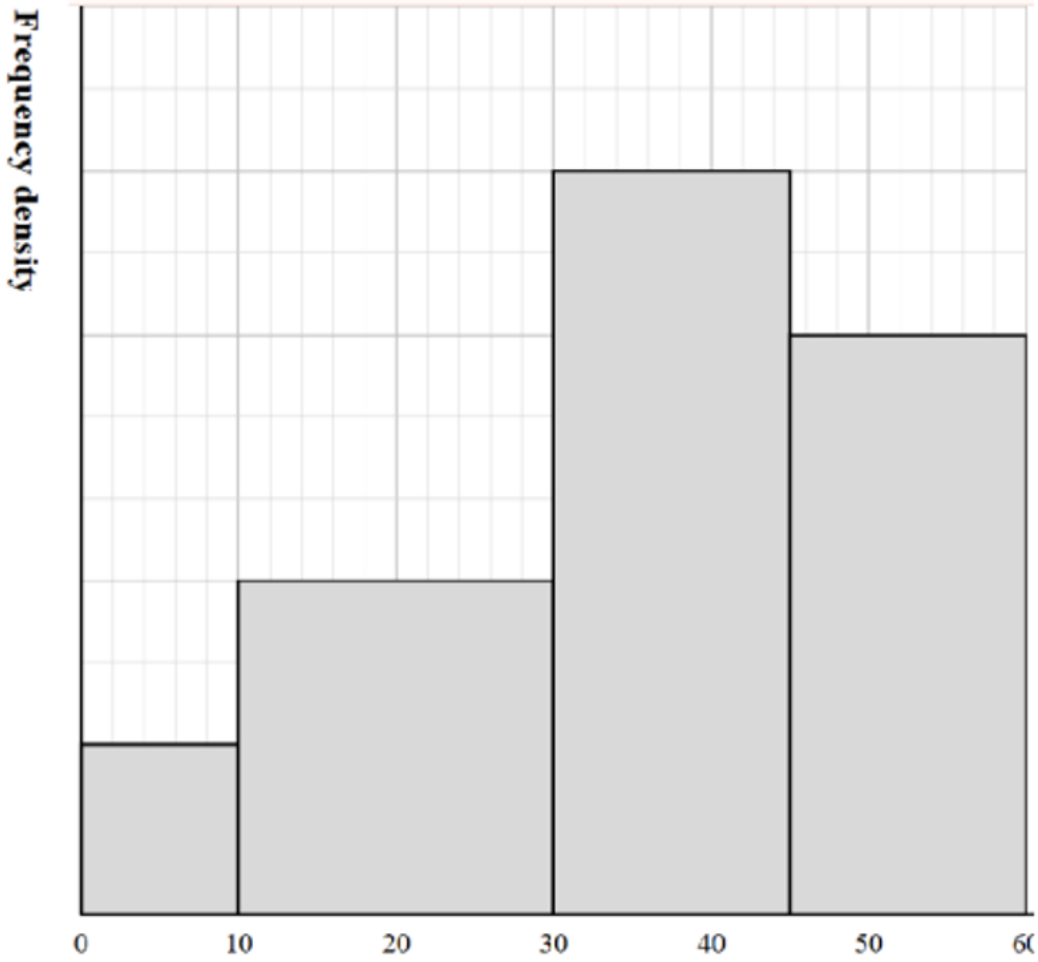
22. The straight line $\mathbf{L}_1$ has the equation $3y - 2x = 12$.
The straight line $\mathbf{L}_2$ is parallel to $\mathbf{L}_1$ and passes through the point $(0,5)$.
Find the equation of $\mathbf{L}_2$.
Give your answer in the form $y = mx + c$.

.....

(Total for Question 22 is 3 marks)

Model Solution	Practice Perfect Questions

23. The histogram gives information about the weights, in grams, of some strawberries.



One of these strawberries is chosen at random. Work out an estimate for the probability that the strawberry has a weight between 25 grams and 50 grams.

.....

(Total for Question 23 is 4 marks)

Model Solution	Practice Perfect Questions

24 Solid **A** and solid **B** are mathematically similar.
The total surface area of solid **A** is 45π cm^2.
The total surface area of solid **B** is 80π cm^2.
The volume of solid **A** is 810 cm^3.
Calculate the volume of solid **B**.
.

.....

(Total for Question 24 is 4 marks)

Model Solution	Practice Perfect Questions

25. (a) Express $f(x) = 2x^2 - 12x + 23$ in the form $a(x + b)^2 + c$, where a, b, and c are integers to be found.

(3)

(b) Hence, write down the coordinates of the turning point on the curve with equation $y = 2x^2 - 12x + 23$.

.....

(1)

(Total for Question 25 is 4 marks)

Model Solution	Practice Perfect Questions

TOTAL FOR PAPER = 100 MARKS