

NAME	
TEACHER	

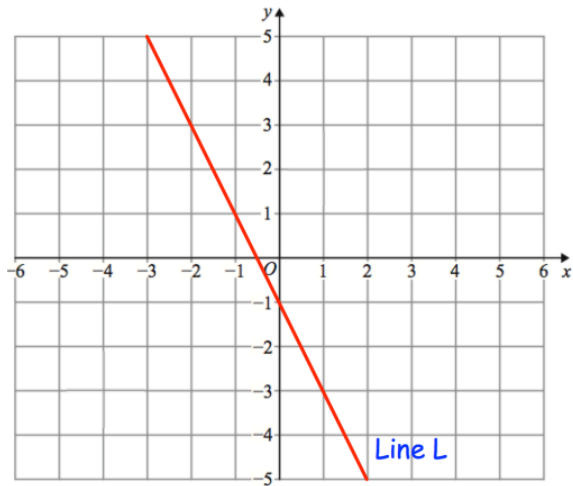
Year 9 Mathematics
End of Year Assessment 2025

Paper 1
NON-CALCULATOR

60 minutes
68 marks

Show all your working next to the question

1



(a) Find the gradient of line L

Answer: _____

(b) Write down the equation of the line

Answer: _____

(3 marks)

2 Work out:

(a) 2^3

Answer: _____

(b) 4^0

Answer: _____

(c) 2^{-1}

Answer: _____

Simplify:

(d) $\frac{a^2 \times a^5}{a^4}$

Answer: _____

(e) $(a^2)^3$

Answer: _____

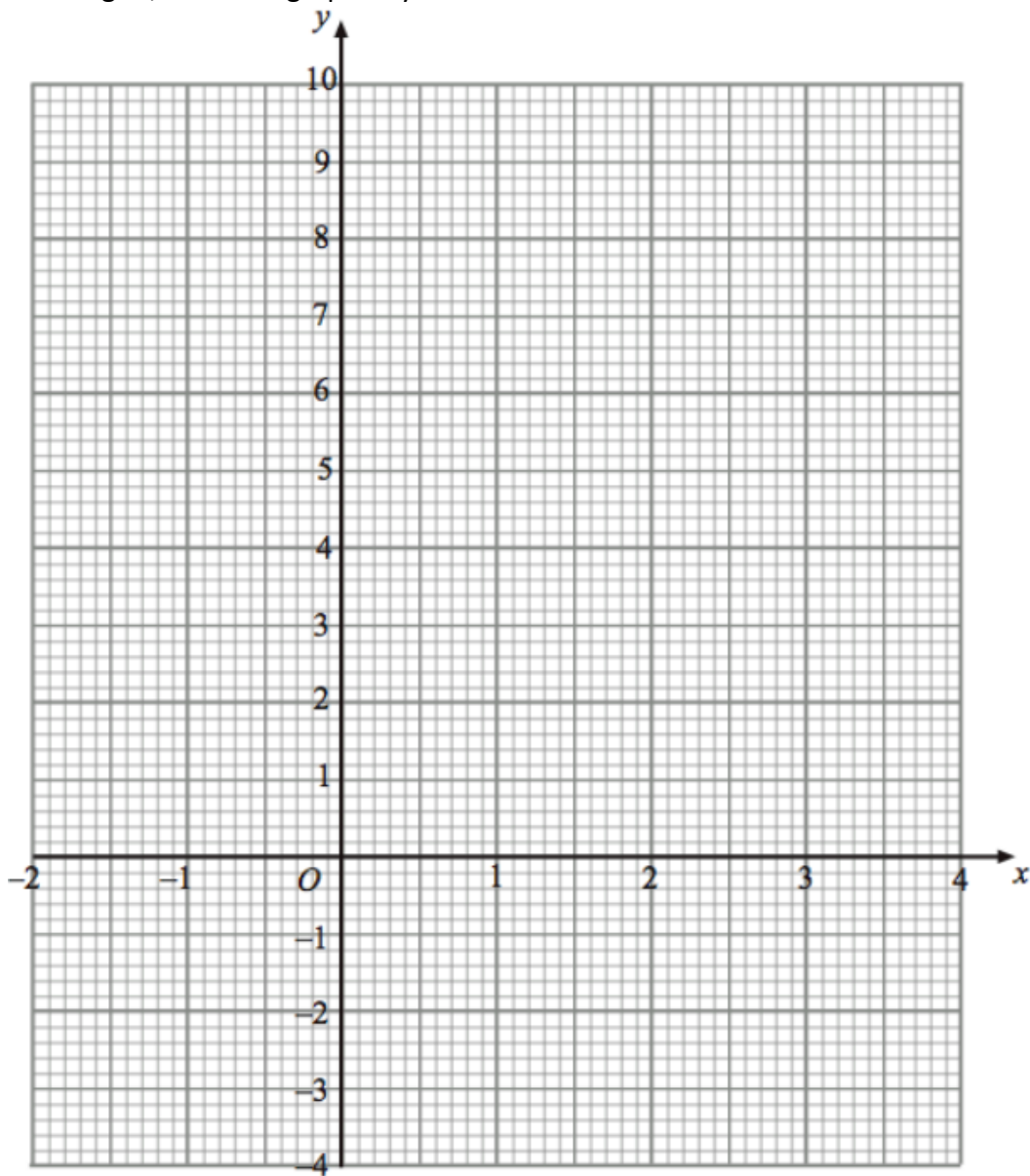
(6 marks)

3

(a) Complete the table of values for $y = x^2 - 3x$

x	-2	-1	0	1	2	3	4
y	10		0	-2		0	

(b) On the grid, draw the graph of $y = x^2 - 3x$ for $-2 \leq x \leq 4$



(c) State the roots of the equation $y = x^2 - 3x$

Answer: _____

(6 marks)

4

(a) Expand and simplify : $(y + 5)(y - 3)(y + 2)$

Answer: _____

(b) Fully factorise: $12ab^2 + 8b^3$

Answer: _____

(6 marks)

5 Solve:

(a) $\frac{4(x + 3)}{3} = 20$

Answer: _____

(b) $3x + 2 = 7x - 1$

Answer: _____

(5 marks)

6 Given that $A=2^3 \times 3$ and $B = 2 \times 3^2 \times 5$ find:

(a) the highest common factor (HCF) of A and B

Answer: _____

(b) the lowest common multiple (LCM) of A and B

Answer: _____

(3 marks)

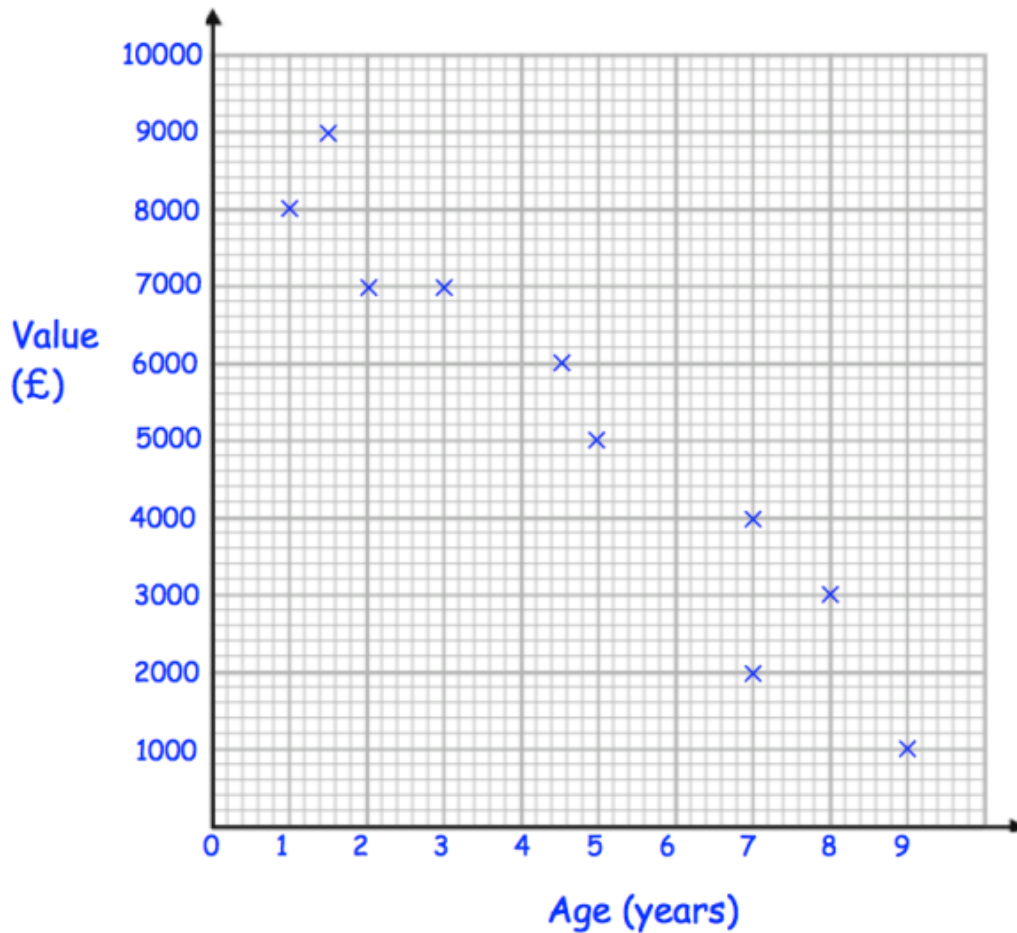
7 Write down the integers that satisfy the inequality $2 < x \leq 5$

Answer: _____

(1 mark)

TURN OVER

8 Below is a scatter graph showing the value of cars that arrive at a garage:



(a) Another car arrives at the garage. It is 4 years old and worth £5000. Show this information on the scatter graph.

(b) Describe the correlation between the value of the car and the age of the car.

Answer: _____

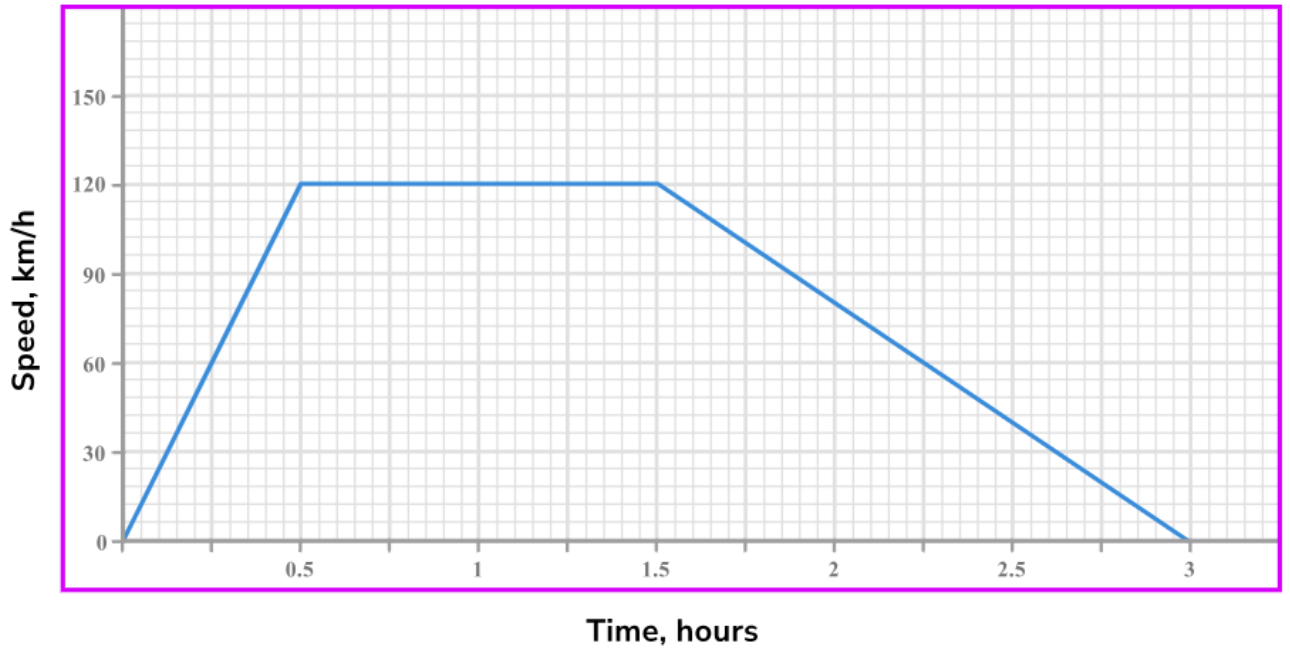
(c) Draw a line of best fit on the graph

(d) Use your line of best fit to estimate the value of a car that is 6 years old

Answer: £ _____

(4 marks)

9



The speed time graph for a 3 hour journey is shown above.

(a) Find the acceleration over the first half an hour.

Answer: _____ km/h²

(b) Find the total distance travelled.

Answer: _____ km

(4 marks)

10

(a) Express $\sqrt{75}$ in its simplest form

Answer: _____

(b) Express $2\sqrt{3} \times 3\sqrt{5}$ in its simplest form

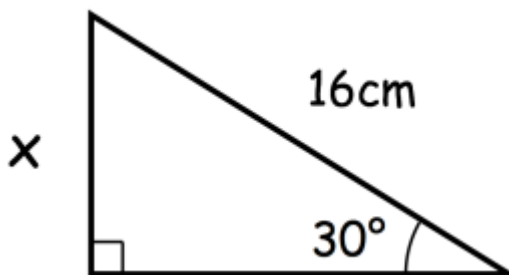
Answer: _____

(c) Rationalise the denominator and fully simplify your answer: $\frac{12}{\sqrt{3}}$

Answer: _____

(5 marks)

11



The diagram above shows a right-angled triangle. Calculate x.

Answer: _____ cm

(3 marks)

12 The table shows the ages of a rugby squad:

Age	Frequency
18	5
19	6
20	5
21	7

(a) Find the median age (you must show your method)

Answer: _____

(b) State the modal age

Answer: _____

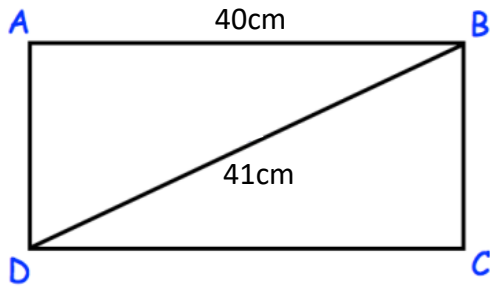
(3 marks)

13 Make a the subject of $14a + 6y = ac + 8w$

Answer: _____

(3 marks)

14 Below is a rectangle, ABCD



BD = 41cm
AB = 40cm

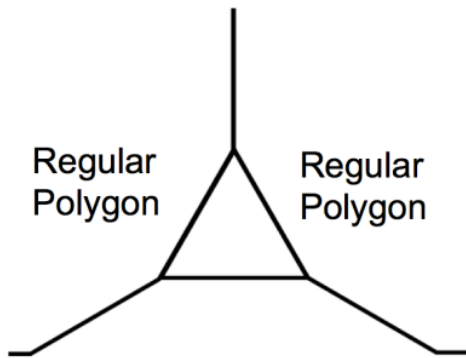
Calculate the area of the rectangle ABCD.

Answer: _____ cm²

(5 marks)

TURN OVER

15 Shown below are two identical regular polygons and an equilateral triangle:



(a) Calculate the interior angle of each regular polygon.

Answer: _____°

(b) Hence, or otherwise, find the number of sides each regular polygon has.

Answer: _____
(6 marks)

TURN OVER

16

- (a) Find the gradient of the line $x - 3y = -15$

Answer: _____

- (b) Hence, find the equation of the line that is perpendicular to $x - 3y = -15$ and passes through the point (5, -17)

Answer: _____
(5 marks)

END OF TEST