




COUNTDOWN TO YOUR FINAL MATHS EXAM ... PART 2

	Marks	Actual	  
Q1. Frequency Polygons	2		
Q2. Histograms	6		
Q3. Pythagoras	5		
Q4. Pythagoras & Circles	4		
Q5. Trigonometry	4		
Q6. Trigonometry	3		
Q7. Pythagoras with trigonometry	5		
Q8. Straight line graphs	3		
Q9. Real-life graphs	3		
Q10. Reciprocal graphs	3		
Q11. Quadratic graphs	4		
Q12. Cubic graphs	4		

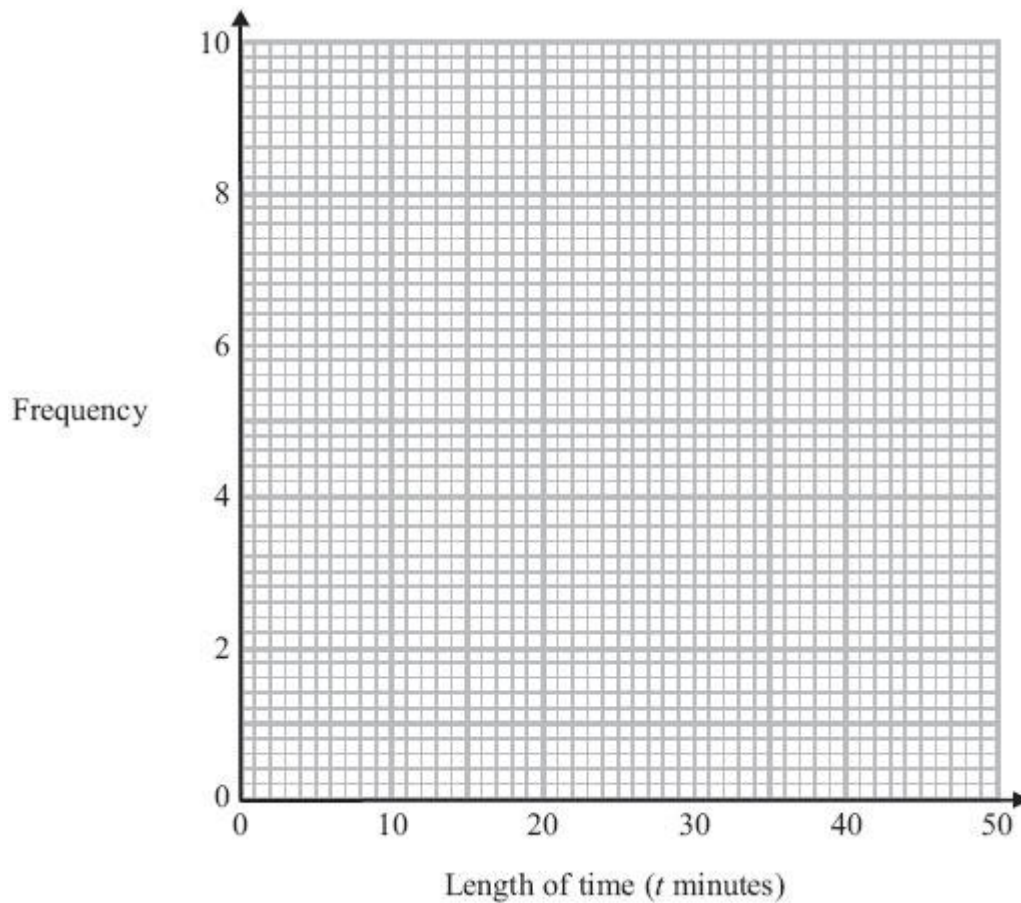
Q1.

Helen went on 35 flights in a hot air balloon last year.

The table gives some information about the length of time, t minutes, of each flight.

Length of time (t minutes)	Frequency
$0 < t \leq 10$	6
$10 < t \leq 20$	9
$20 < t \leq 30$	8
$30 < t \leq 40$	7
$40 < t \leq 50$	5

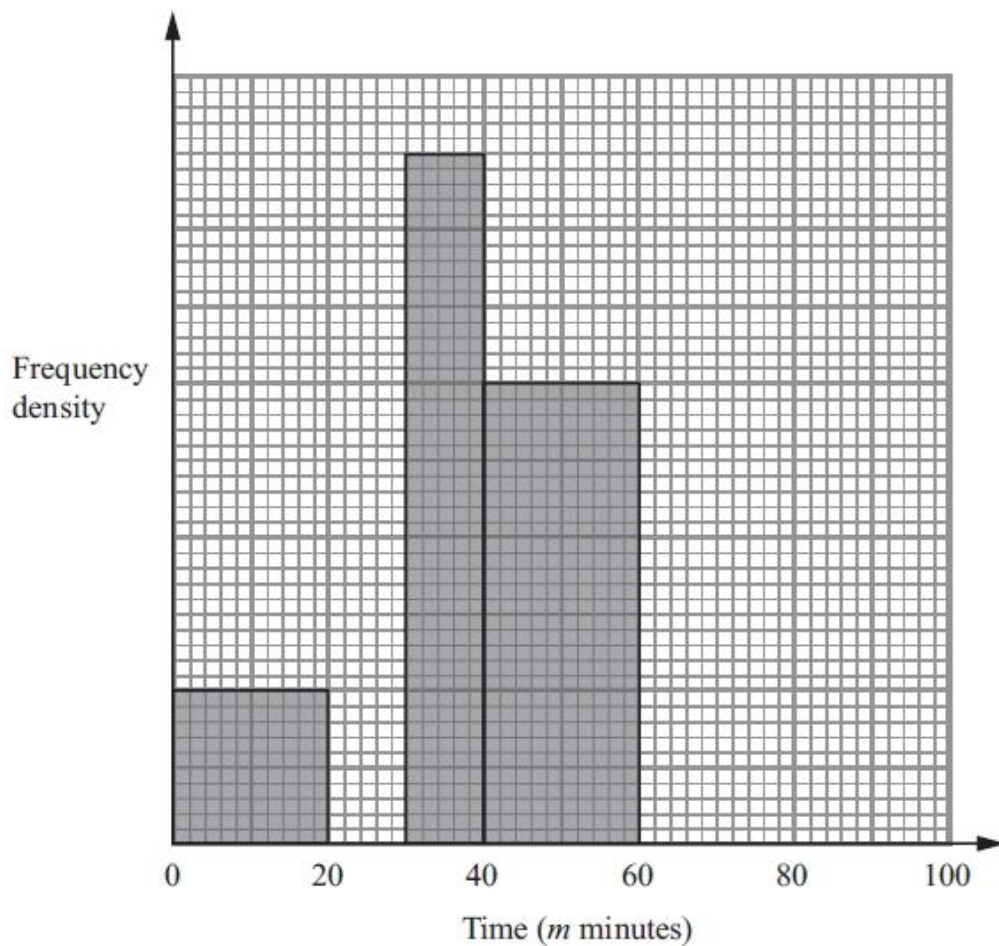
On the grid below, draw a frequency polygon for this information.



(Total for Question is 2 marks)

Q2. The table and the histogram show some information about the time, in minutes, taken by a group of students to travel to college in one week.

Time (m minutes)	Frequency
$0 < m \leq 20$	20
$20 < m \leq 30$	30
$30 < m \leq 40$	
$40 < m \leq 60$	
$60 < m \leq 100$	48



(a) Use the histogram to complete the table.

(2)

(b) Use the table to complete the histogram.

(2)

(c) Work out an estimate for the median time.

..... minutes (2)

Q3. The diagram shows the marking on a school playing field.

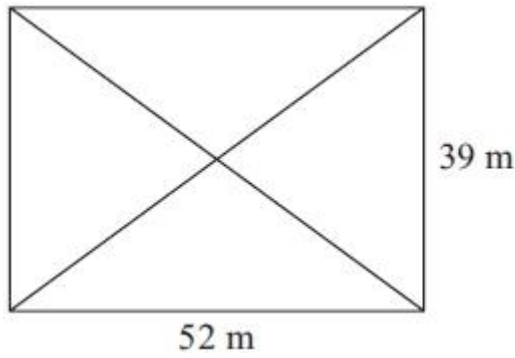


Diagram **NOT** accurately drawn

The diagram shows a rectangle and its diagonals.

Work out the total length of the four sides of the rectangle and its diagonals.

..... m

(Total for Question is 5 marks)

Q4.

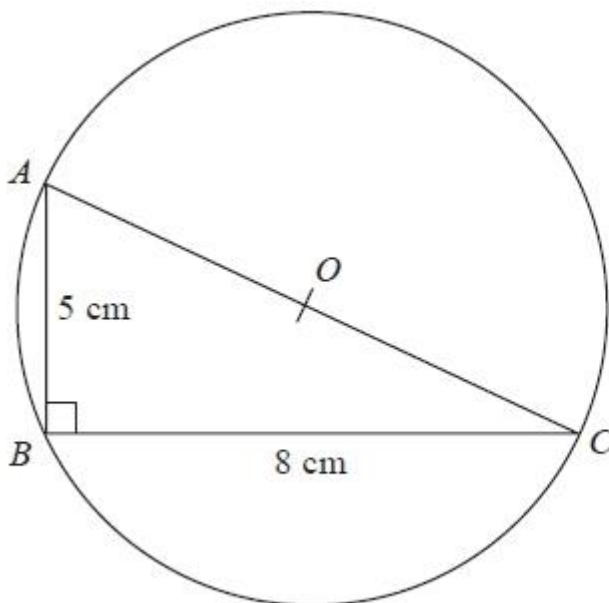


Diagram **NOT**
accurately drawn

ABC is a right-angled triangle.
 A , B and C are points on the circumference of a circle centre O .
 $AB = 5$ cm

$BC = 8 \text{ cm}$

AOC is a diameter of the circle.

Calculate the circumference of the circle.
Give your answer correct to 3 significant figures.

..... cm

(Total for question = 4 marks)

Q5.

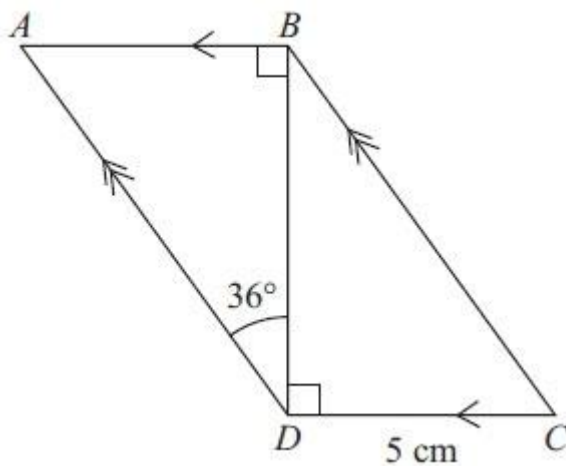


Diagram **NOT**
accurately drawn

$ABCD$ is a parallelogram.

$DC = 5 \text{ cm}$

Angle $ADB = 36^\circ$

Calculate the length of AD .

Give your answer correct to 3 significant figures.

.....

(Total for Question is 4 marks)

Q6.

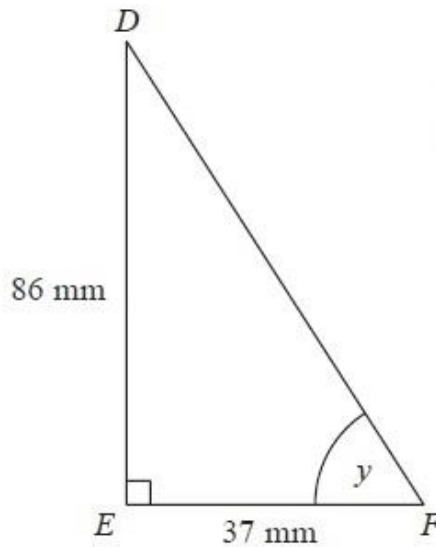


Diagram NOT accurately drawn

DEF is a right-angled triangle.

$DE = 86 \text{ mm}$

$EF = 37 \text{ mm}$

Calculate the size of the angle marked y .

Give your answer correct to 1 decimal place.

..... ° (3)

Q7. The diagram represents a metal frame.

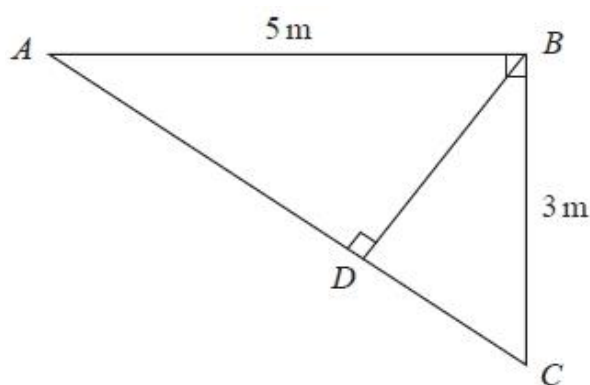


Diagram NOT accurately drawn

The frame is made from four metal bars, AB , AC , BC and BD . Angle $ABC = \text{angle } ADB = 90^\circ$

$AB = 5 \text{ m}$

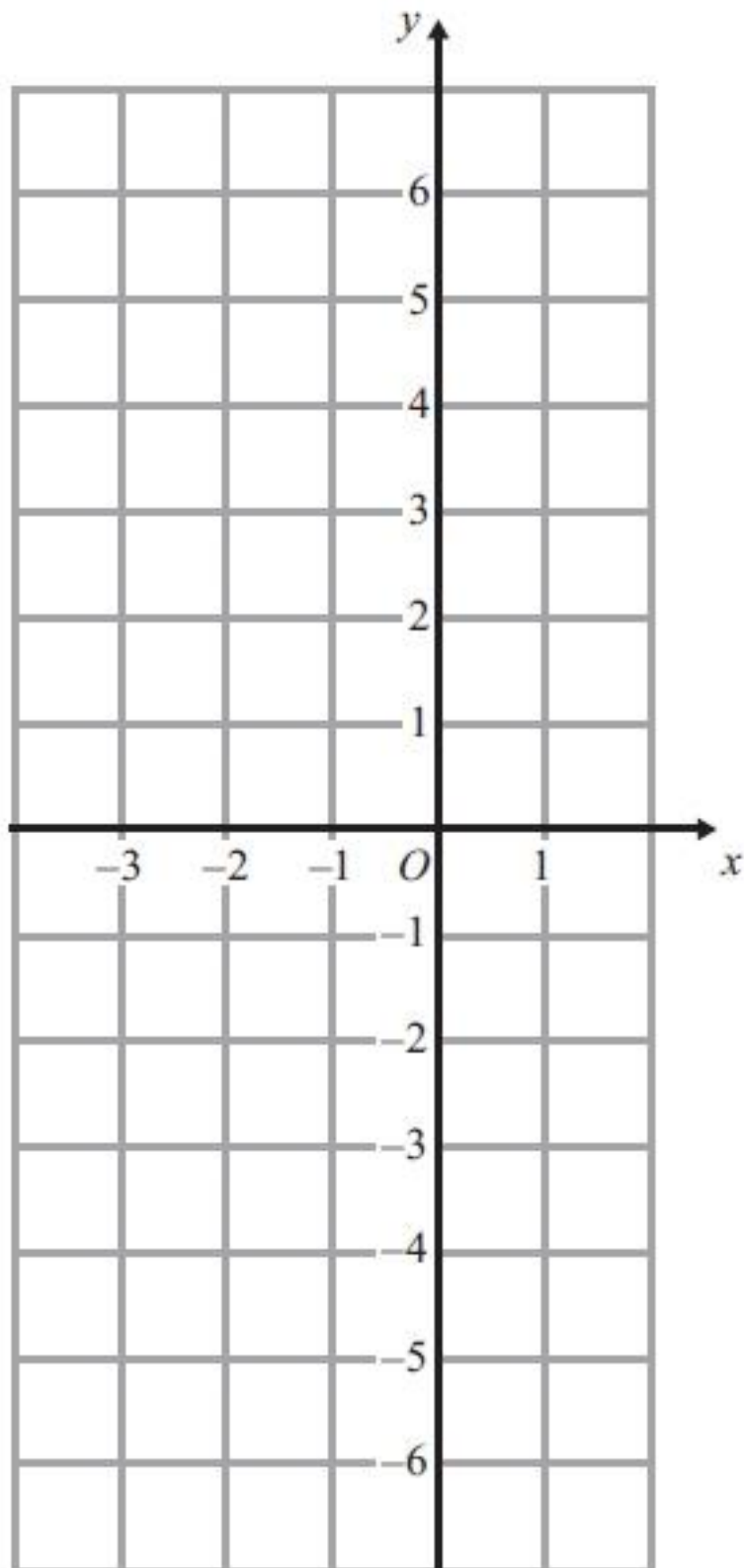
$BC = 3 \text{ m}$

Work out the total length of the four metal bars of the frame.

Give your answer correct to 3 significant figures.

..... m (5)

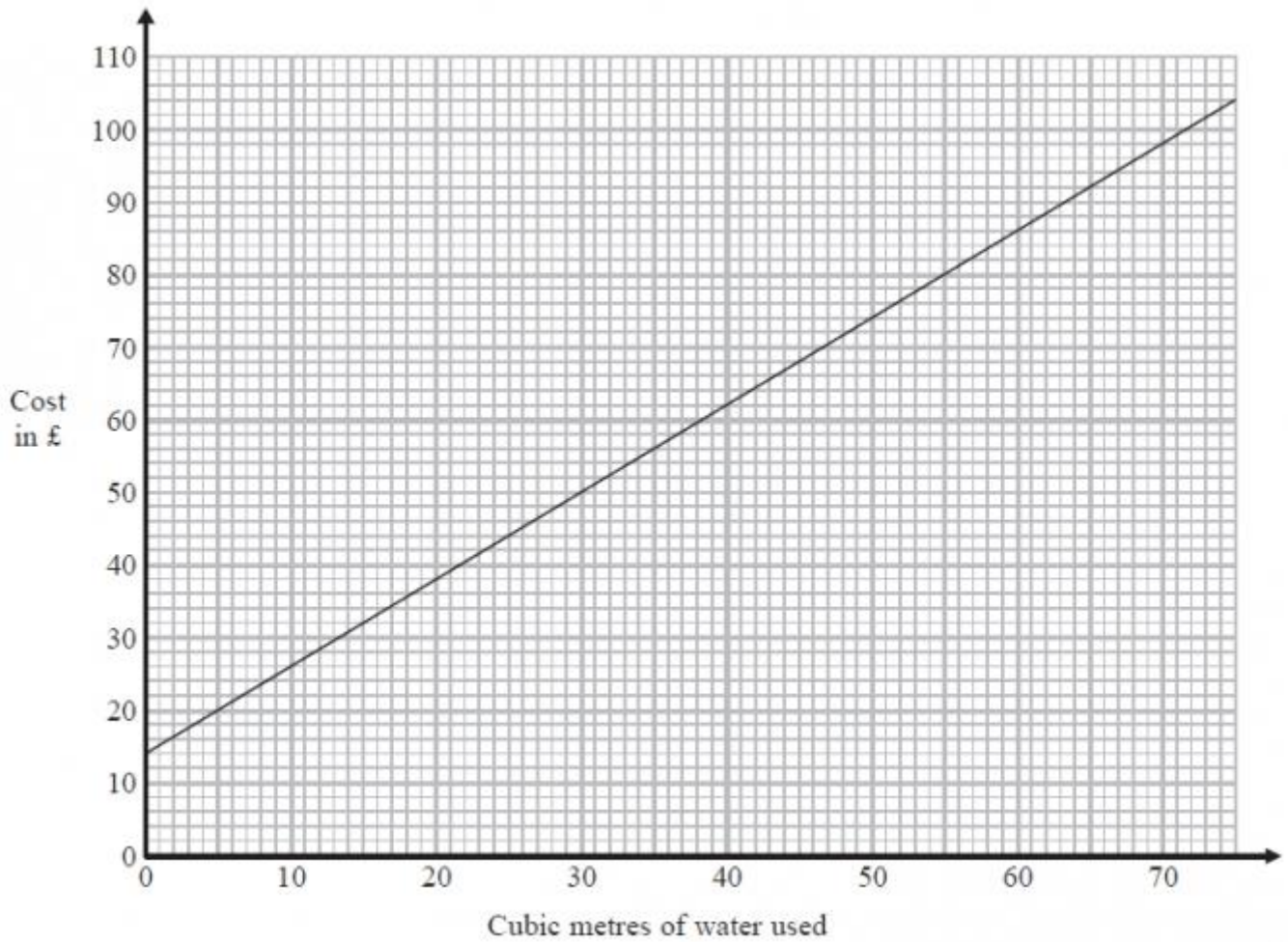
Q8. On the grid, draw the graph of $y = 2x + 3$ for values of x from $x = -3$ to $x = 1$



(Total for Question is 3 marks)

Q9. A water company charges customers a fixed standing charge plus an additional cost for the amount of water, in cubic metres, used.

The graph shows information about the total cost charged.



(a) Write down the fixed standing charge.

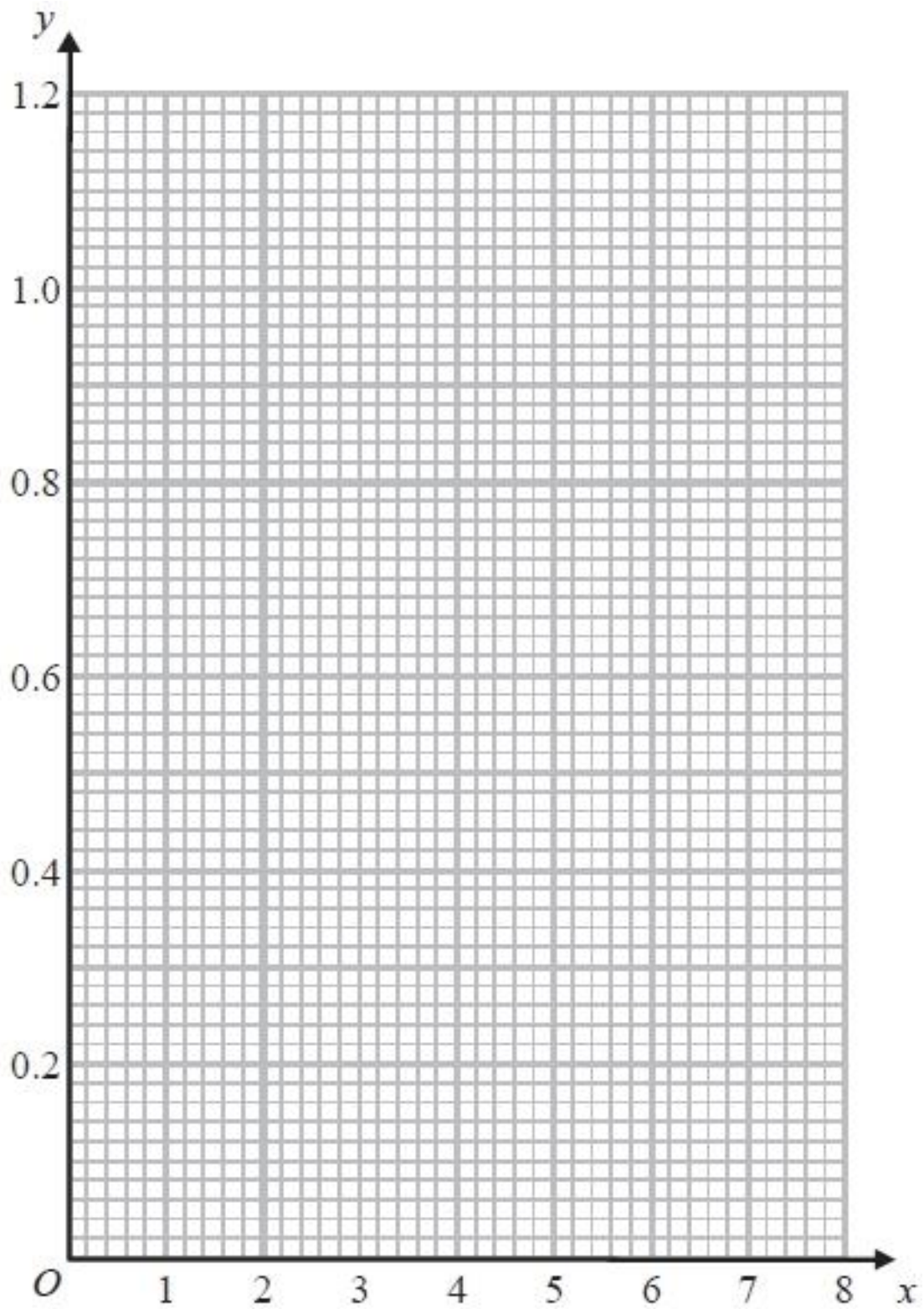
£.....
(1)

(b) Work out the additional cost for each cubic metre of water used.

£.....
(2)

(Total for Question is 3 marks)

Q10. On the grid, draw the graph of $y = \frac{1}{x}$ for values of x from 1 to 7



(Total for question = 3 marks)

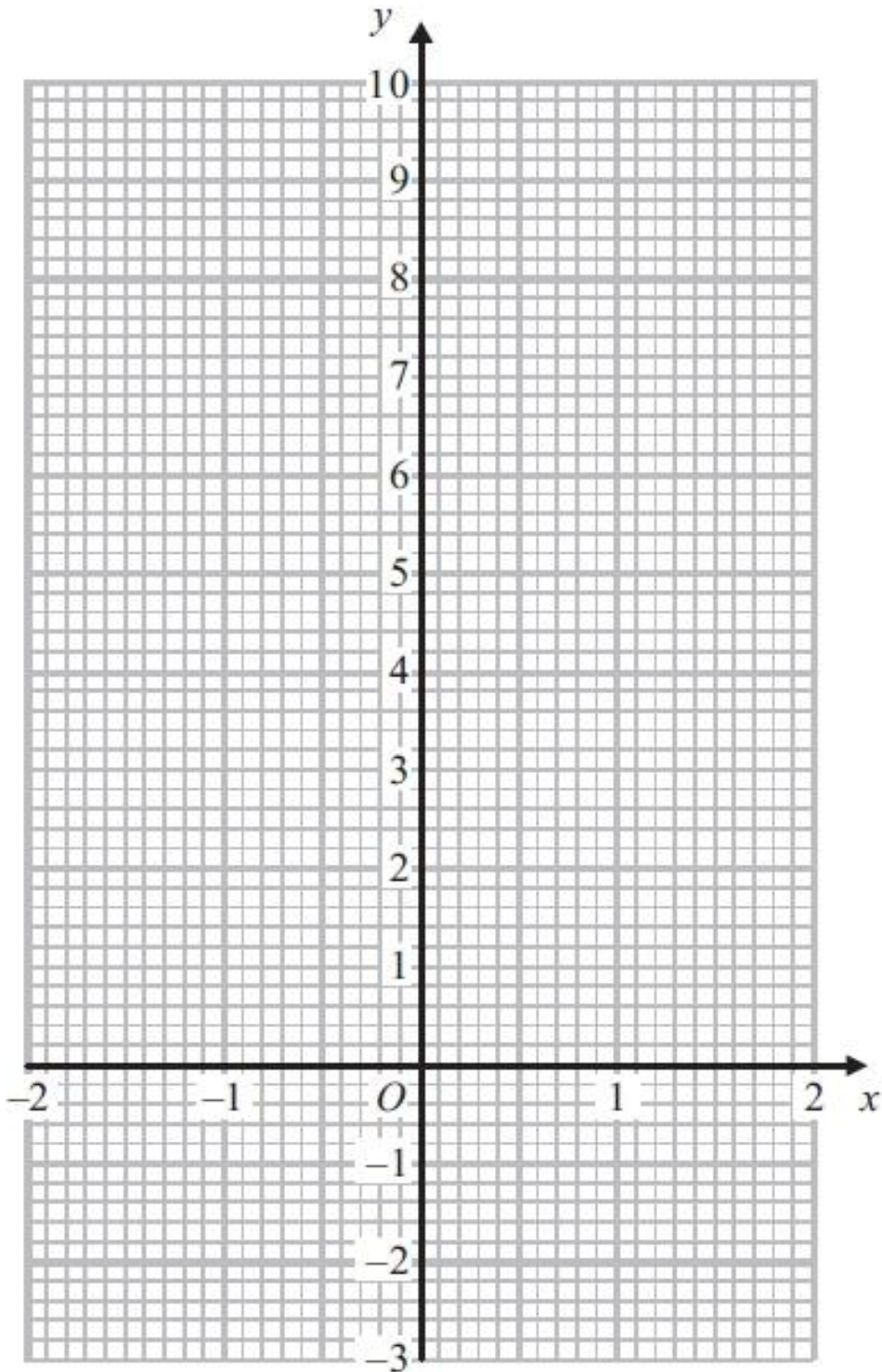
Q11.

(a) Complete the table of values for $y = 2x^2 - 1$

x	-2	-1	0	1	2
y	7			1	

(2)

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



(2)

(Total for Question is 4 marks)

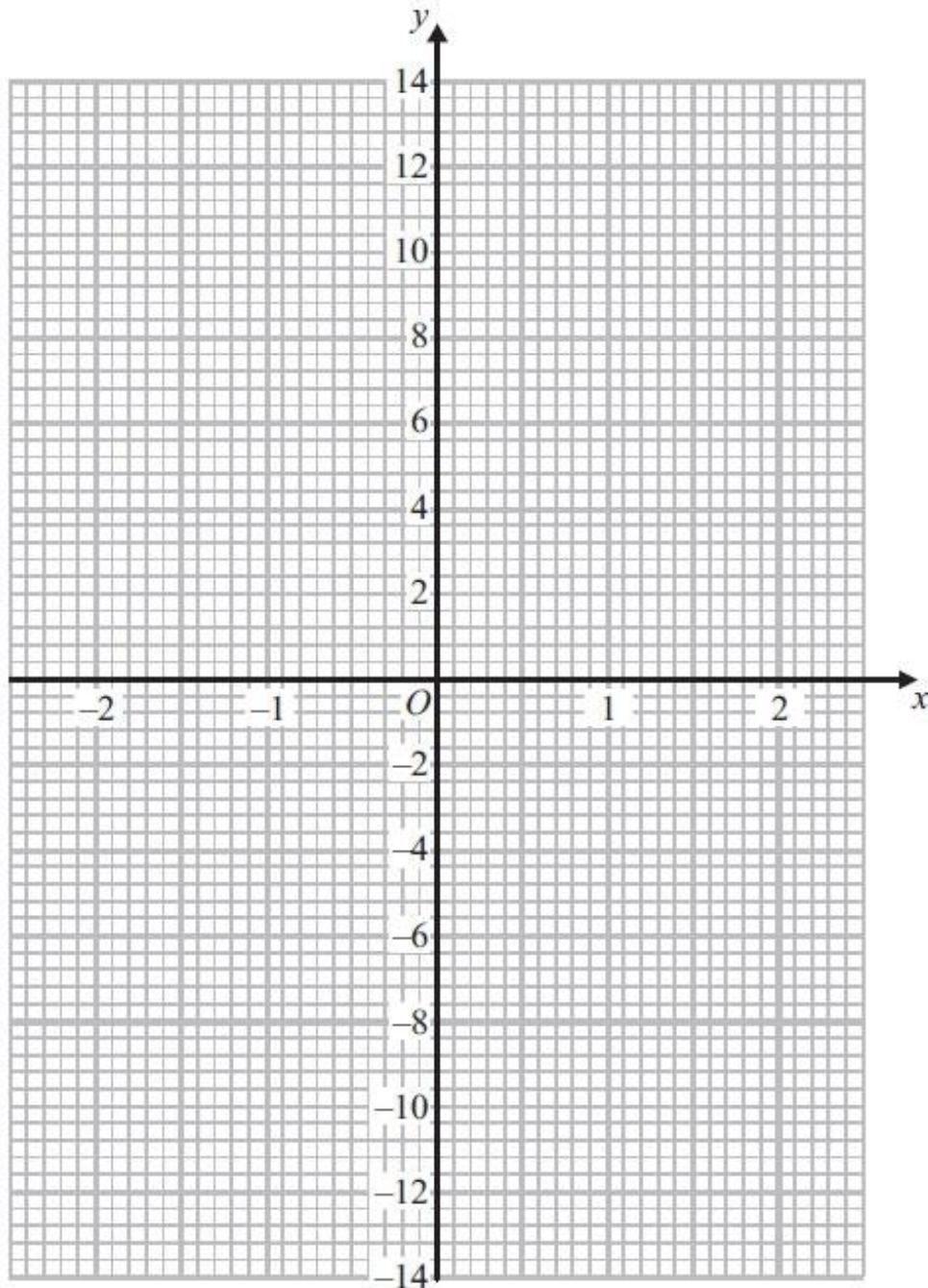
Q12.

(a) Complete this table of values for $y = x^3 + 2x - 1$

x	-2	-1	0	1	2
y		-4			11

(2)

(b) On the grid, draw the graph of $y = x^3 + 2x - 1$



(2)

(Total for Question is 4 marks)