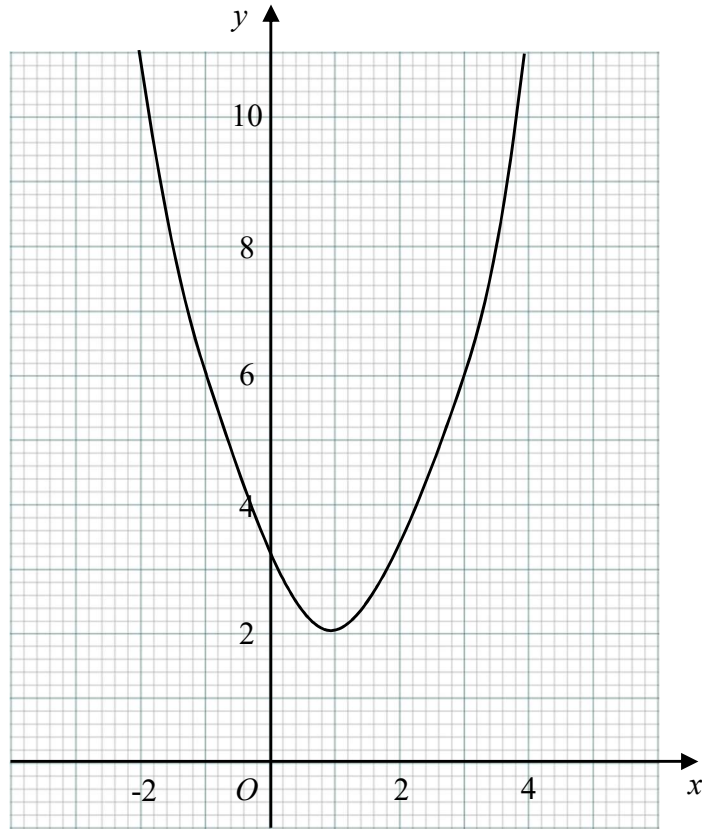




1 The diagram shows part of the graph of $y = x^2 - 2x + 3$



(a) By drawing a suitable straight line, use your graph to find estimates for the solutions of $x^2 - 3x - 1 = 0$

.....
(2)

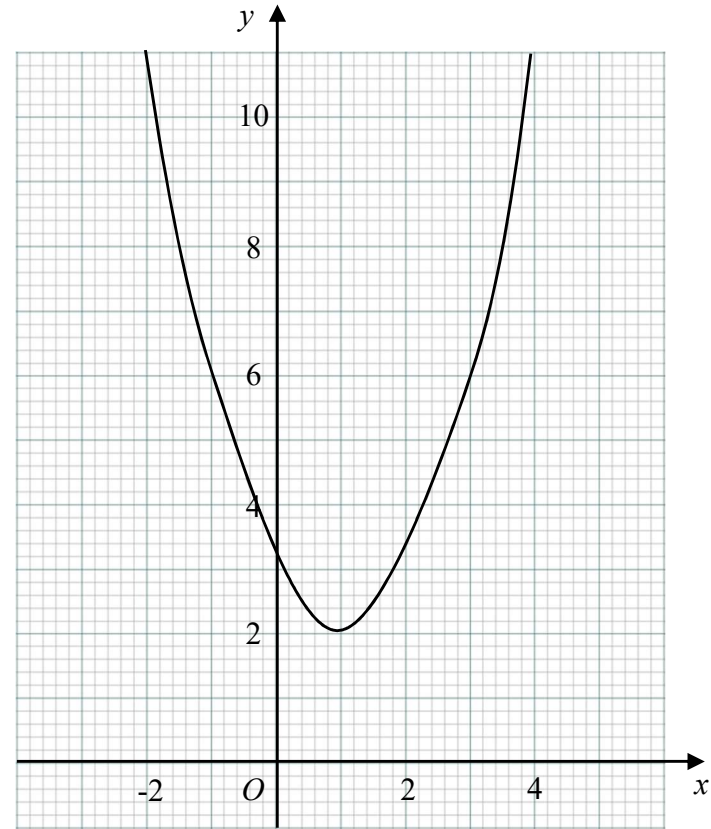
Q is the point on the graph of $y = x^2 - 2x + 3$ where $x = 2$

(b) Calculate an estimate for the gradient of the graph at the point Q.

.....
(3)

(Total for Question 1 is 5 marks)

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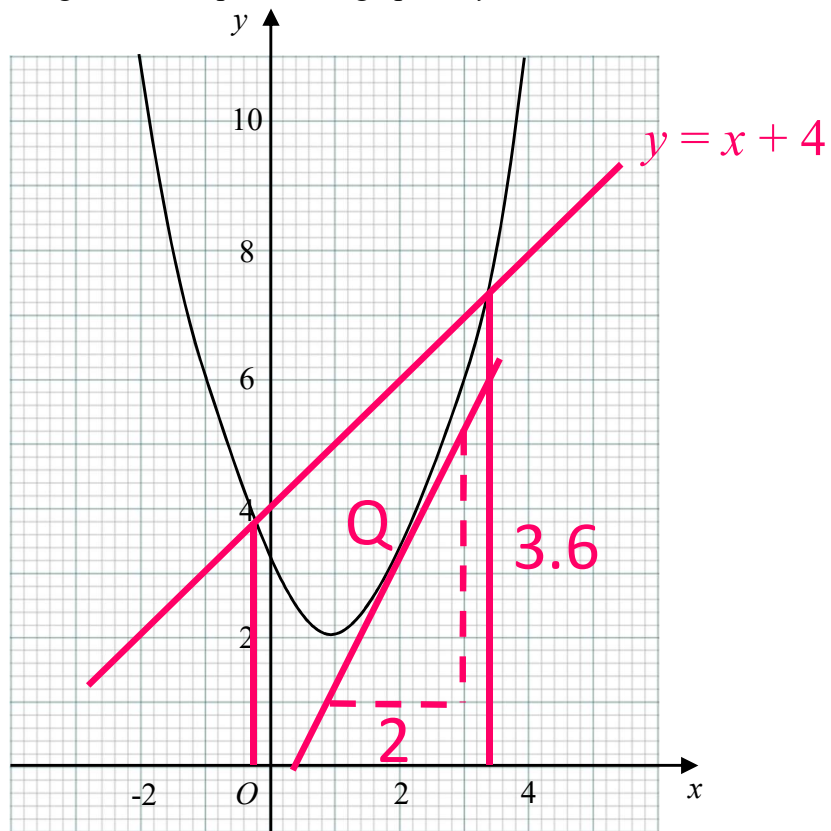
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(Total for Question 1 is 5 marks)



1 The diagram shows part of the graph of $y = x^2 - 2x + 3$



- (a) By drawing a suitable straight line, use your graph to find estimates for the solutions of $x^2 - 3x - 1 = 0$

$$\begin{aligned}
 & y = x^2 - 2x + 3 \\
 \text{Subtract } & 0 = x^2 - 3x - 1 \\
 & = y = x + 4
 \end{aligned}$$

$x = -0.2, 3.4$

(2)

Q is the point on the graph of $y = x^2 - 2x + 3$ where $x = 2$

- (b) Calculate an estimate for the gradient of the graph at the point Q.

$$\text{Gradient} = \frac{2}{3.6} = 1.8$$

1.8

(3)

(Total for Question 1 is 5 marks)