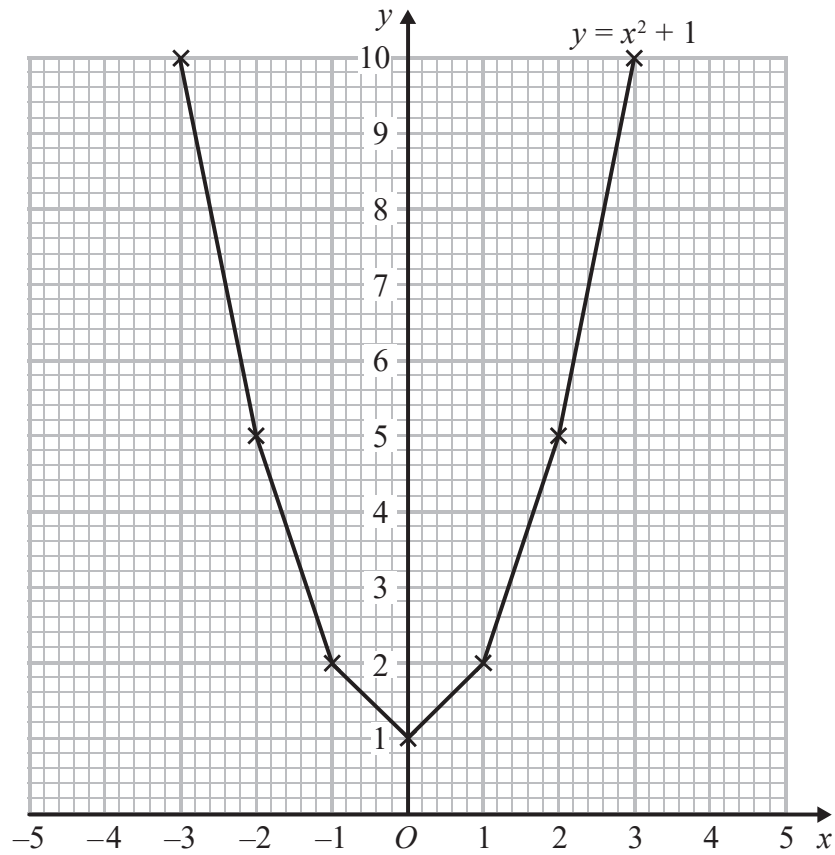


1 Brogan needs to draw the graph of  $y = x^2 + 1$

Here is her graph.



Write down one thing that is wrong with Brogan's graph.

.....

.....

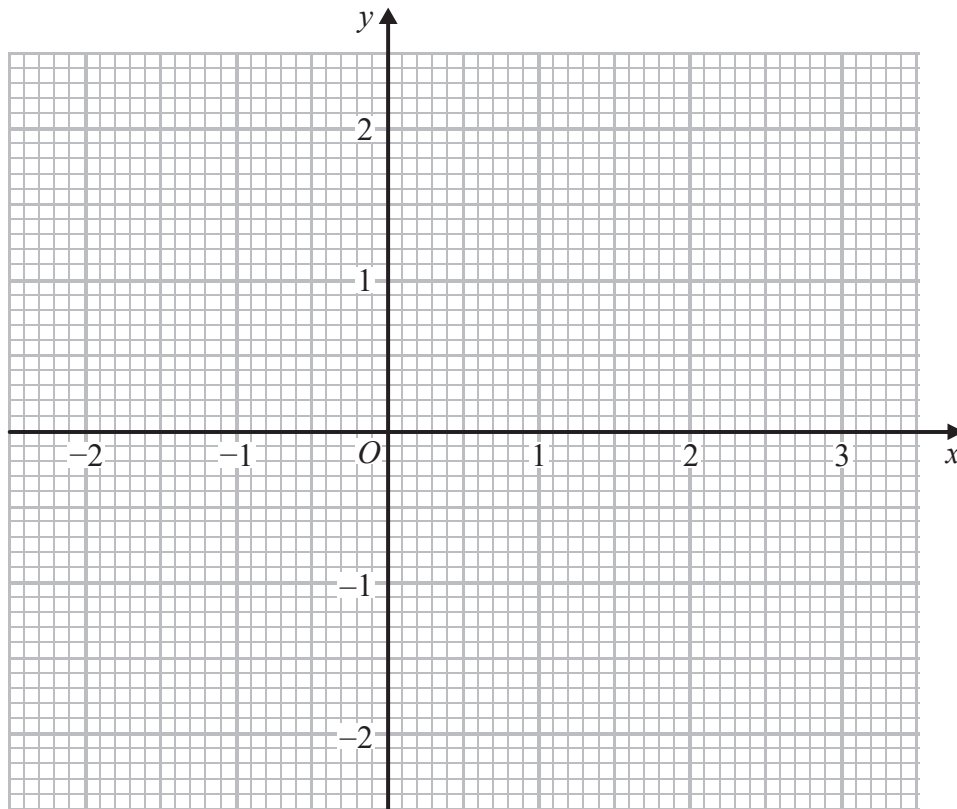
(Total for Question 1 is 1 mark)

2 (a) Complete the table of values for  $y = \frac{1}{2}x - 1$

$x$	-2	-1	0	1		
$y$	-2				0	

(2)

(b) On the grid, draw the graph of  $y = \frac{1}{2}x - 1$  for values of  $x$  from -2 to 3



(2)

(c) Use your graph to find the value of  $x$  when  $y = 0.3$

$x = \dots\dots\dots$

(1)

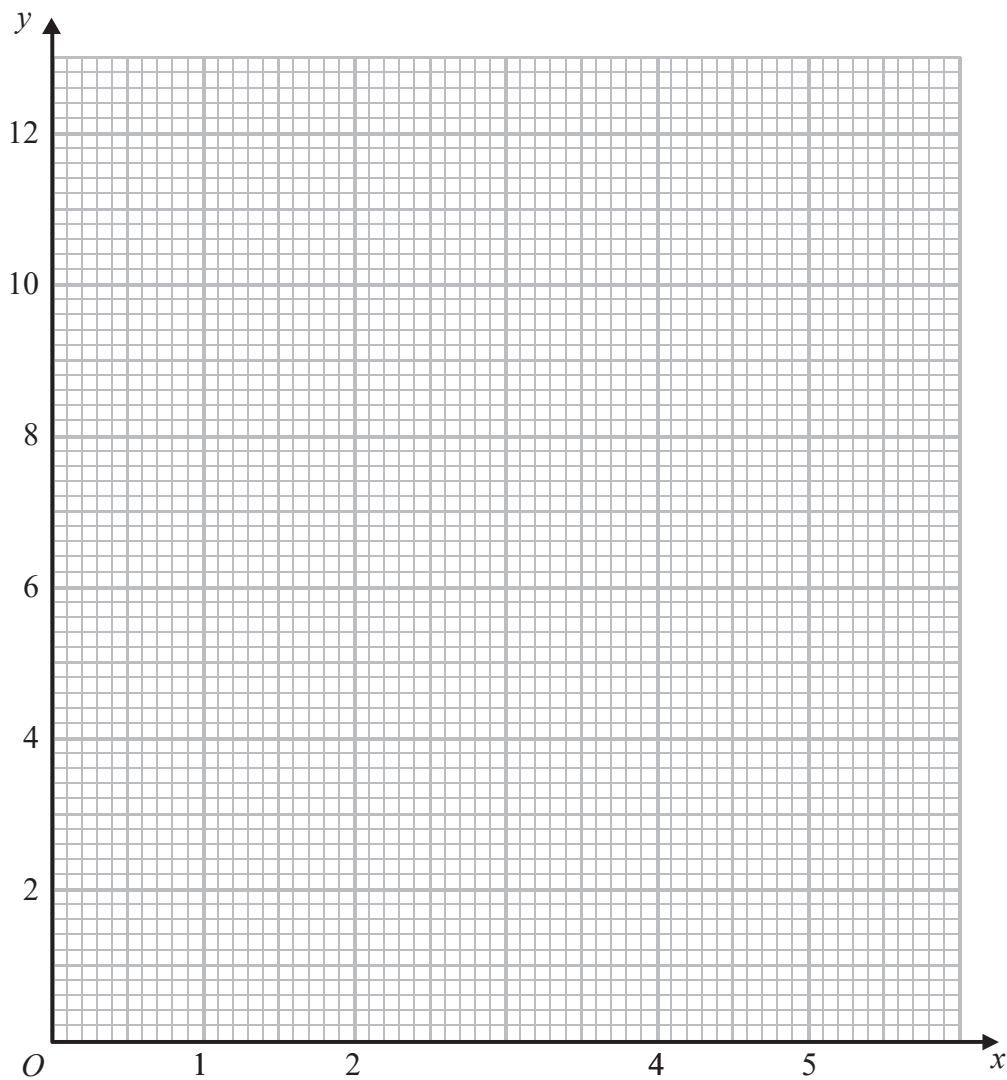
**(Total for Question 2 is 5 marks)**

- 3 (a) Complete the table of values for  $y = \frac{6}{x}$

$x$	0.5	1	1.5	2	3			
$y$		6		3		1.5		

(2)

- (b) On the grid below, draw the graph of  $y = \frac{6}{x}$  for values of  $x$  from 0.5 to 6



(2)

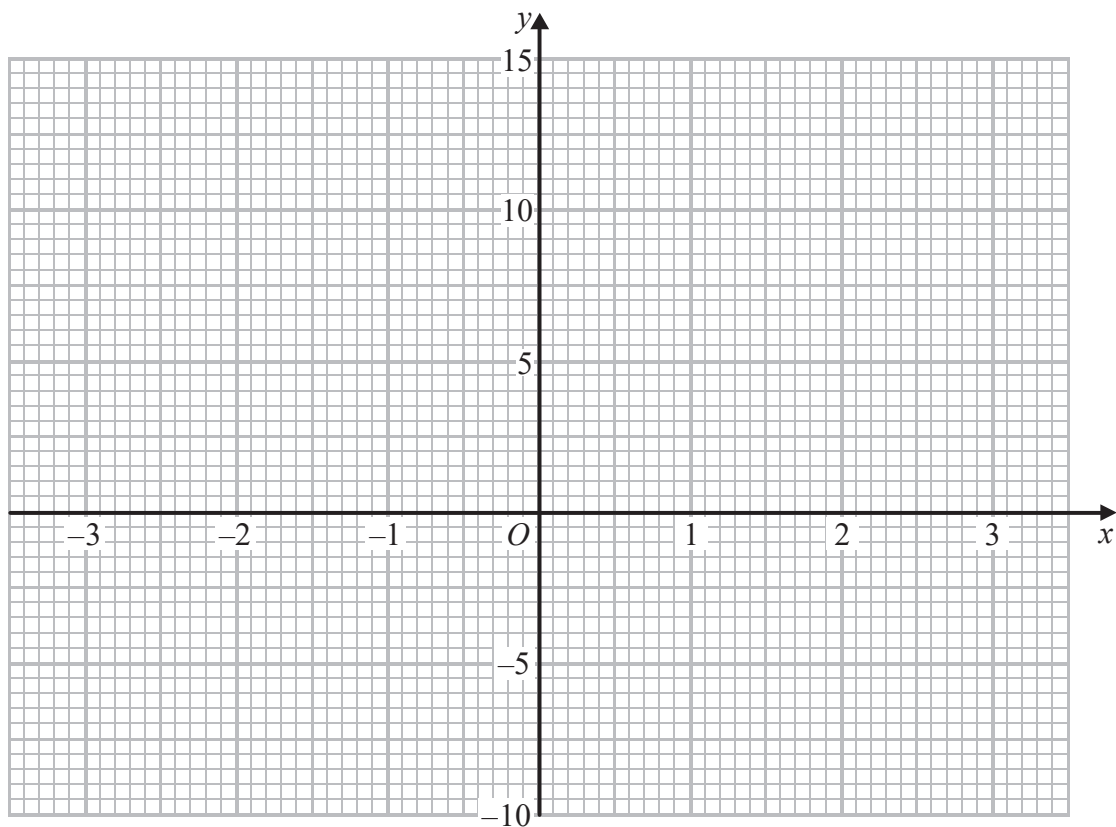
(Total for Question 3 is 4 marks)

4 (a) Complete this table of values for  $y = x^2 + x - 4$

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

(2)

(b) On the grid, draw the graph of  $y = x^2 + x - 4$  for values of  $x$  from -3 to 3



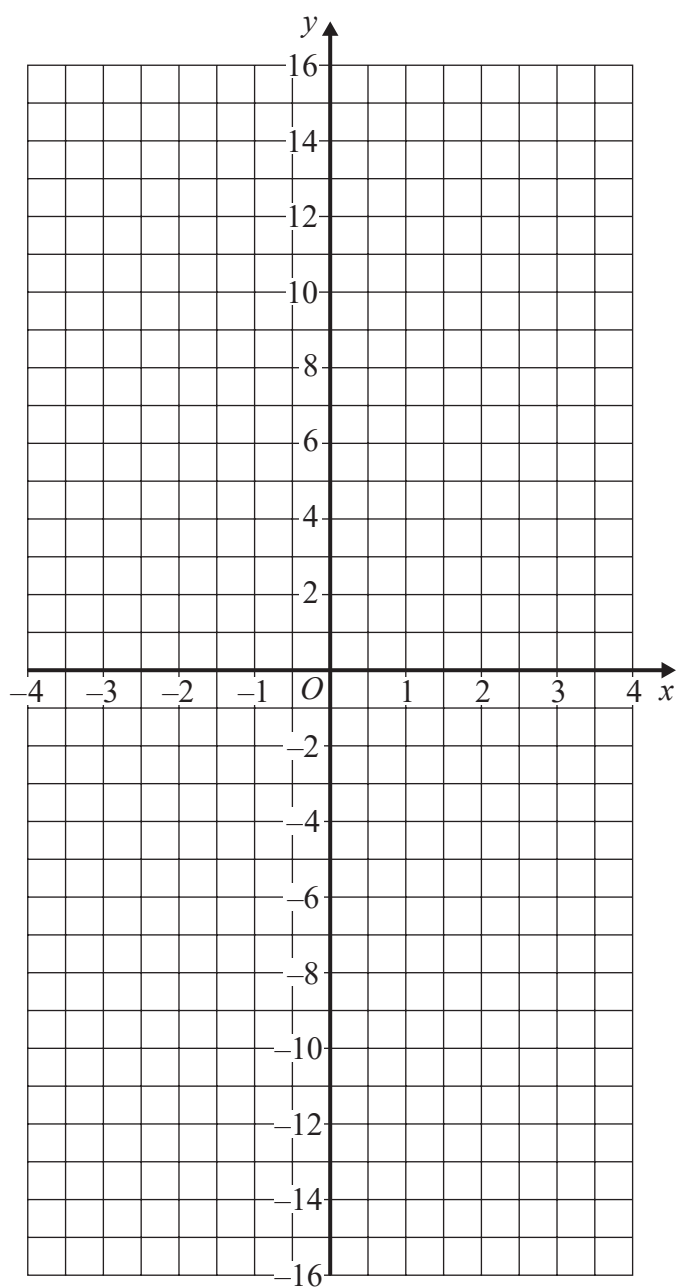
(2)

(c) Use the graph to estimate a solution to  $x^2 + x - 4 = 0$

.....  
(1)

**(Total for Question 4 is 5 marks)**

- 5 On the grid below, draw the graph of  $y = 1 - 4x$  for values of  $x$  from  $-3$  to  $3$



(Total for Question 5 is 3 marks)

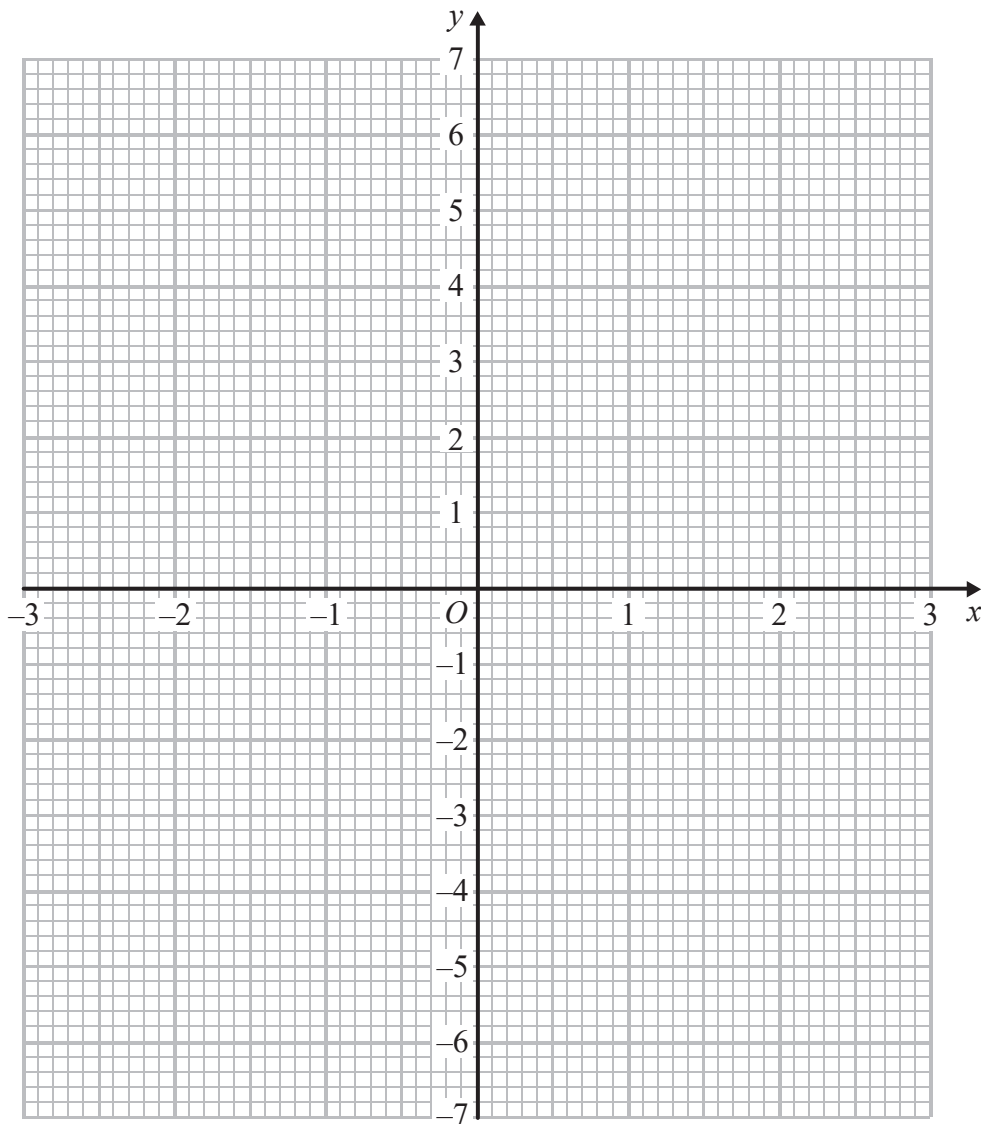
6 (a) Complete the table of values for  $y = x^2 - x - 6$

$x$	-3	-2	-1	0	1		
$y$	6			-6			

(2)

(b) On the grid, draw the graph of  $y = x^2 - x - 6$  for values of  $x$  from -3 to 3

(2)



(c) Use your graph to find estimates of the solutions to the equation  $x^2 - x - 6 = -2$

.....  
(2)

**(Total for Question 6 is 6 marks)**

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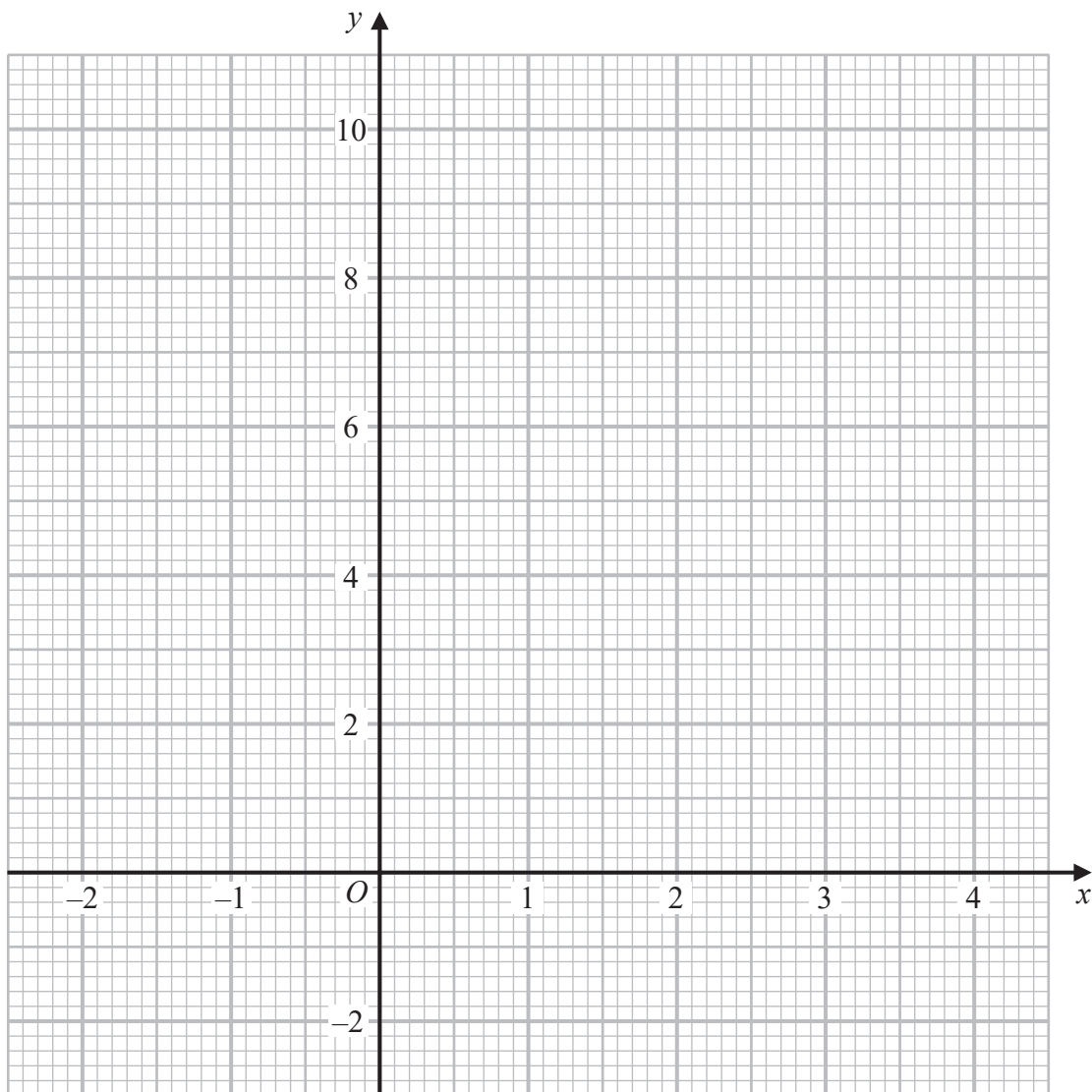
7 (a) Complete the table of values for  $y = x^2 - 2x + 2$

$x$	-2	-1	0	1	2	3	4
$y$	10		2			5	

(2)

(b) On the grid, draw the graph of  $y = x^2 - 2x + 2$  for values of  $x$  from -2 to 4

(2)



(c) Use your graph to find estimates of the solutions of the equation  $x^2 - 2x + 2 = 4$

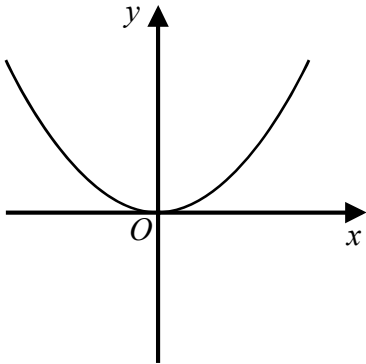
(2)

**(Total for Question 7 is 6 marks)**

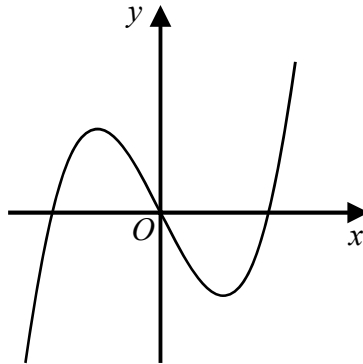


8 Here are six graphs.

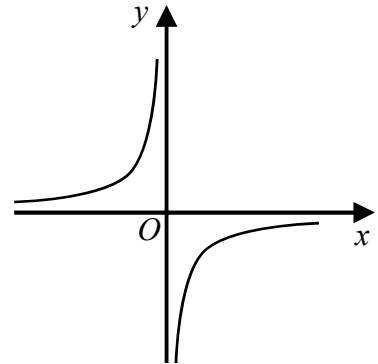
A



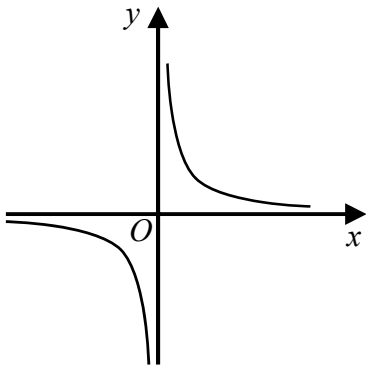
B



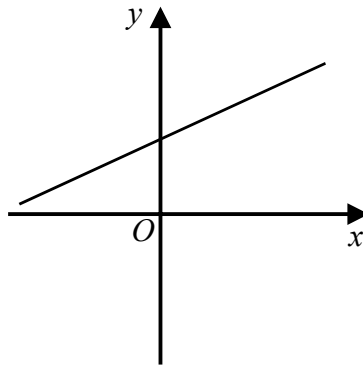
C



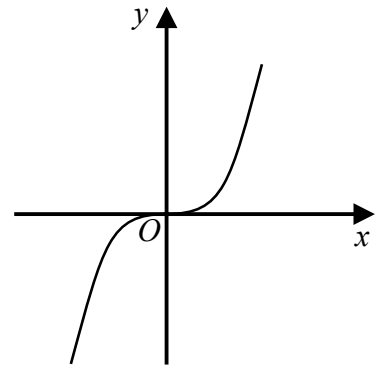
D



E



F



Write down the letter of the graph that could have the equation

(a)  $y = x^3$

.....  
(1)

(b)  $y = \frac{1}{x}$

.....  
(1)

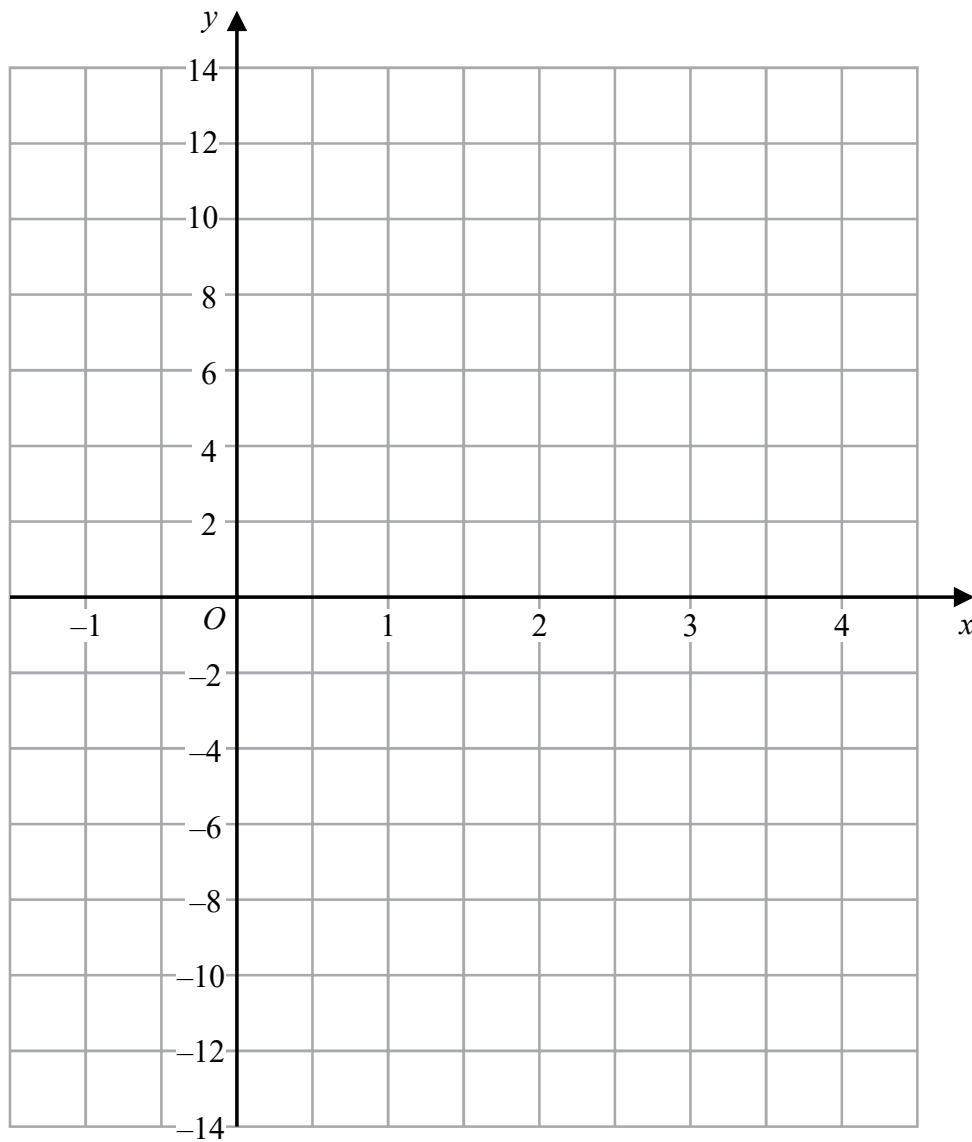
(Total for Question 8 is 2 marks)

9 (a) Complete the table of values for  $y = 4x - 6$

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

(2)

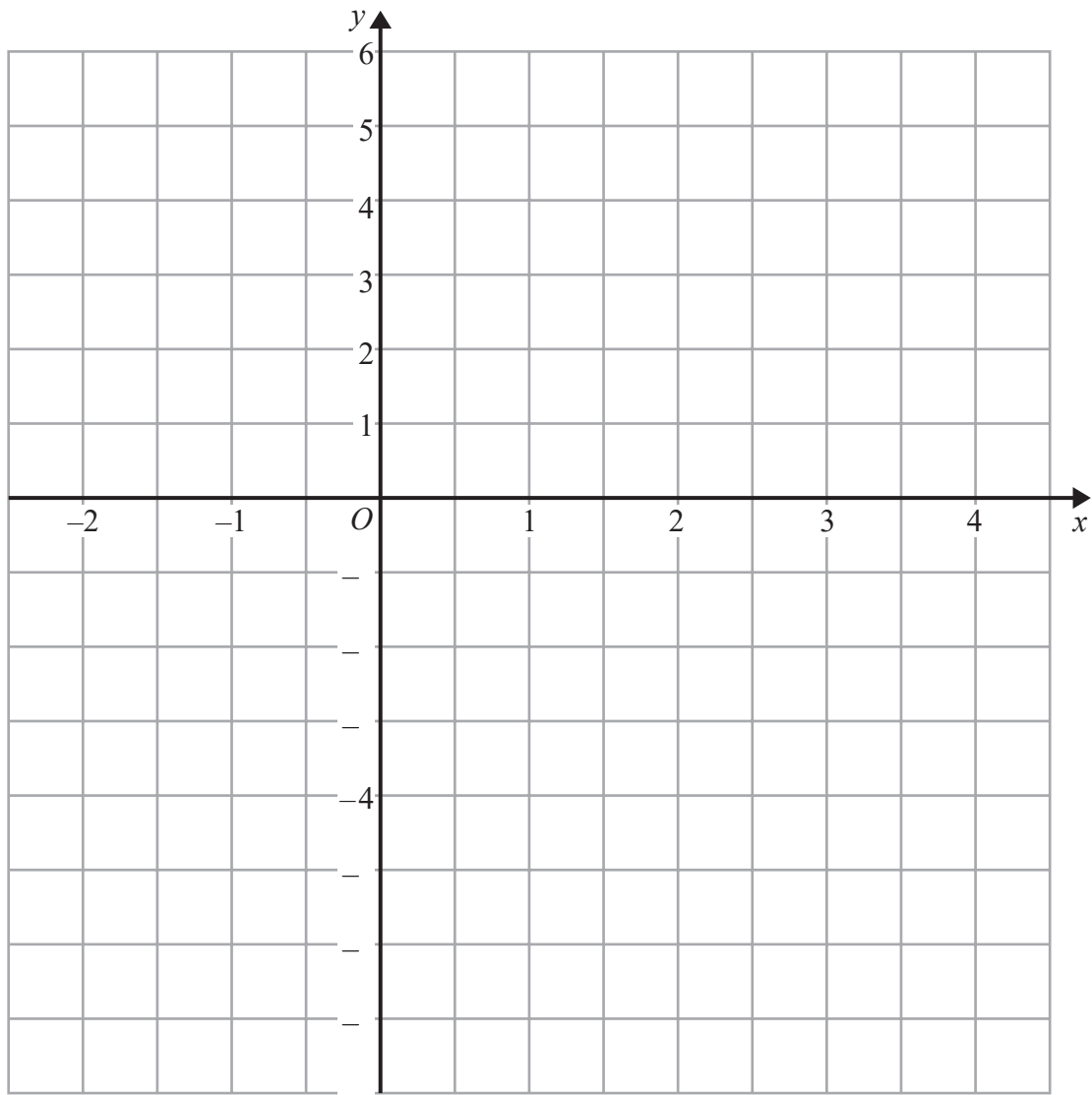
(b) On the grid, draw the graph of  $y = 4x - 6$  for values of  $x$  from -1 to 4



(2)

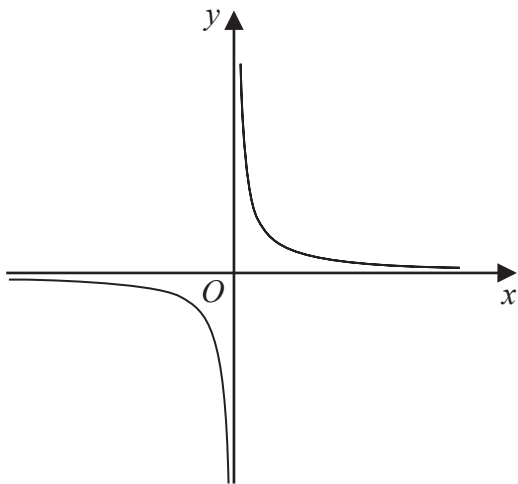
(Total for Question 9 is 4 marks)

10 On the grid below, draw the graph of  $y = 2x - 3$  for values of  $x$  from  $-2$  to  $4$

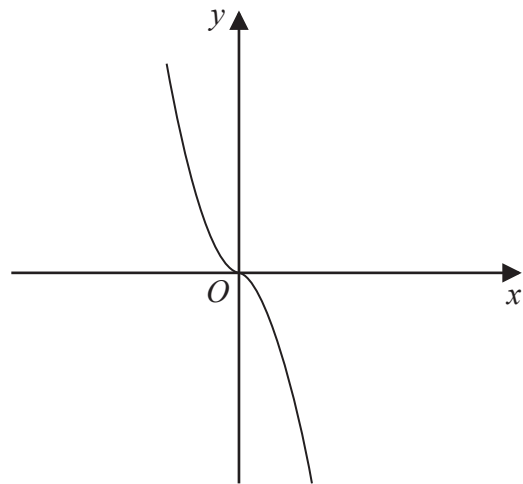


(Total for Question 10 is 3 marks)

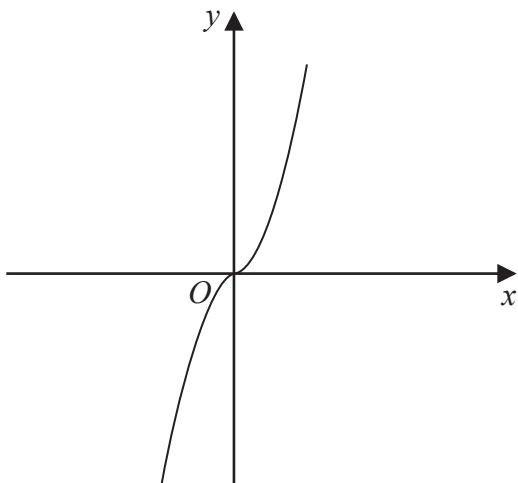
11 The diagram shows four graphs.



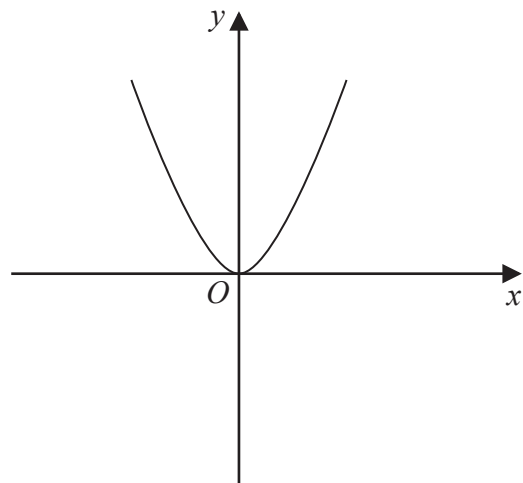
Graph A



Graph B



Graph C



Graph D

Each of the equations in the table is the equation of one of the graphs.

Complete the table.

Equation	Letter of graph
$y = -x^3$	
$y = x^3$	
$y = x^2$	
$y = \frac{1}{x}$	

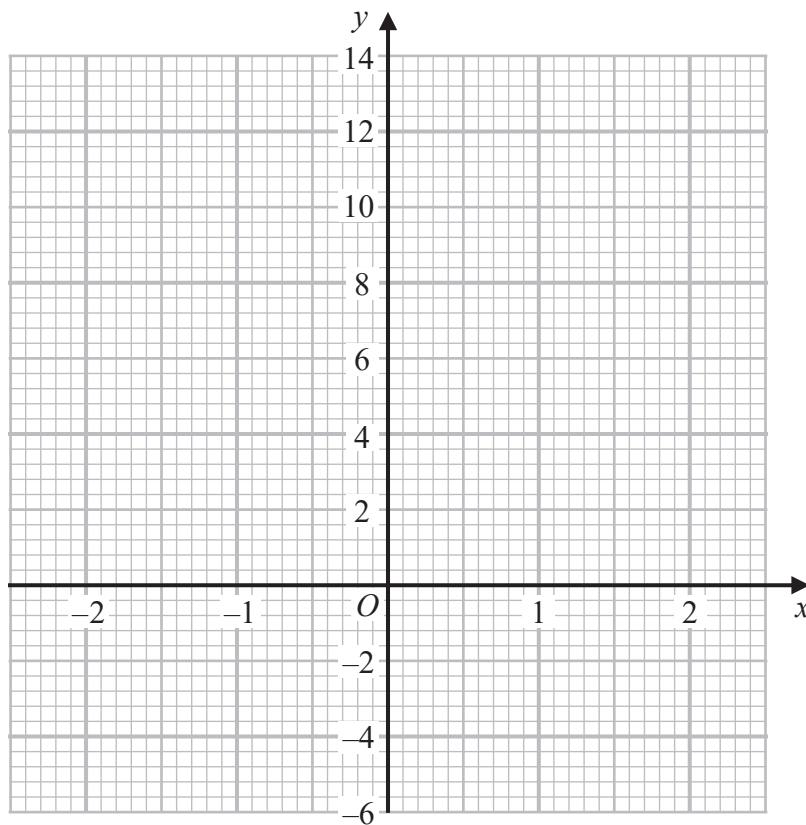
(Total for Question 11 is 2 marks)

12 (a) Complete the table of values for  $y = 5 - x^3$

$x$	-2	-1	0	1	2
$y$		6			

(2)

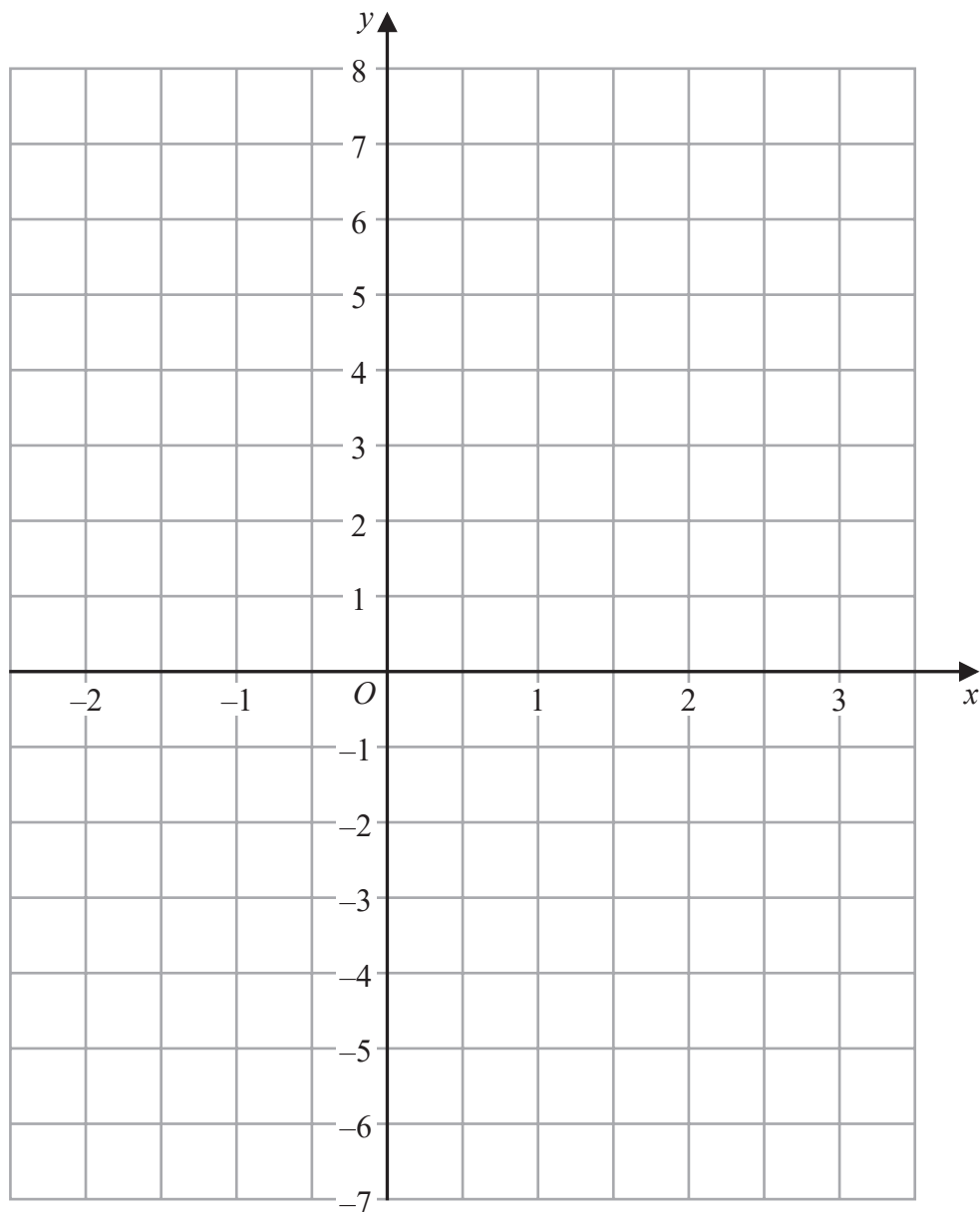
(b) On the grid below, draw the graph of  $y = 5 - x^3$  for values of  $x$  from -2 to 2



(2)

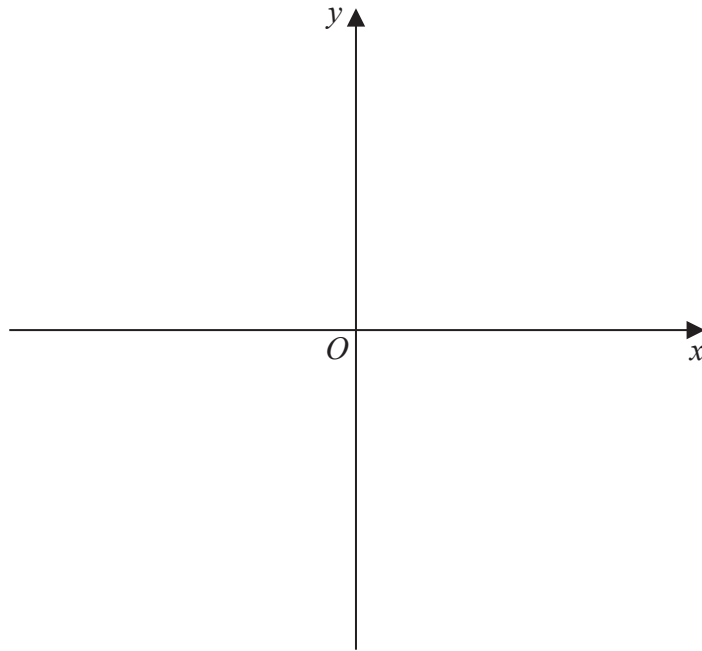
(Total for Question 12 is 4 marks)

13 On the grid below, draw the graph of  $y = 2x - 2$  for values of  $x$  from  $-2$  to  $3$



(Total for Question 13 is 3 marks)

14 Sketch the graph of  $y = \frac{1}{x}$



(Total for Question 14 is 2 marks)

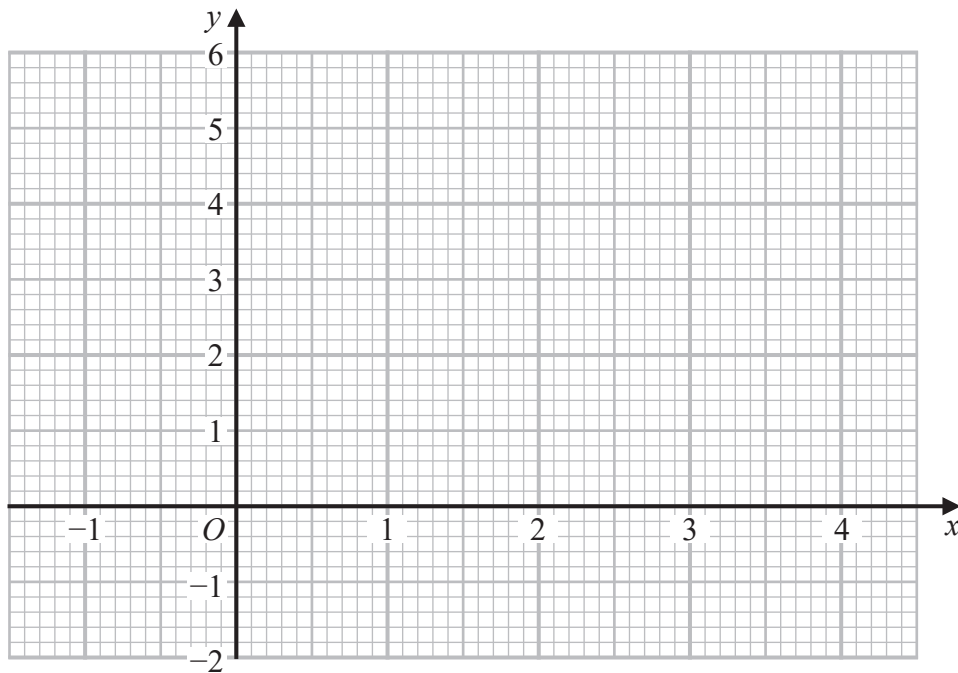
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15 (a) Complete the table of values for  $y = x^2 - 3x + 1$

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

(2)

(b) On the grid, draw the graph of  $y = x^2 - 3x + 1$  for values of  $x$  from -1 to 4



(2)

(c) Using your graph, find estimates for the solutions of the equation  $x^2 - 3x + 1 = 0$

(2)

(Total for Question 15 is 6 marks)