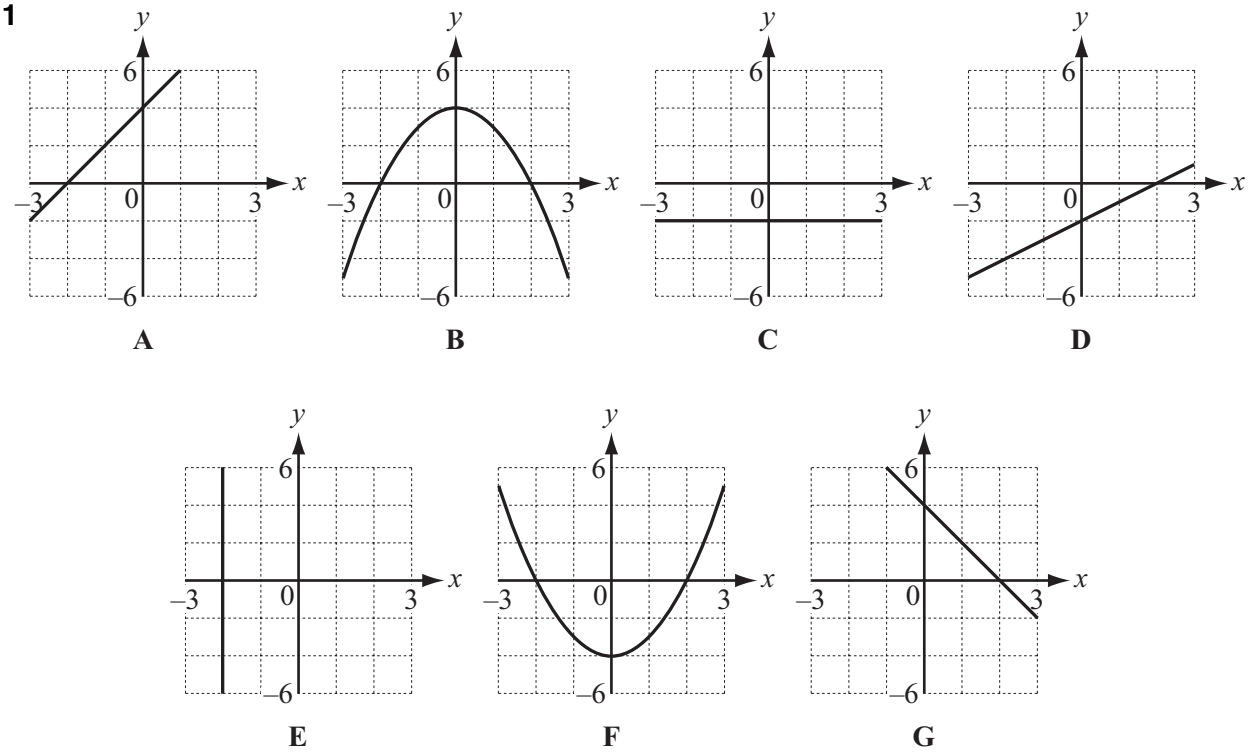
1



Write down the letter of the graph which is

(a) $y = x - 2$,

Answer(a) ..... [1]

(b) $x = -2$,

Answer(b) ..... [1]

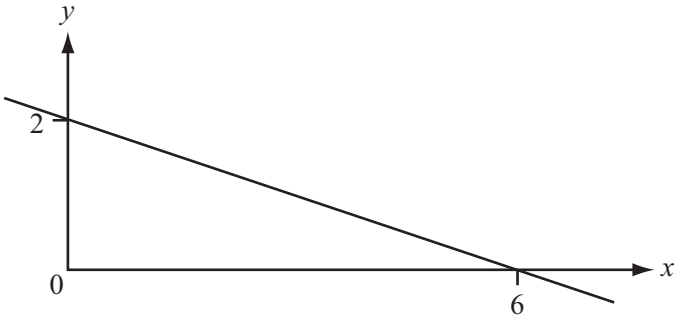
(c) $y = -2x + 4$,

Answer(c) ..... [1]

(d) $y = x^2 - 4$.

Answer(d) ..... [1]

2

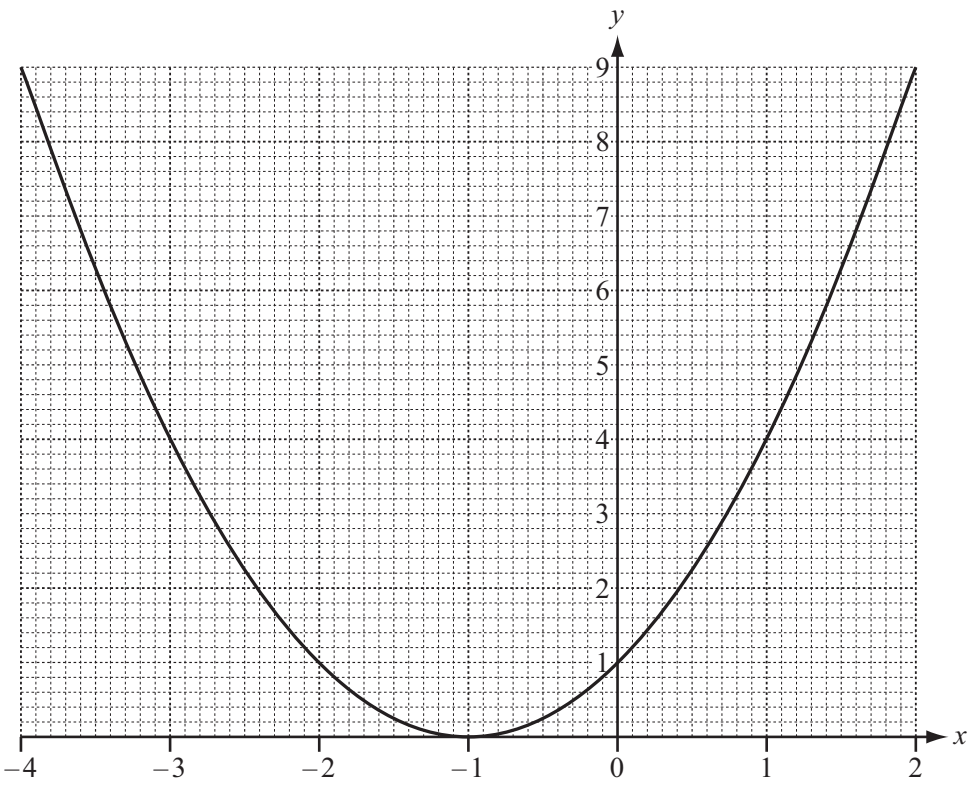


The diagram shows a straight line passing through the points (0, 2) and (6, 0).

Find the equation of this line in the form $y = mx + c$.

Answer $y =$ ..... [3]

3



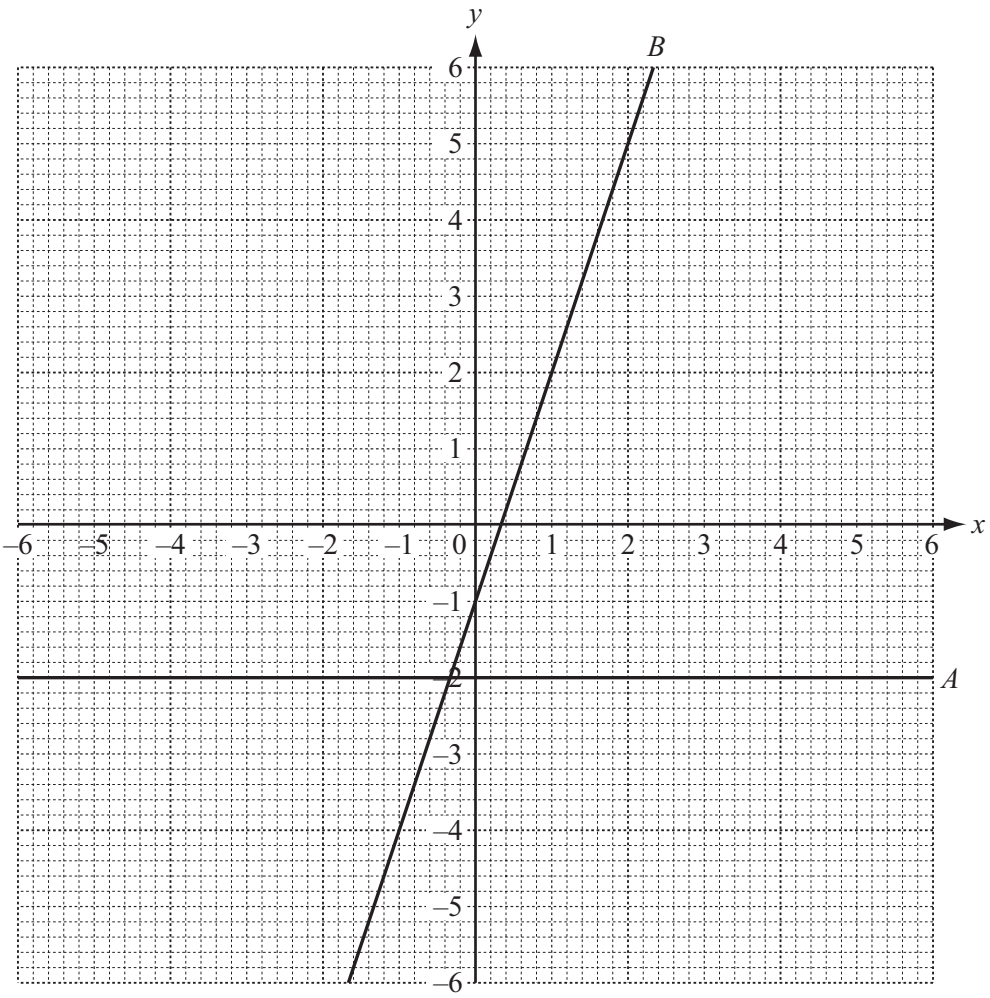
The diagram shows the graph of $y = (x + 1)^2$ for $-4 \leqslant x \leqslant 2$.

(a) On the same grid, draw the line $y = 3$. [1]

(b) Use your graph to find the solutions of $(x + 1)^2 = 3$.
Give each solution correct to 1 decimal place.

Answer(b) $x =$ ..... or $x =$ ..... [2]

4



The diagram shows two straight lines, A and B, drawn on a grid.

(a) Write down the equation of line A.

Answer(a) ..... [1]

(b) The equation of line B is $y = 3x - 1$.

(i) Draw a line parallel to line B that passes through the point (0, 2). [1]

(ii) Write down the equation of your line in the form $y = mx + c$.

Answer(b)(ii) $y =$ ..... [2]

5 The straight line, L, has the equation $y = 5 - 2x$.

Write down

(a) the co-ordinates of the point where the line crosses the y-axis,

Answer(a) (..... , ...) [1]

(b) the gradient of the line,

Answer(b) ..... [1]

(c) the equation of a line parallel to L.
Give your answer in the form $y = mx + c$.

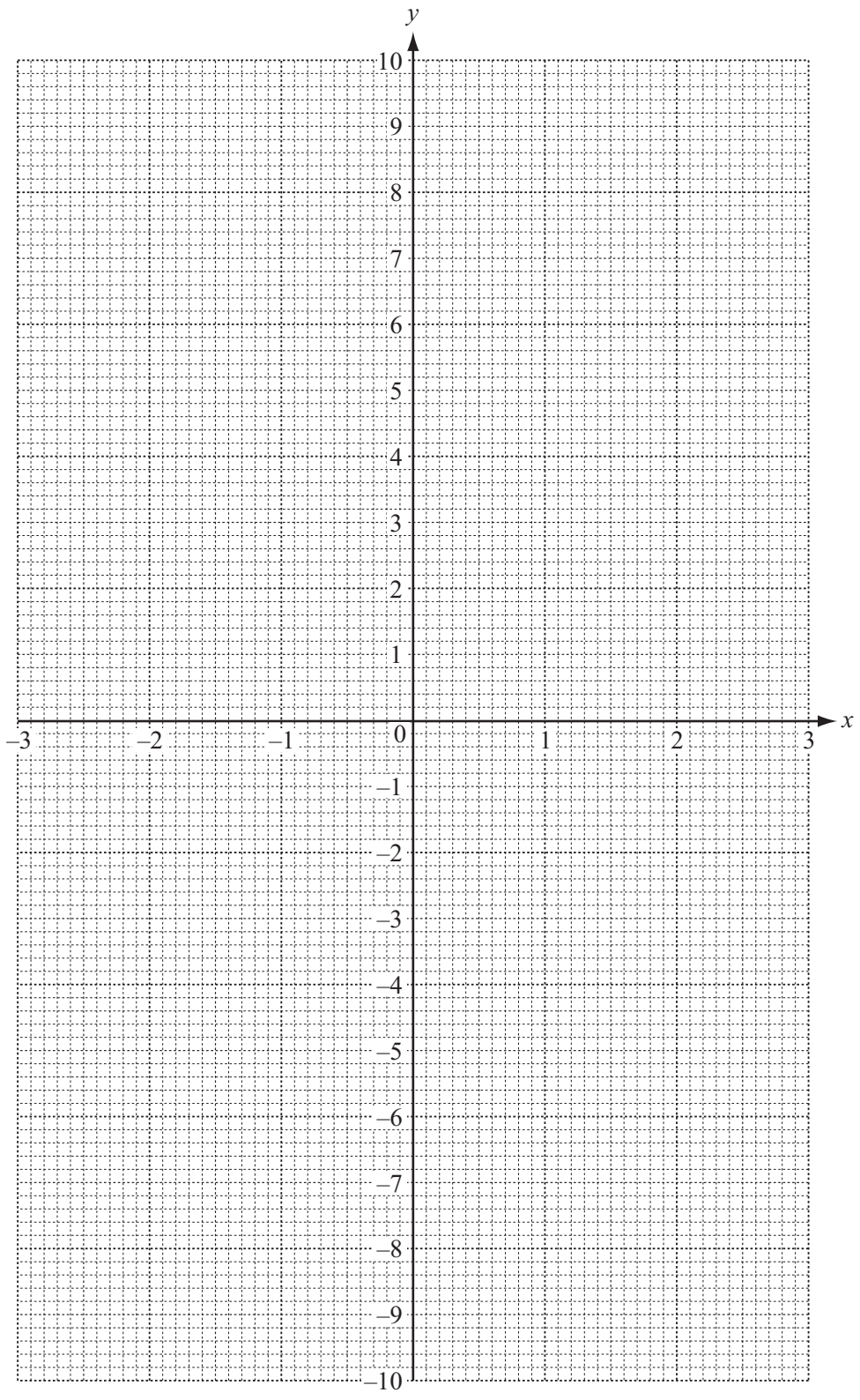
Answer(c) $y =$ ..... [1]

6 **a)** Complete the table of values for the function $y = \frac{3}{x}$, $x \neq 0$.

x	−3	−2.5	−2	−1.5	−1	−0.5	−0.3		0.3	0.5	1	1.5	2	2.5	3
y	−1	−1.2		−2	−3	−6					3	2	1.5		1

[3]

(b) On the grid below, draw the graph of $y = \frac{3}{x}$ for $-3 \leqslant x \leqslant -0.3$ and $0.3 \leqslant x \leqslant 3$.



[5]

(c) Use your graph to solve the equation $\frac{3}{x} = 7$.

Answer(c) $x =$ ..... [1]

(d) Complete the table of values for $y = \frac{2x}{3} - 1$.

x	−3	0	3
y			

[2]

(e) On the grid, draw the straight line $y = \frac{2x}{3} - 1$ for $-3 \leqslant x \leqslant 3$. [2]

(f) Write down the co-ordinates of the points where the line $y = \frac{2x}{3} - 1$ intersects the graph of $y = \frac{3}{x}$.

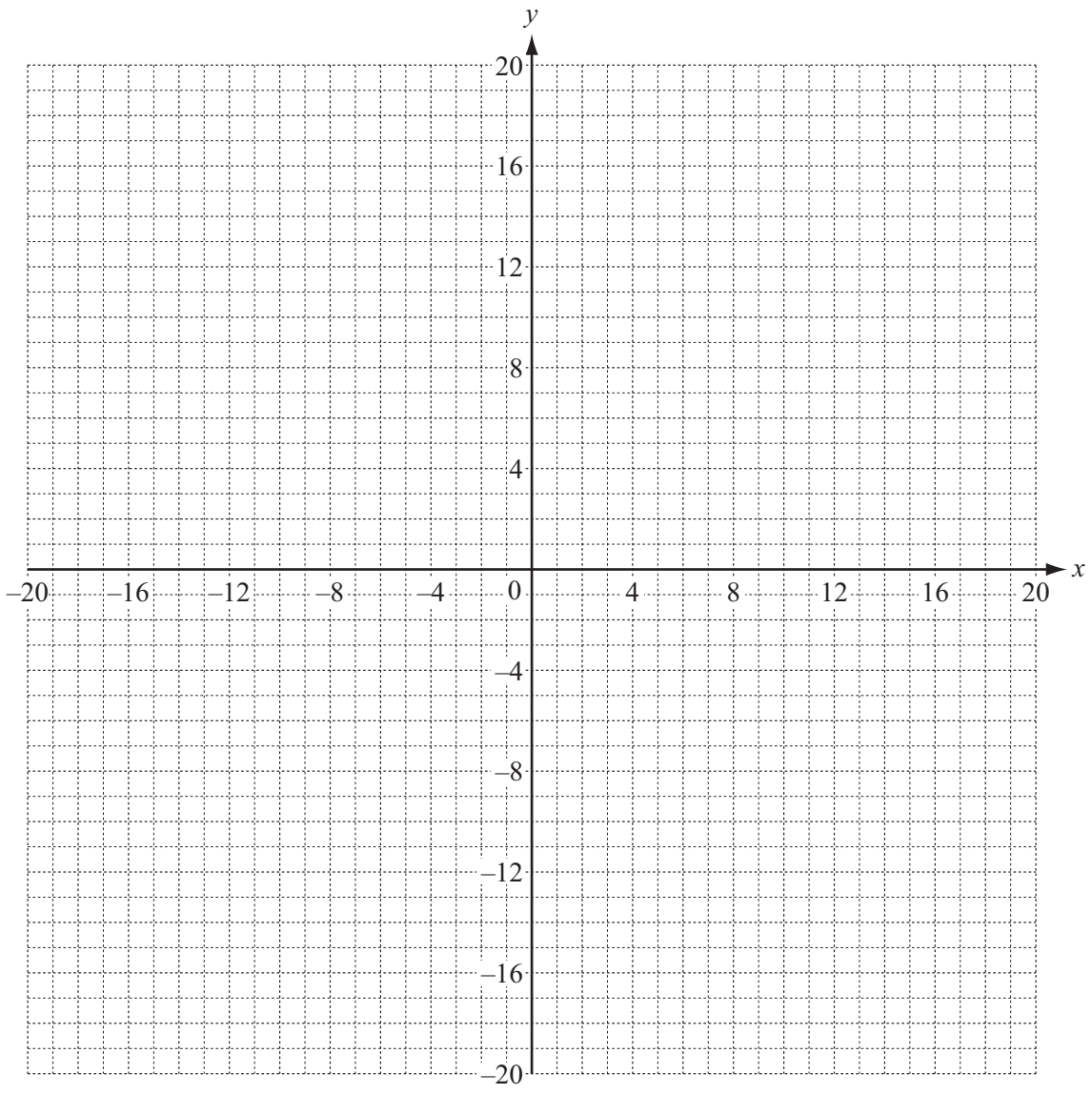
Answer(f) (..... , ...) and (..... , ...) [2]

7 **(a)** Complete the table for the function $y = \frac{18}{x}$, $(x \neq 0)$.

x	−18	−9	−6	−3	−2	−1		1	2	3	6	9	18
y				−6	−9	−18		18	9	6			

[3]

(b) On the grid below, draw the graph of $y = \frac{18}{x}$ for $-18 \leqslant x \leqslant -1$ and $1 \leqslant x \leqslant 18$.



[4]

(c) Write down the order of rotational symmetry of the graph.

Answer(c) ..... [1]

(d) **(i)** On the grid, draw the graph of $y = x$. [1]

(ii) Write down the co-ordinates of the points of intersection of $y = x$ and $y = \frac{18}{x}$.

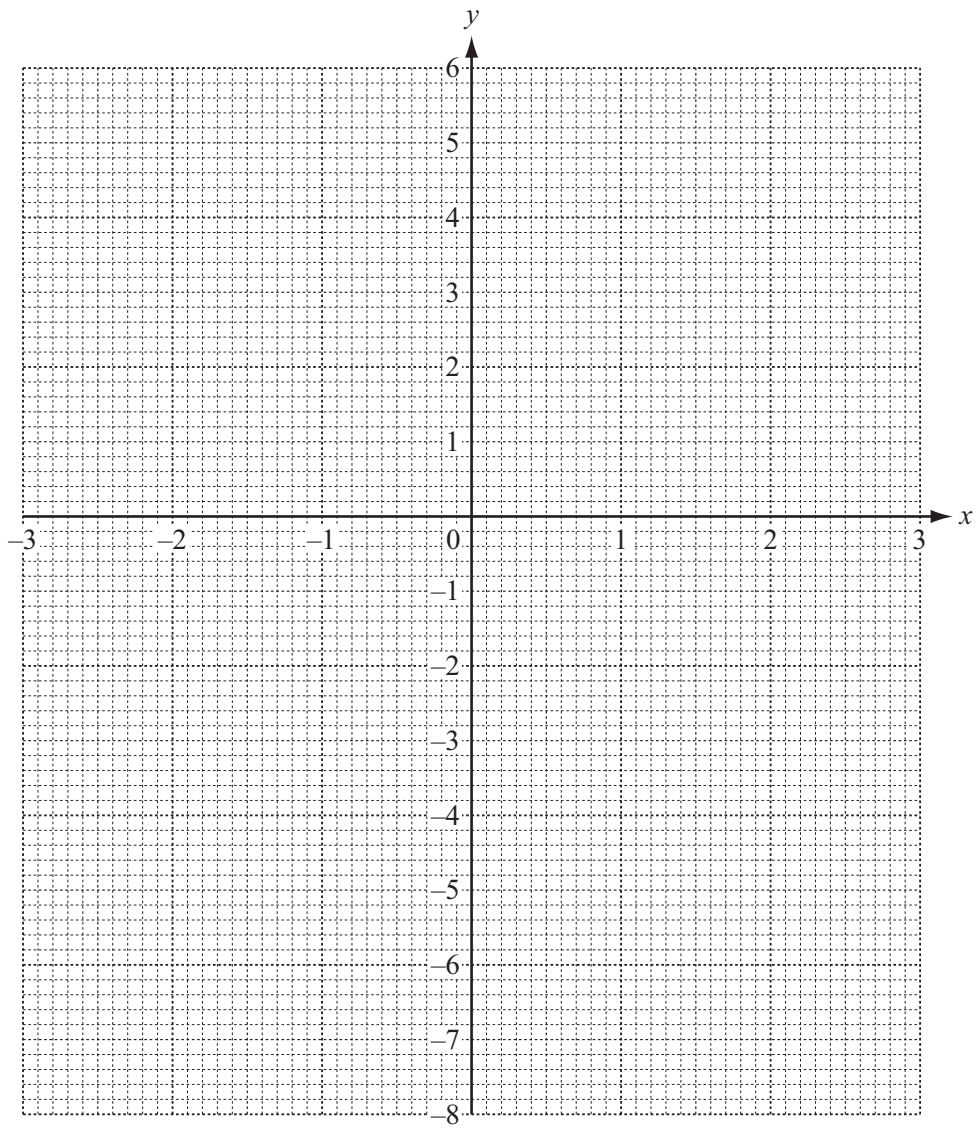
Answer(d)(ii) (..... , ...) and (..... , ...) [2]

8 **(a)** Complete the table of values for $y = 5 + x - x^2$.

x	–3	–2	–1	0	1	2	3
y	–7	–1		5		3	

[3]

(b) On the grid below draw the graph of $y = 5 + x - x^2$ for $-3 \leqslant x \leqslant 3$.



[4]

(c) Use your graph to solve the equation $5 + x - x^2 = 2$.

Answer(c) $x =$ ..... or $x =$ ..... [2]

(d) **(i)** Complete the table of values for $y = 2x - 1$.

x	–3	0	3
y			

[2]

(ii) On the grid, draw the straight line $y = 2x - 1$ for $-3 \leqslant x \leqslant 3$. [2]

(iii) Write down the gradient of $y = 2x - 1$.

Answer(d)(iii) ..... [1]

(e) Write down the co-ordinates of the points where the line $y = 2x - 1$ intersects the graph of $y = 5 + x - x^2$.

Answer(e) (..... , ...) and (..... , ...) [2]