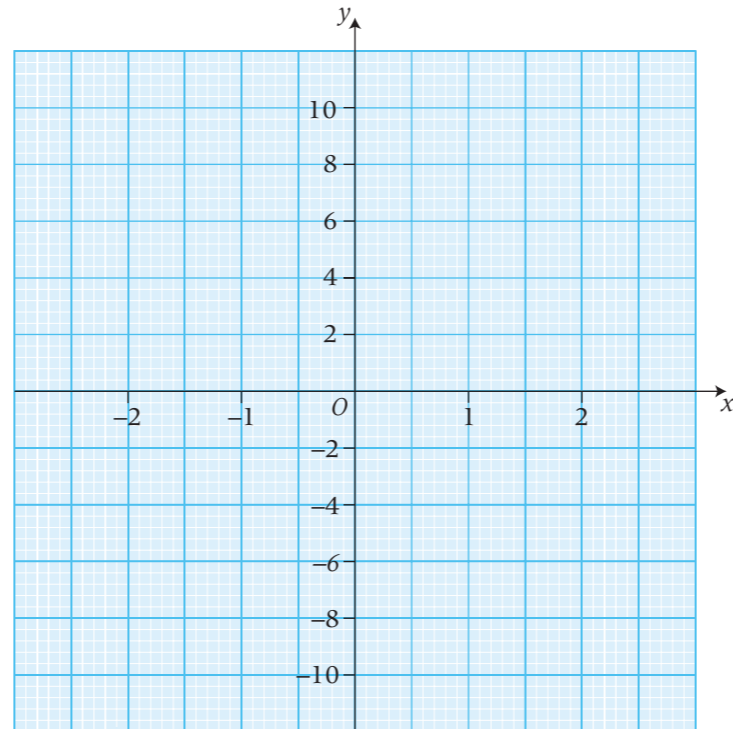


# A8

## Algebra exam review

1 Draw the graph of  $y = 5x - 2$  on the grid below.



(Total 3 marks)

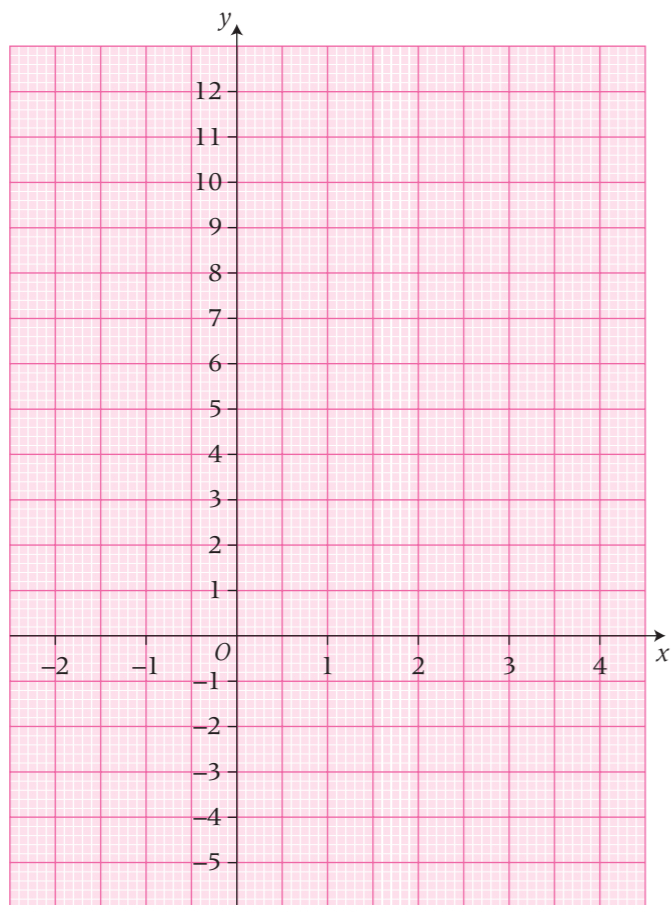
2 a Complete the table for  $y = x^2 - 3x + 1$

$x$	-2	-1	0	1	2	3	4
$y$	11		1	-1		1	5

(2)

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

(2)



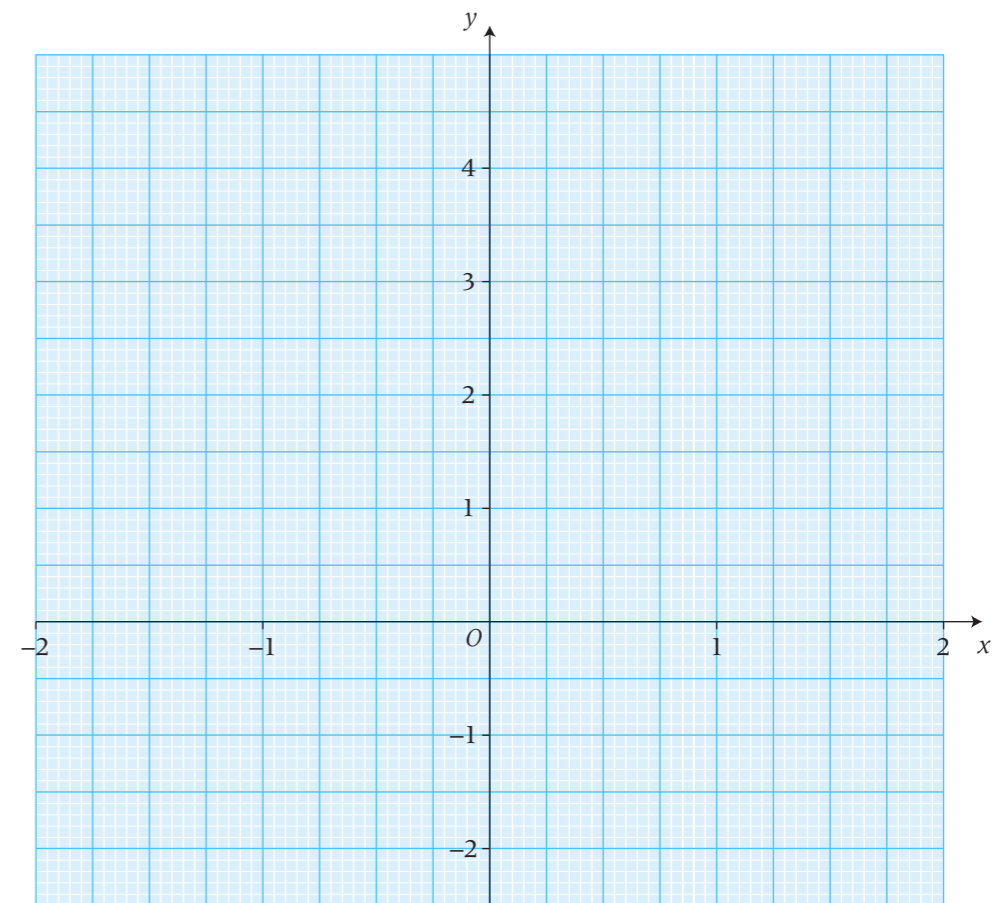
**c** Use your graph to find an estimate for the minimum value of  $y$ .

$y = \dots\dots\dots$

(1)

(Total 5 marks)

**b** On the grid, draw the graph of  $y = x^3 - 3x + 1$  for  $-2 \leq x \leq 2$



(2)

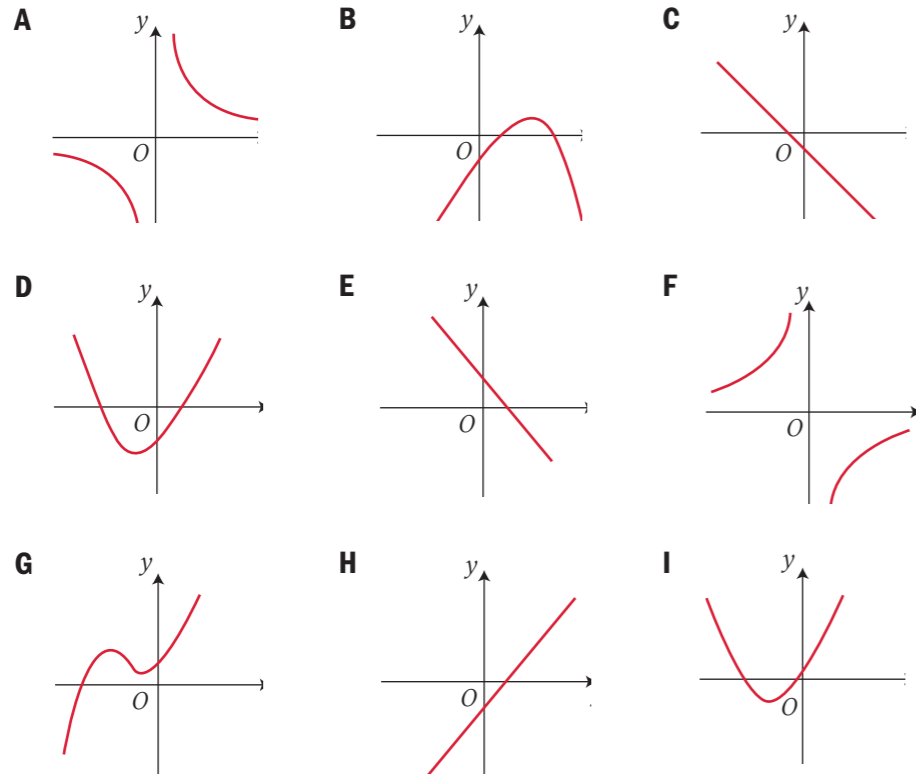
(Total 3 marks)

**3 a** Complete the table of values for  $y = x^3 - 3x + 1$

$x$	-2	-1.5	-1	-0.5	0	0.5	1	1.5	2
$y$	-1		3	2.375	1	-0.375		-0.125	3

(1)

4



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

- i  $y = 3x - 2$  .....
- ii  $y = 2x^2 + 5x - 3$  .....
- iii  $y = \frac{3}{x}$  .....

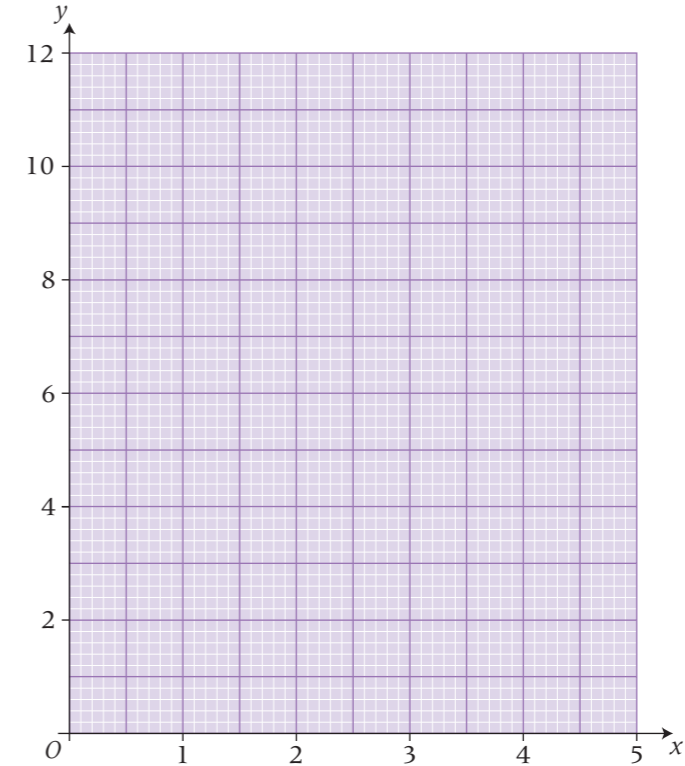
(Total 3 marks)

5 a Complete the table of values for  $y = x + \frac{2}{x}$

$x$	0.2	0.4	0.6	0.8	1	1.5	2	3	4	5
$y$	10.2		3.9		3	2.8		3.7		5.4

(2)

b On the grid, draw the graph of  $y = x + \frac{2}{x}$  for  $0.2 \leq x \leq 5$



(2)

c Use your graph to find estimates for the solutions of the equation

$$x + \frac{2}{x} = 4$$

$x = \dots\dots\dots$  or  $x = \dots\dots\dots$

(2)

The solutions of the equation  $2x + \frac{2}{x} = 7$  are the x-coordinates of the points of intersection of the graph of  $y = x + \frac{2}{x}$  and a straight line **L**.

**d** Find the equation of **L**.

.....  
(2)

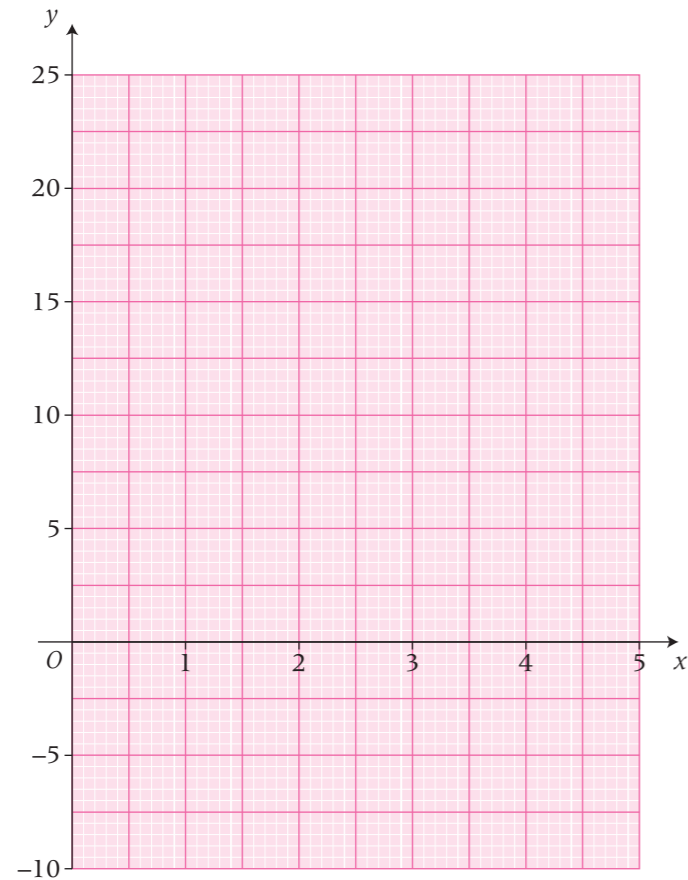
(Total 8 marks)

**6 a** Complete the table of values for  $y = x^2 - \frac{3}{x}$

<i>x</i>	0.5	1	1.5	2	3	4	5
<i>y</i>	-5.75	-2					24.4

(2)

**b** On the grid, draw the graph of  $y = x^2 - \frac{3}{x}$  for  $0.5 \leq x \leq 5$



(2)

**c** Use your graph to find an estimate for a solution of the equation

$$x^2 - \frac{3}{x} = 0$$

$x = \dots\dots\dots$

(1)

**d** Draw a suitable straight line on your graph to find an estimate for a solution of the equation

$$x^2 - 2x - \frac{3}{x} = 0$$

$x = \dots\dots\dots$

(2)

(Total 7 marks)