Surname	
Other Names	
Candidate's Signature	

GCSE 9 - 1 Questions

Graph Drawing

Calculator Allowed

INSTRUCTIONS TO CANDIDATES

Write your name in the space provided.

Write your answers in the spaces provided in this question paper.

Answer ALL questions.

Any working should be clearly shown in the spaces provided since marks may be awarded for partially correct solutions.

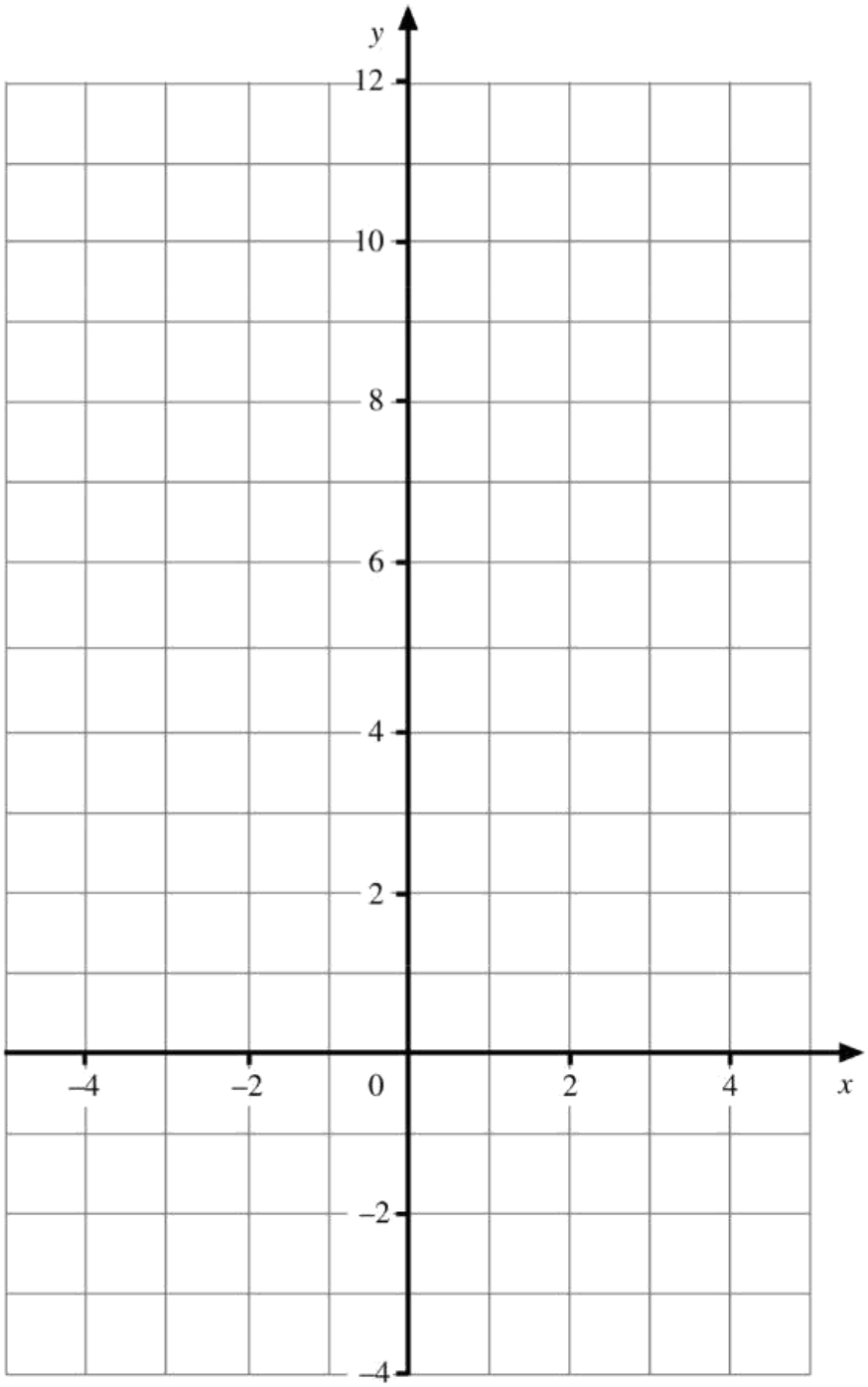
Total Marks :

1) **(a)** Complete the table for $y = 3x - 1$

x	-1	1	3	4
$y = 3x - 1$		2	8	11

[1]

(b) Hence draw the graph of $y = 3x - 1$



[2]

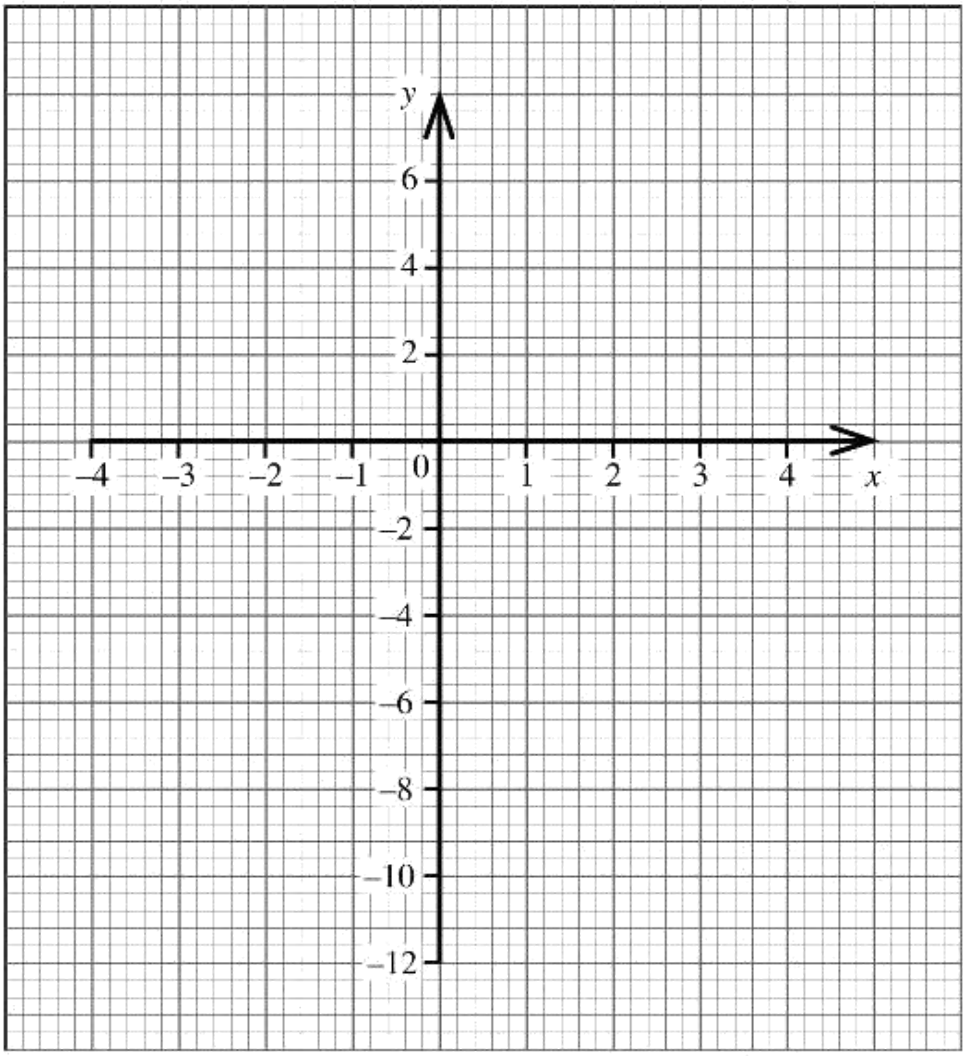
2)

(a) Complete the table for $y = 4x - 7$

x	-1	0	1	2	3
y		-7	-3	1	5

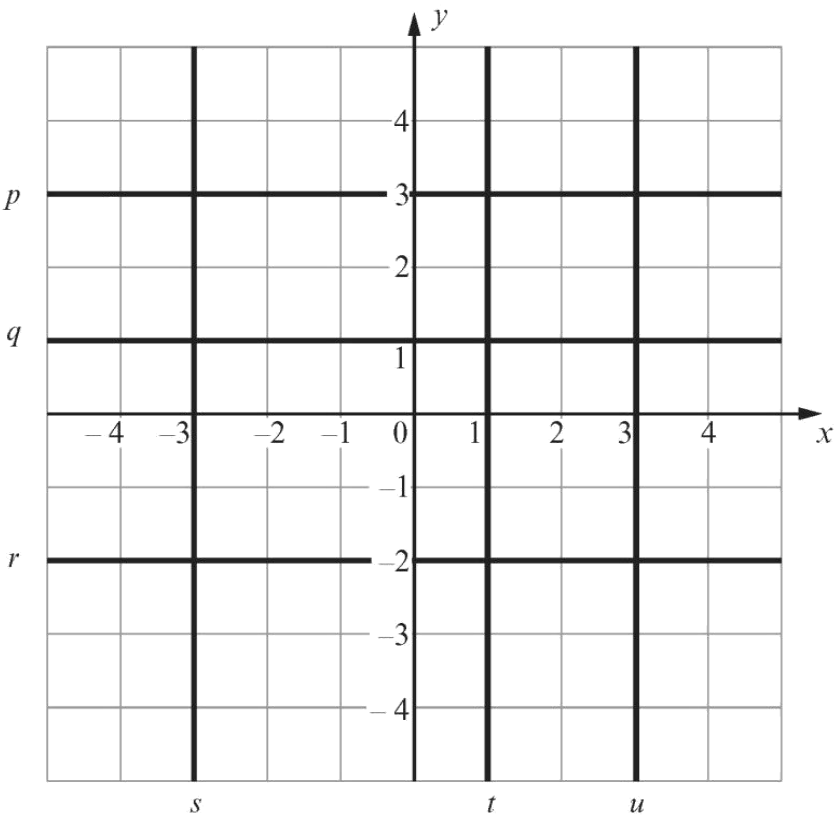
[1]

(b) Draw the graph of $y = 4x - 7$ on the grid below [2]



(c) Draw the line $y = -4$ on the grid above. [1]

3) As part of her homework, Nia was asked to identify straight lines drawn on the coordinate grid shown below.



(a) Which of the lines *p, q, r, s, t* or *u* shown on the grid represent the following equations?

$y = 1$ is line .....

$x = -3$ is line .....

[2]

(b) Nia was also asked to draw the line $y = 2x - 1$.

(i) Complete the table below for this line.

x	–2	–1	0	1	2	3
$y = 2x - 1$	–5		–1	1		5

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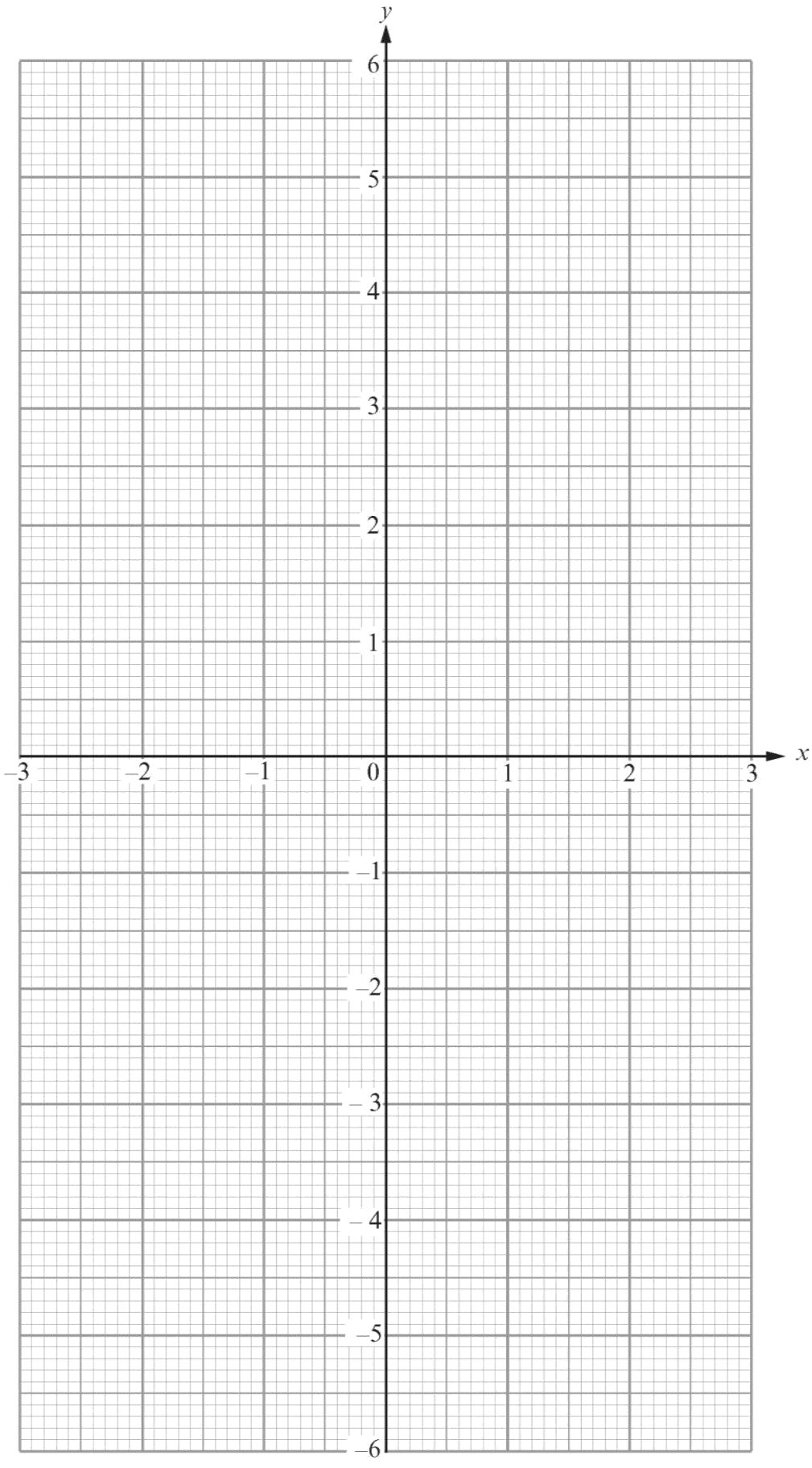
[2]

(ii) On the graph paper on the opposite page, draw the graph of $y = 2x - 1$.

[2]


y
x
6
5
4
3
2
1
0
–1
–2
– 3
– 4
–5
–6
–3
–2
–1
1
2
3

4) *(a)* Solve the equation $5x - 16 = 29$. [2]

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(b) The table shows the value of $y = 2x - 1$ for $x = 2$.

x	0	2	4
y		3	

(i) Complete the table for y when $x = 0$ and $x = 4$. [1]

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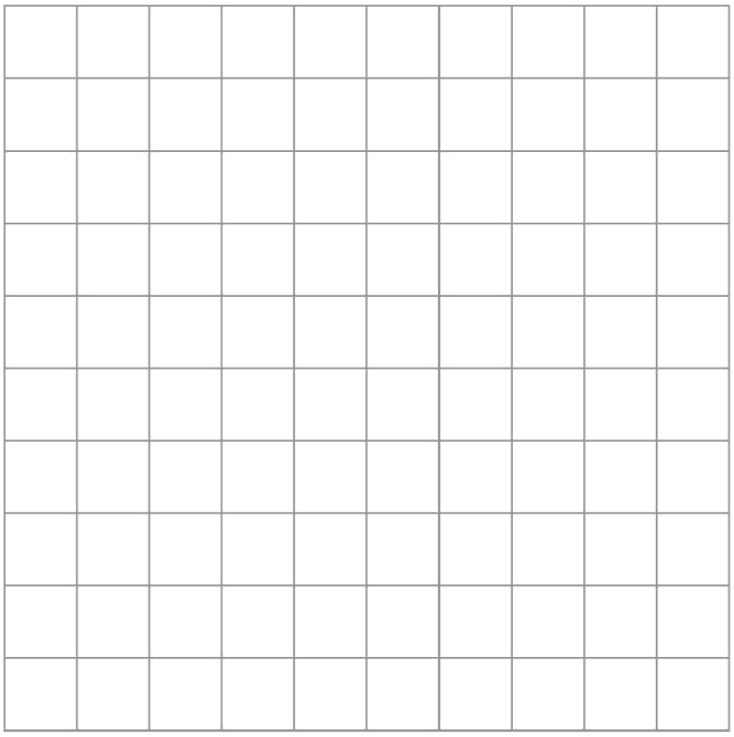
(ii) On the grid below, draw the graph of $y = 2x - 1$ for values of x from $x = 0$ to $x = 4$. [3]



5) In a game, the rule for plotting points is $(x, 2x)$.

On the graph below, plot the points when $x = 1$, $x = 4$ and when $x = -2$. [3]

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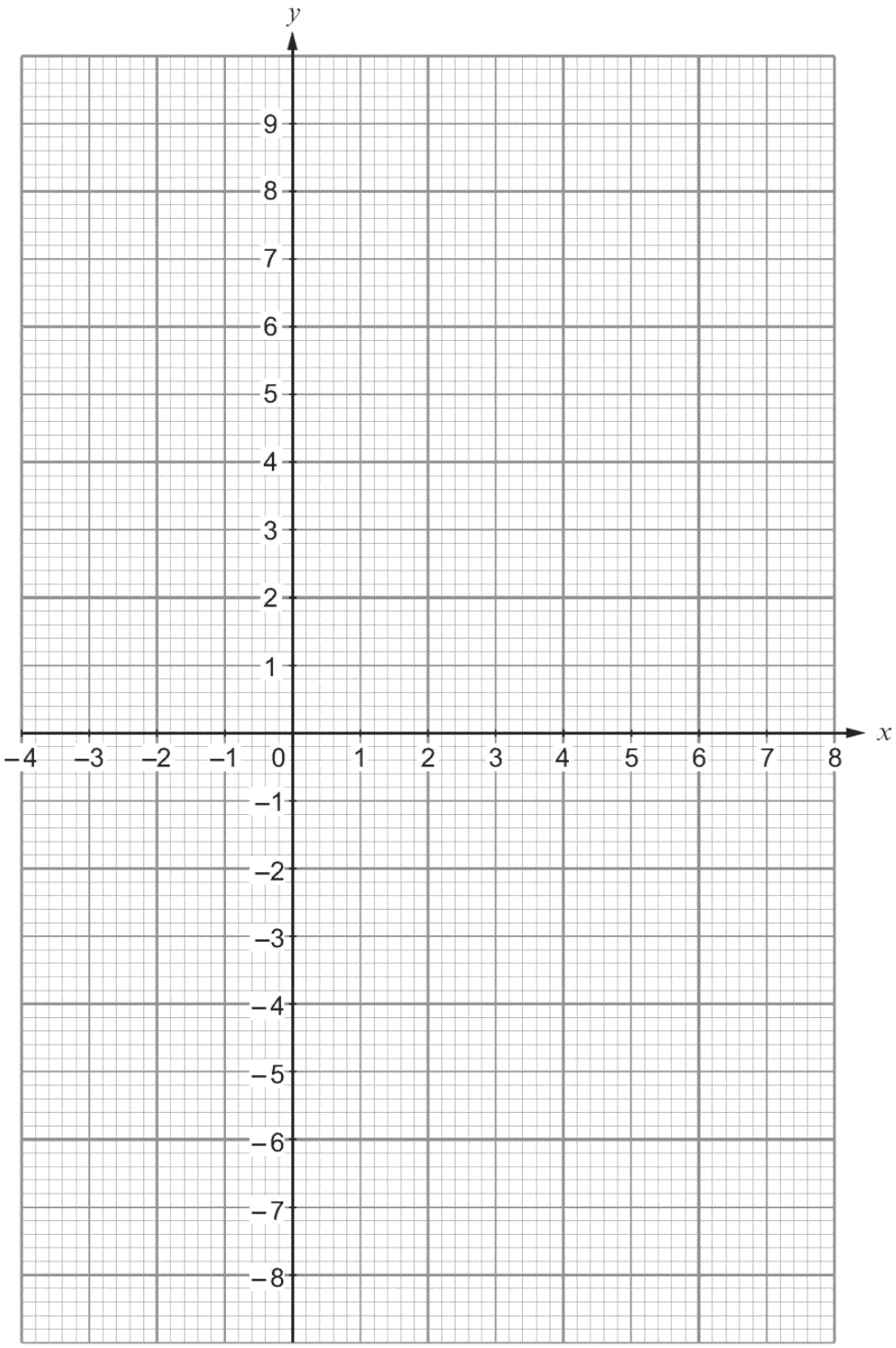
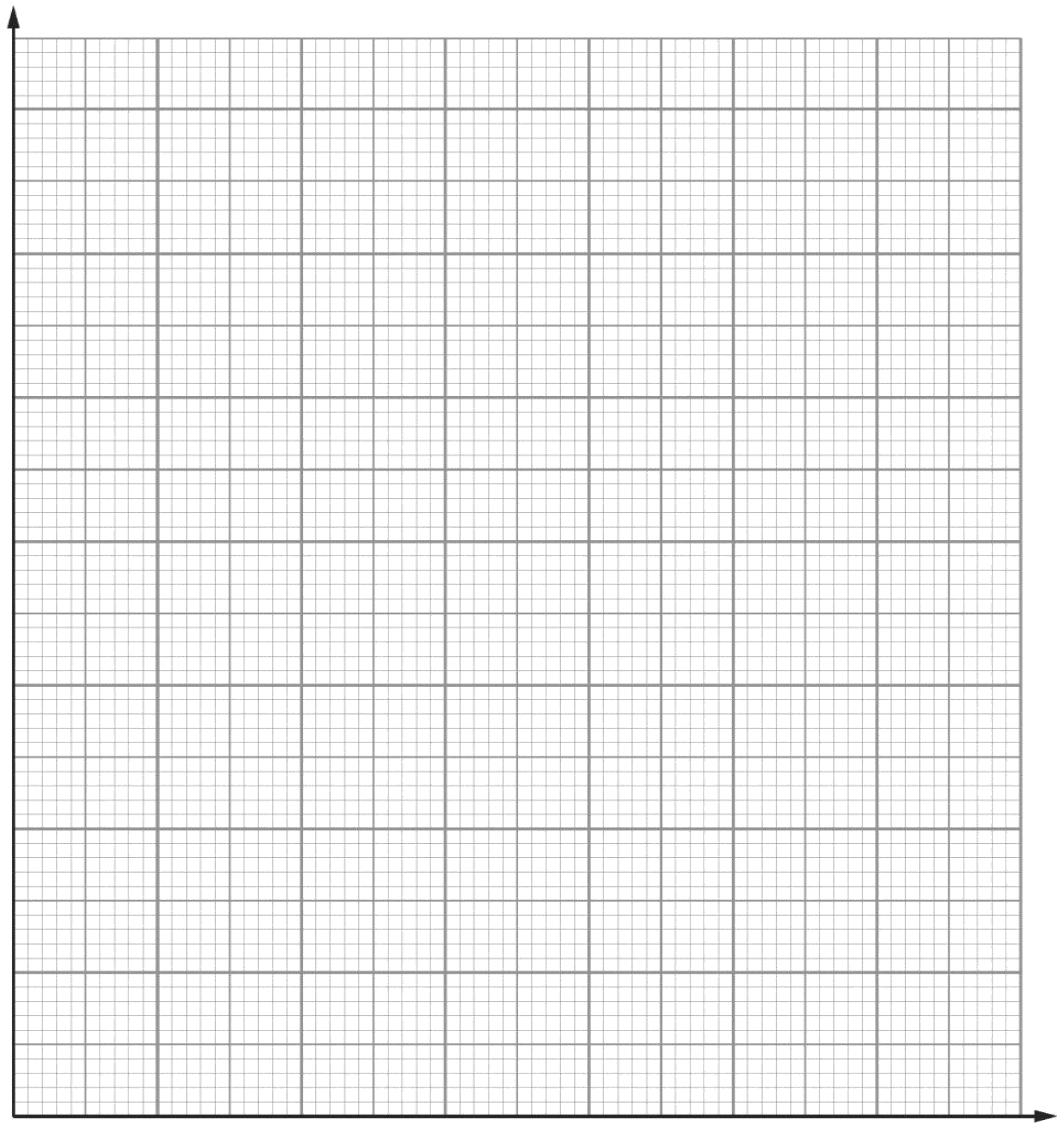


6) A liquid is left to cool.
Its temperature is recorded every two minutes for a period of 12 minutes.
The results are summarised in the table below.

Time (minutes)	0	2	4	6	8	10	12
Temperature (°C)	70	55	42	32	25	20	17

(a) On the graph paper below, draw a curve to represent the information given in the table. [4]



(b) Use your graph to estimate the temperature of the liquid after three minutes. [1]

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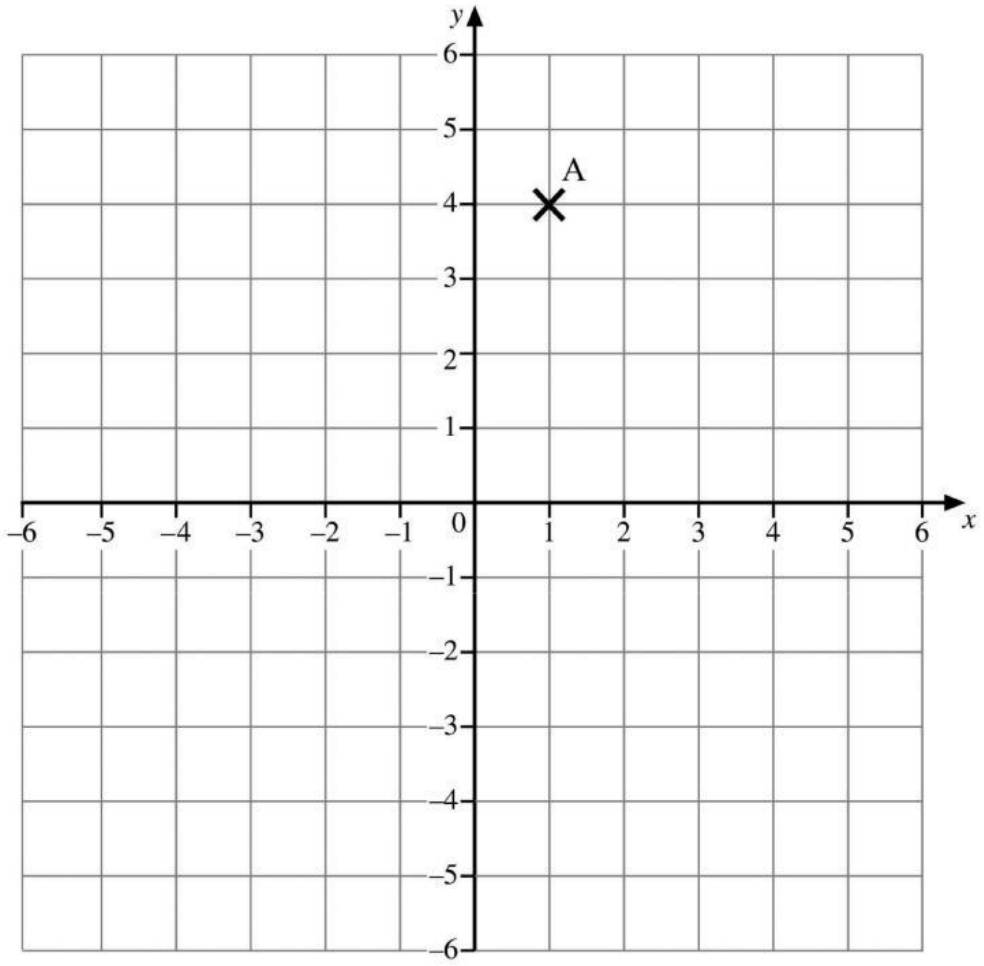
7)



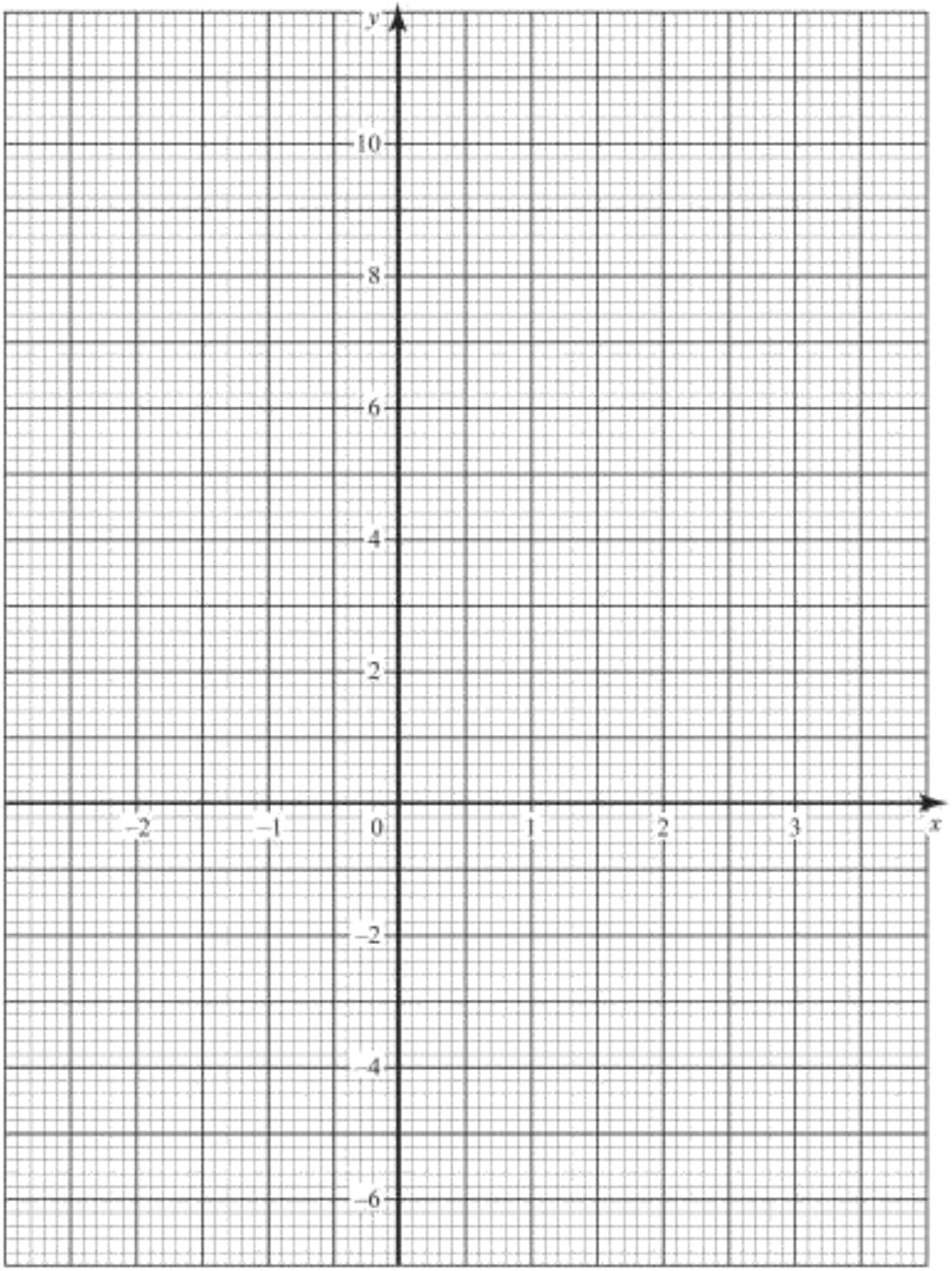
(a) Write down the coordinates of the point marked A.

Answer (_____ , _____) [1]

(b) Plot on the grid the point (–4, 0). [1]

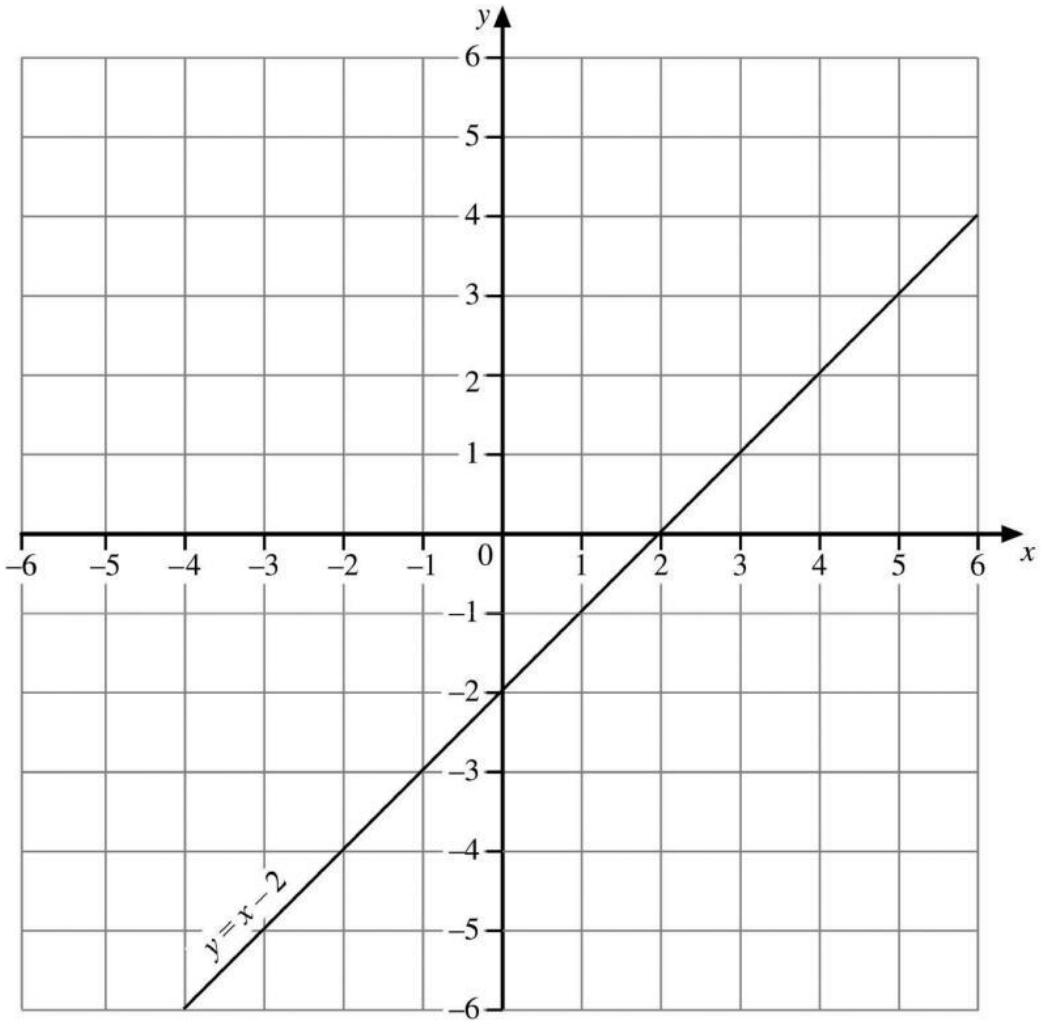
(c) Draw on the grid the line $x = 3$ [1]

8) Draw the graph of $y = 4 - 3x$ on the graph paper below.



[3]

9)



The line $y = x - 2$ has been drawn on the grid.

(a) Draw the line $y = \frac{1}{2}x + 1$ on the same grid. [3]

(b) Write down the coordinates of the point of intersection of the two lines.

Answer (_____ , _____) [1]

10)

Use the grid below to draw graphs to represent each of the following equations.

(i) $y = \frac{1}{2}x + 6$

(ii) $x + y = 8$

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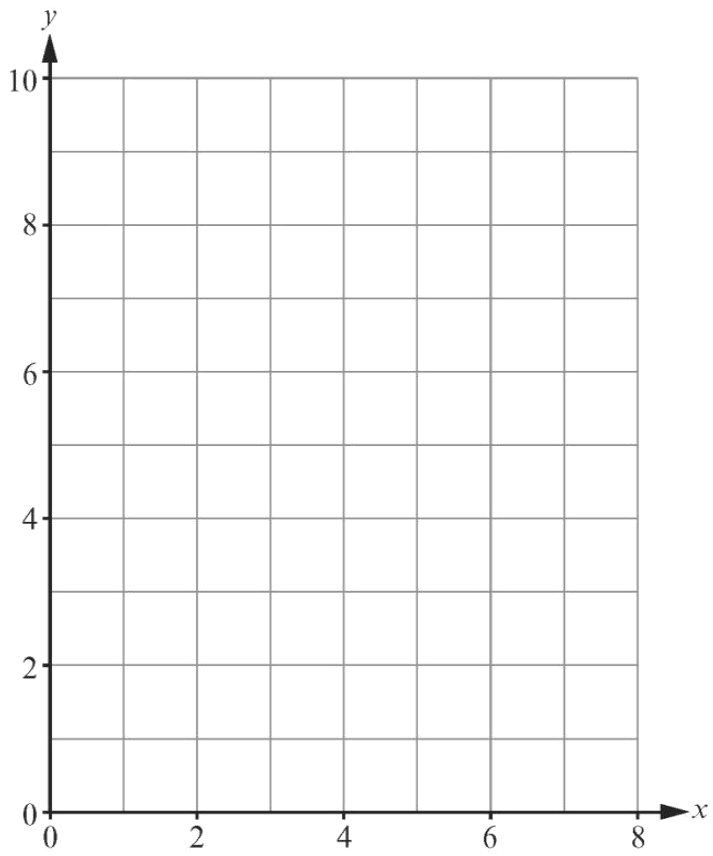
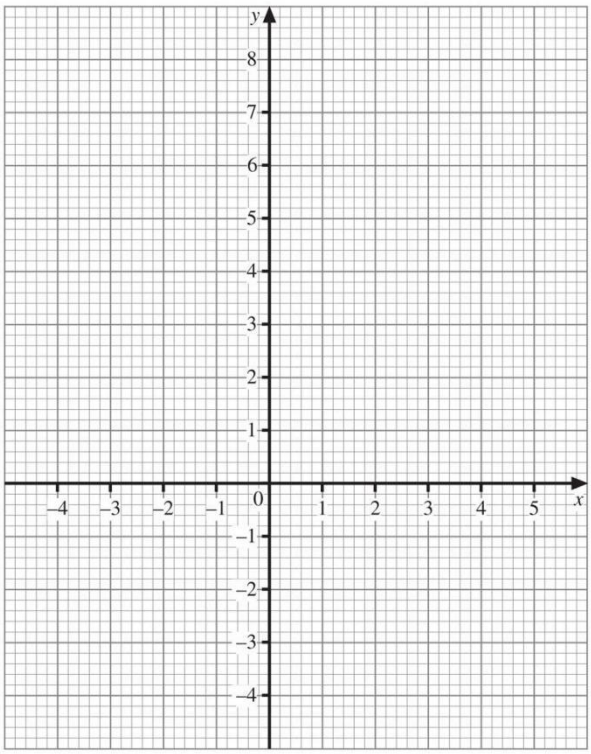
Label your lines (i) and (ii) as appropriate.



[4]

11)

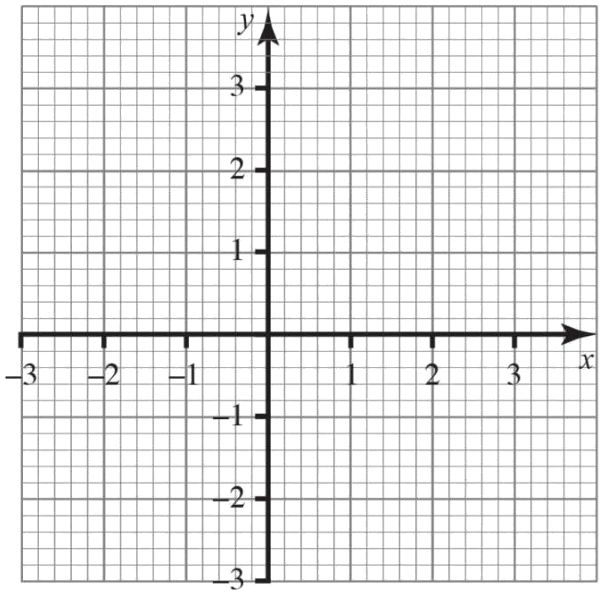
(a) Draw the graph of $y = 2x + 1$ on the grid below.



[3]

(b) Draw the line $y = 3$ on the grid above. [1]

12) Draw the graph of $y = 2x - 1$



[3]