1 On the grid, identify the region represented by
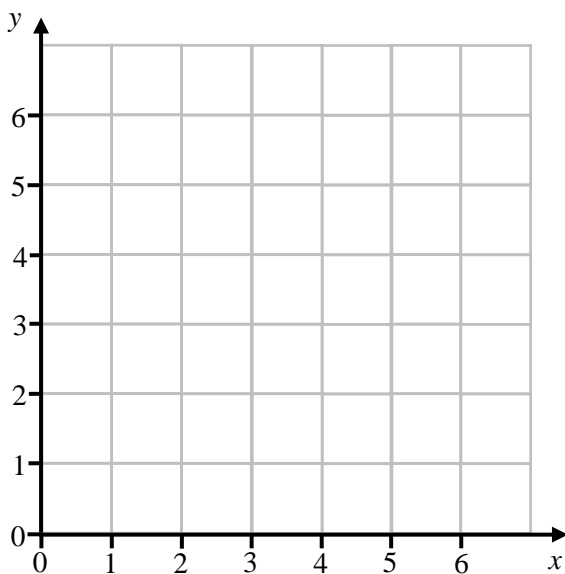
$x > 2$ $\qquad$ $y \leq 4$

Label the region R.

(Total for Question 1 is 2 marks)

2 On the grid, identify the region represented by
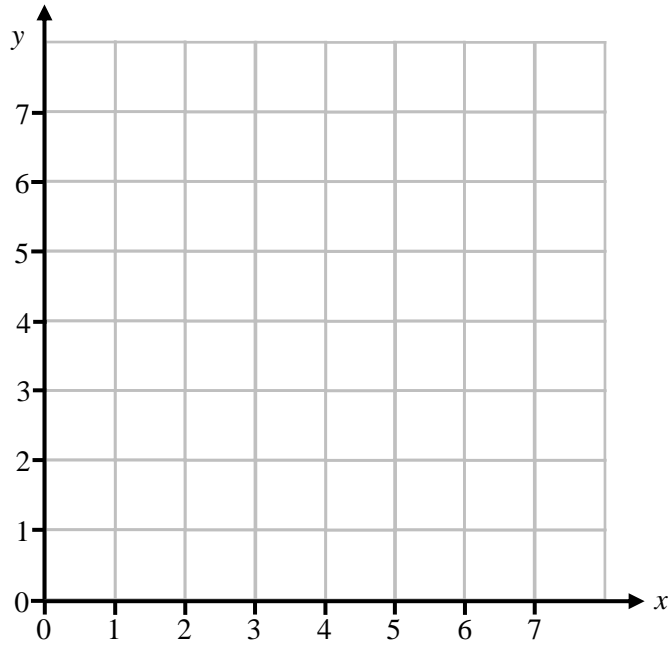
$1 \leq x < 5$

Label the region R.
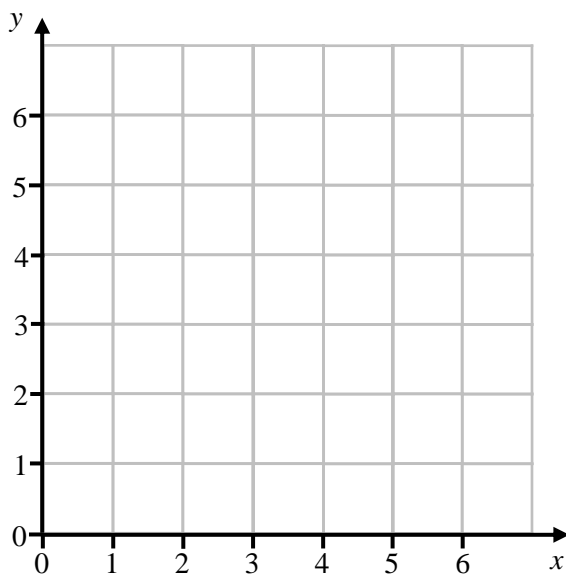
(Total for Question 2 is 2 marks)

1

3 On the grid, identify the region represented by

$$x > 1 \qquad y > 2 \qquad x + y \leq 6$$
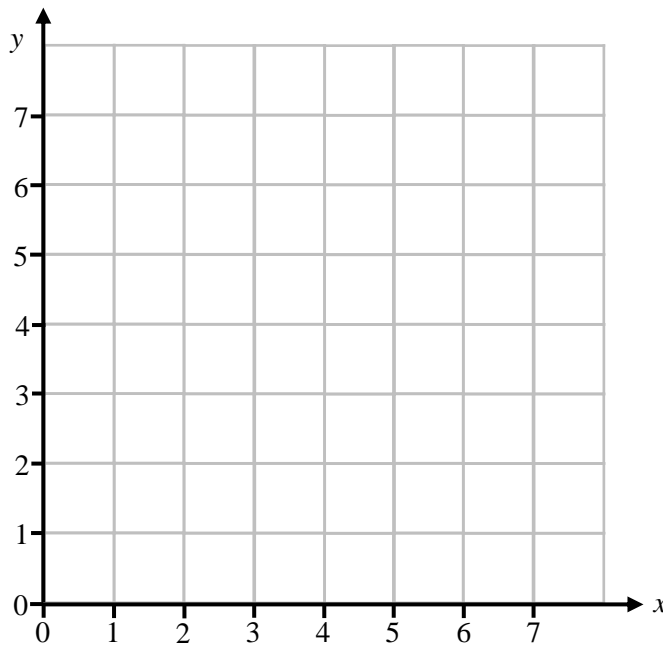
Label the region R.

(Total for Question 3 is 3 marks)

4 On the grid, identify the region represented by

$$x \geq 2 \qquad y \geq 4 \qquad y \leq x + 3$$
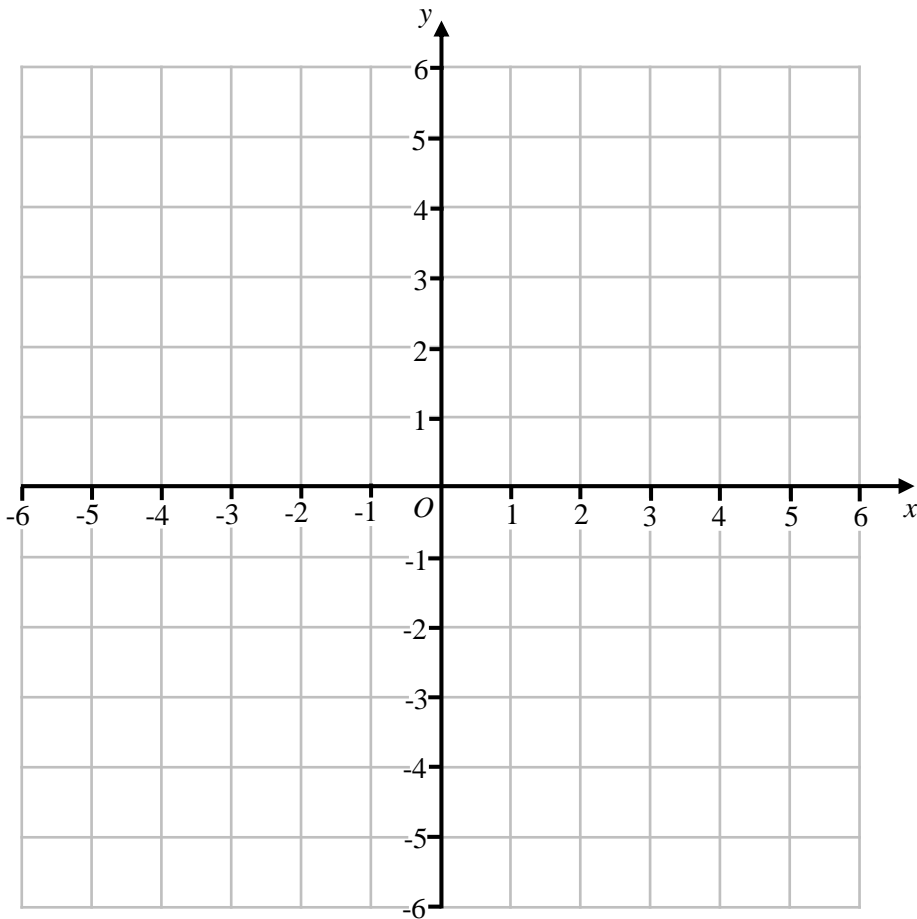
Label the region R.

(Total for Question 4 is 3 marks)

5 On the grid, identify the region represented by

$$y \geq -1 \qquad y \leq x + 5 \qquad y \leq 4 - 3x$$

Label the region R.

(**Total for Question 5 is 3 marks**)

Solutions

6 On the grid, identify the region represented by

$x \geq 0$ $\qquad$ $y < x + 2$ $\qquad$ $y < 5 - 2x$

Label the region R.
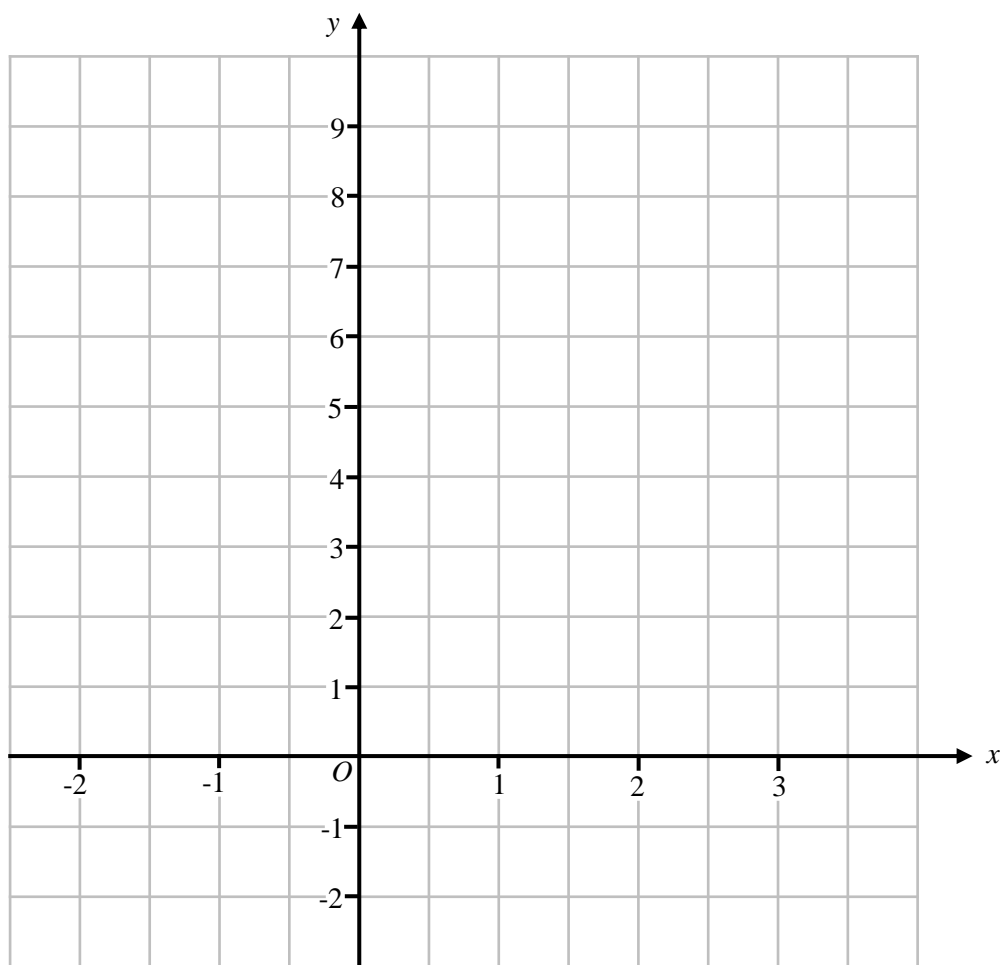
(Total for Question 6 is 3 marks)

7 On the grid, identify the region represented by

$$x > \text{-}4 \qquad y > \frac{1}{2}x - 1 \qquad x + 2y \le 6$$

Label the region R.

8 On the grid, identify the region represented by

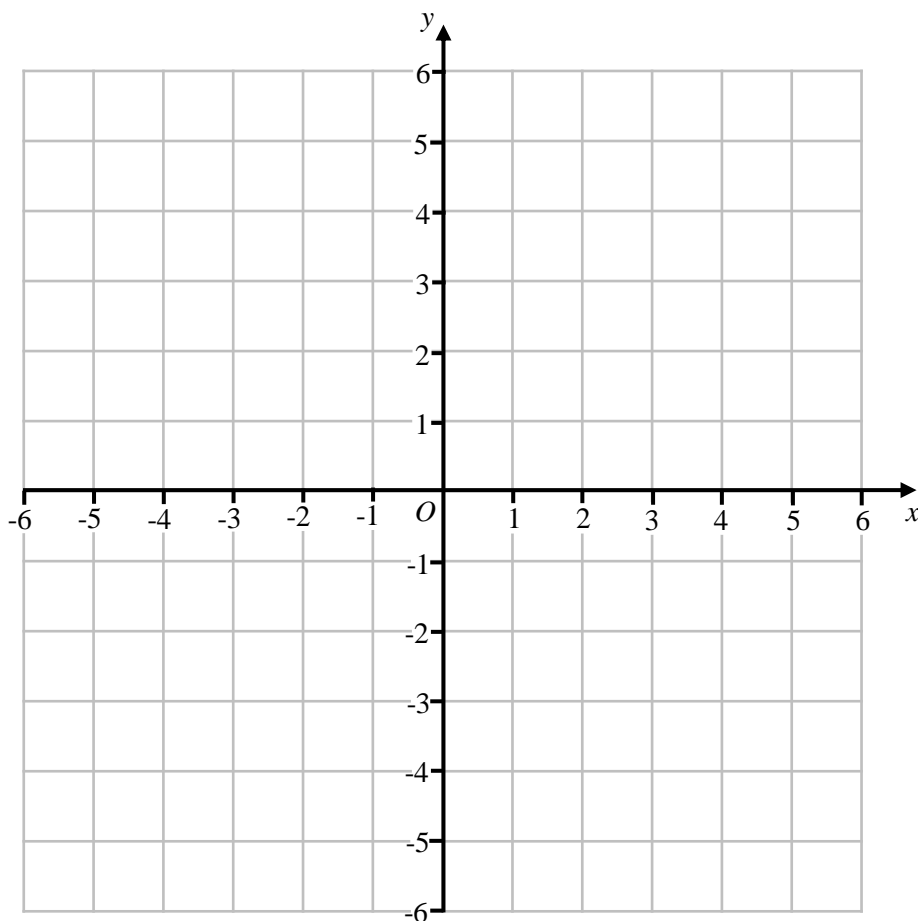$$x < 1 \qquad y \le 0 \qquad y \le x + 1 \qquad 3x + y \ge -6$$

Label the region R.

(Total for Question 8 is 3 marks)

9 The shaded region shown on the grid is bounded by three straight lines.

Write down the three inequalities that define the region.

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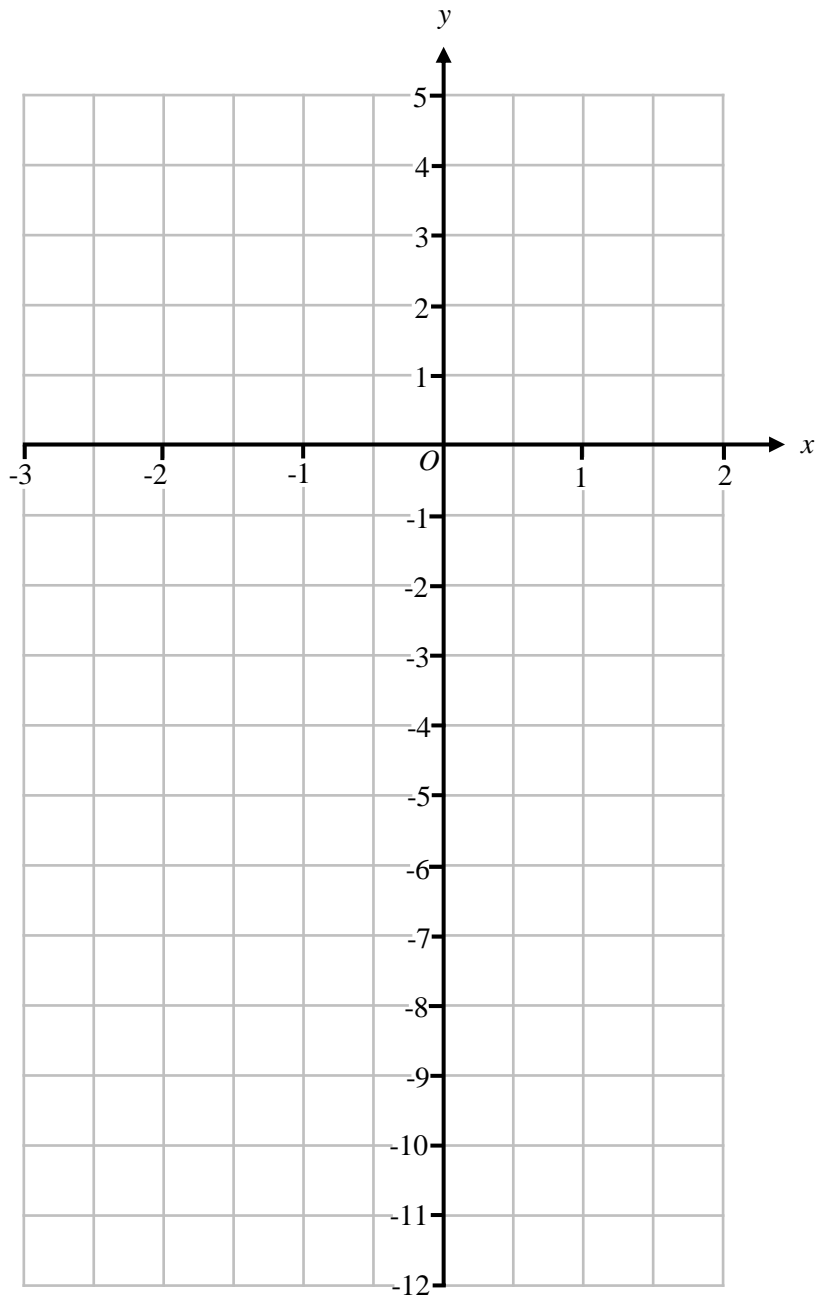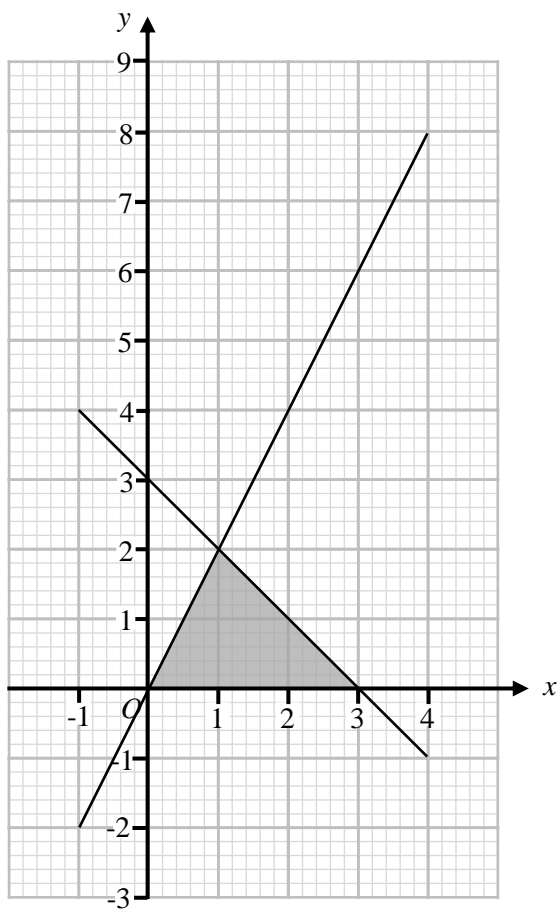
(Total for Question 9 is 3 marks)

10 The shaded region shown on the grid is bounded by three straight lines.

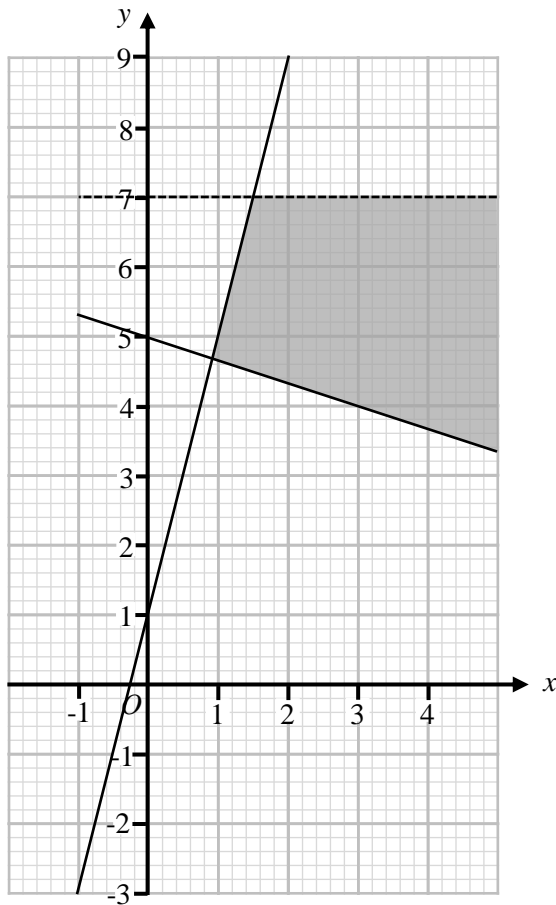Write down the three inequalities that define the region.

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(Total for Question 10 is 3 marks)

11 The shaded region shown on the grid is bounded by four straight lines.

Write down the four inequalities that define the region.

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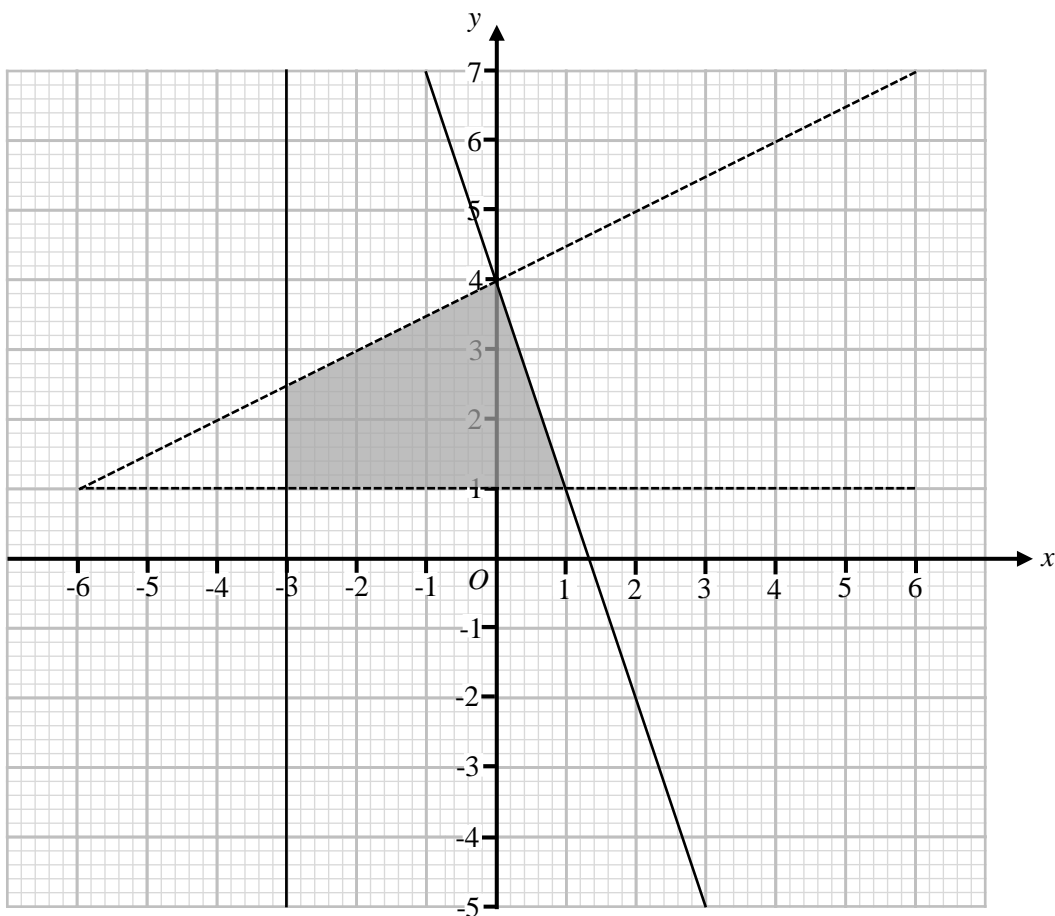...

(Total for Question 11 is 4 marks)

12 The shaded region shown on the grid is bounded by four straight lines.

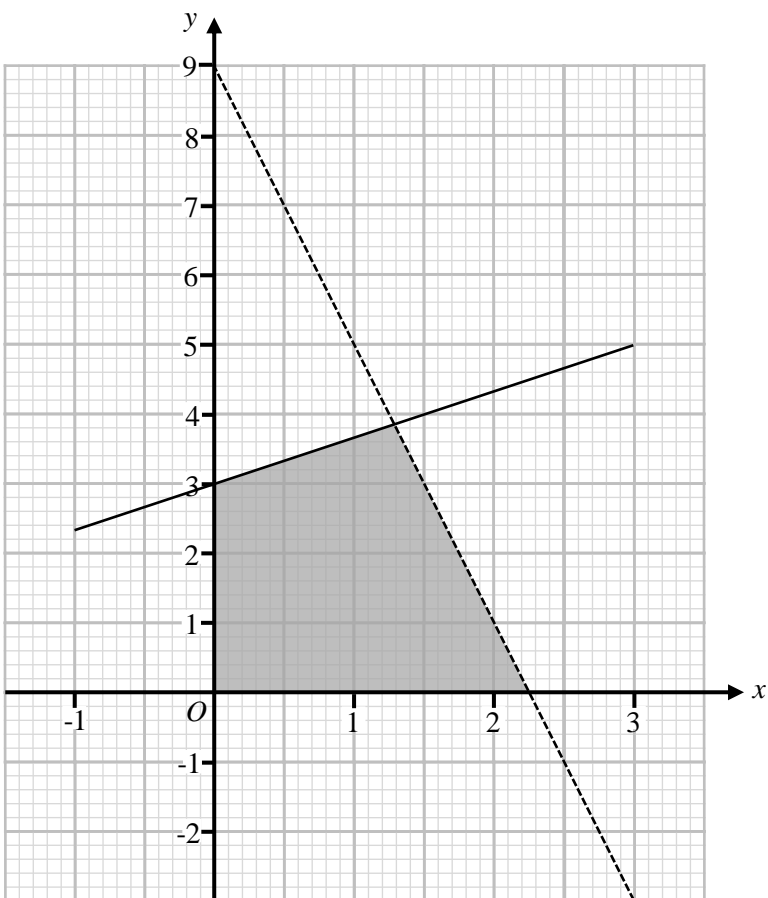Write down the four inequalities that define the region.

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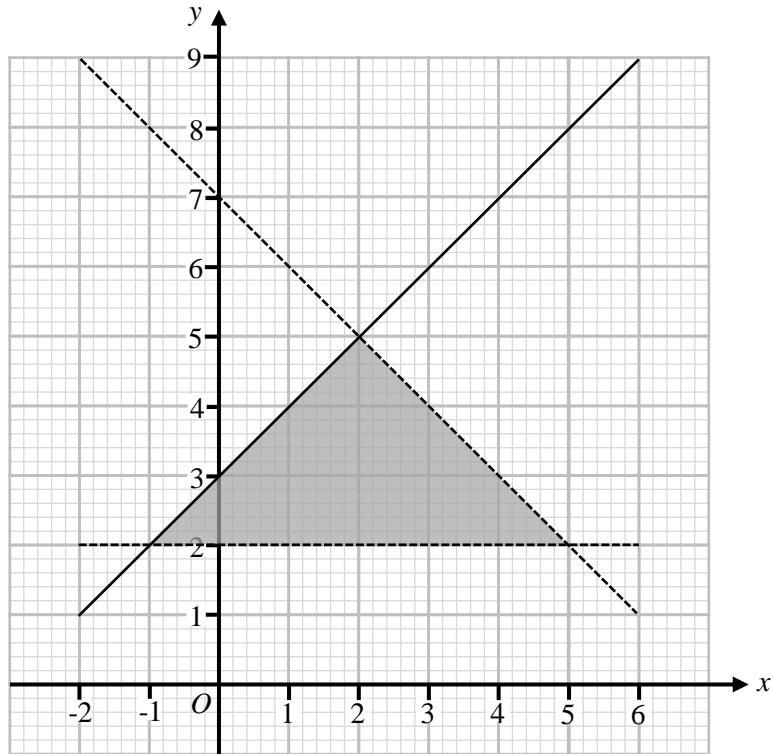(**Total for Question 12 is 4 marks**)

13 The diagram below shows the region that satisfies the inequalities

$$y > 2 \qquad y \leq x + 3 \qquad x + y < 7$$

Tick the correct box for each statement below.

	True	False	Not possible to tell
The point (4, 1) satisfies all three of the inequalities	☐	☐	☐
The point (1, 4) satisfies all three of the inequalities	☐	☐	☐
The point (-1, 2) satisfies all three of the inequalities	☐	☐	☐

(Total for Question 13 is 3 marks)

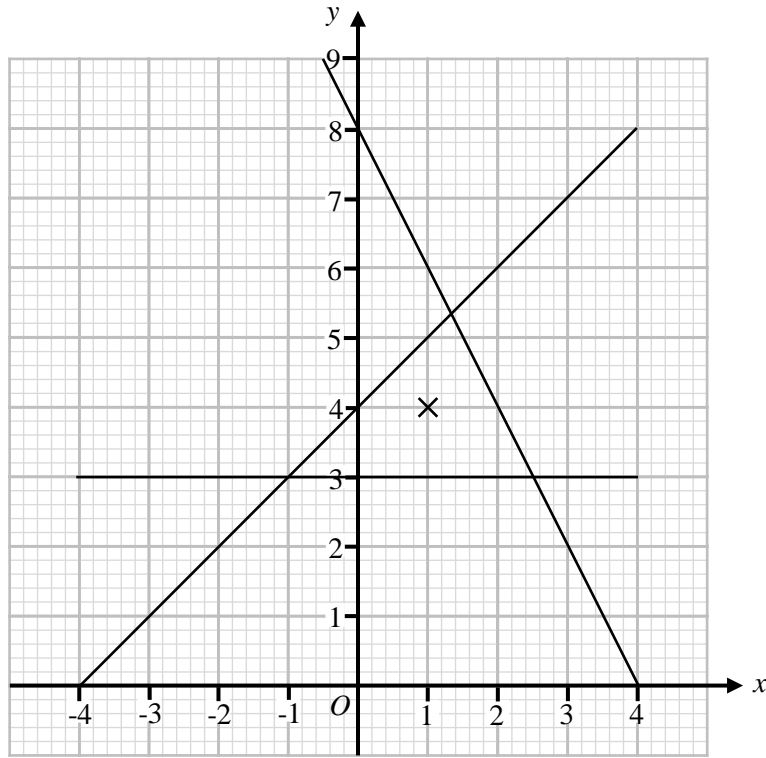**14** The diagram below shows the lines with equations

$$y = 3 \qquad y = x + 4 \qquad 2x + y = 8$$

x and y are **integers.**

Mark on with a cross ($\times$) each of the points that satisfy all three inequalities

$$y \geq 3 \qquad y \leq x + 4 \qquad 2x + y < 8$$

One has been done for you.
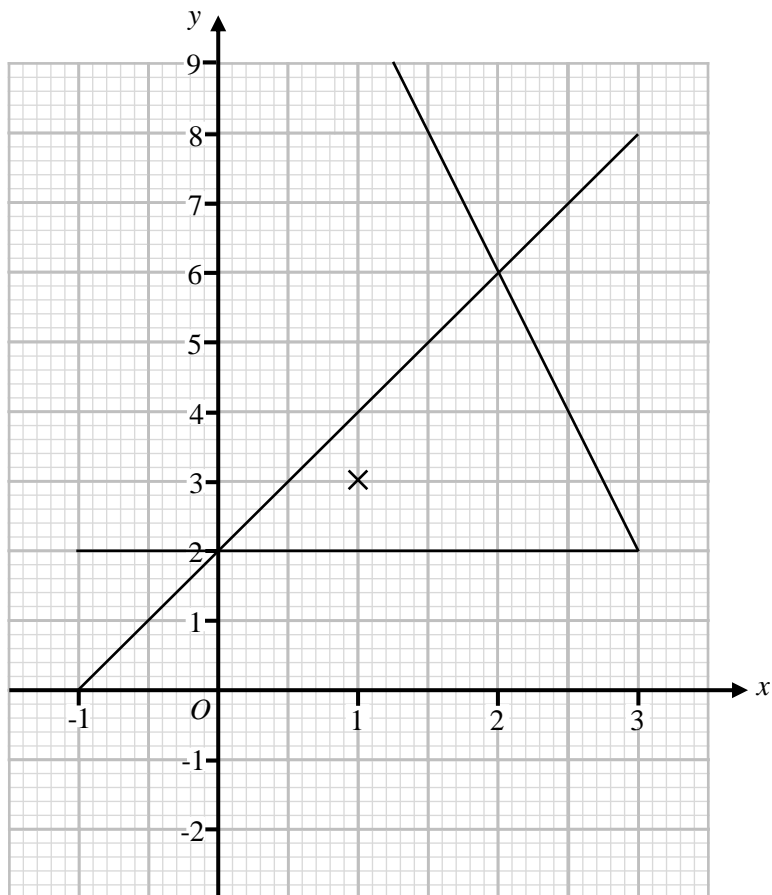
(Total for Question 14 is 2 marks)

15 The diagram below shows the lines with equations

$$y = 2 \qquad y = 2x + 2 \qquad y = 14 - 4x$$

x and *y* are **integers.**

Mark on with a cross (×) each of the points that satisfy all three inequalities

$$y > 2 \qquad y \leq 2x + 2 \qquad y \leq 14 - 4x$$

One has been done for you.

(Total for Question 15 is 2 marks)