



SCAN ME

Inequalities and Regions



SCAN ME



REVISE THIS TOPIC



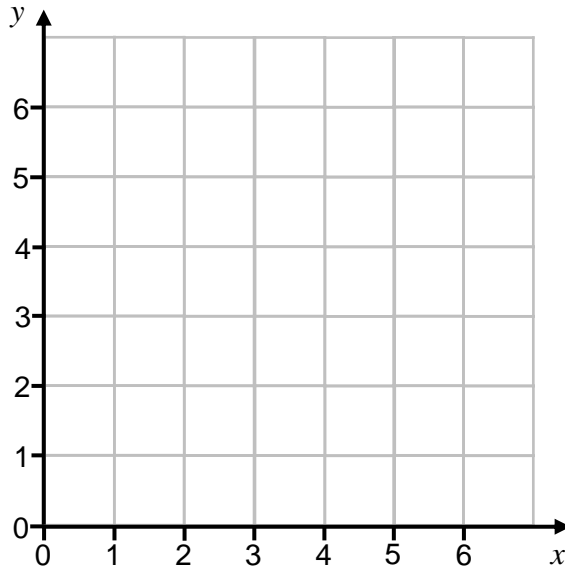
CHECK YOUR ANSWERS

1 On the grid, identify the region represented by

$$x > 2 \quad y \leq 4$$

Label the region R.

[2 marks]

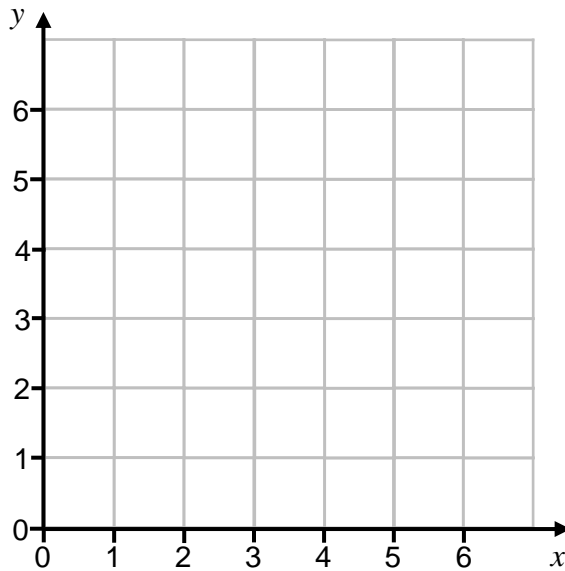


2 On the grid, identify the region represented by

$$1 \leq x < 5$$

Label the region R.

[2 marks]



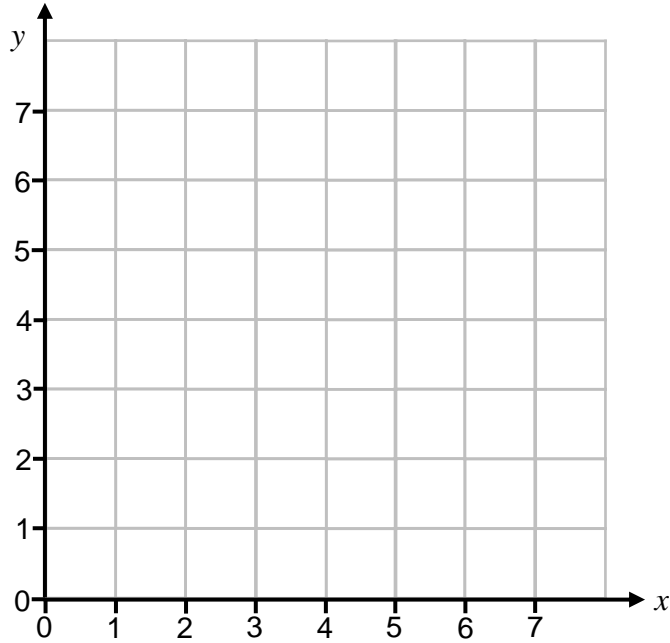


3 On the grid, identify the region represented by

$$x > 1 \quad y > 2 \quad x + y \leq 6$$

Label the region R.

[3 marks]

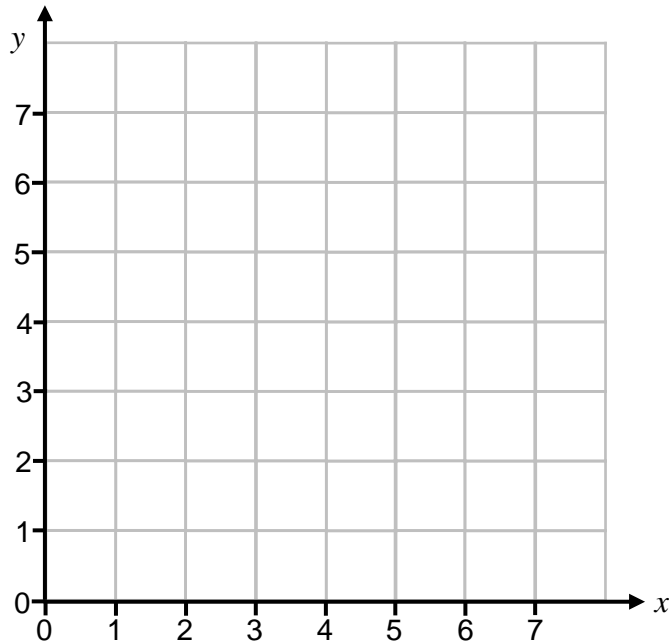


4 On the grid, identify the region represented by

$$x \geq 2 \quad y \geq 4 \quad y \leq x + 3$$

Label the region R.

[3 marks]





5 On the grid, identify the region represented by

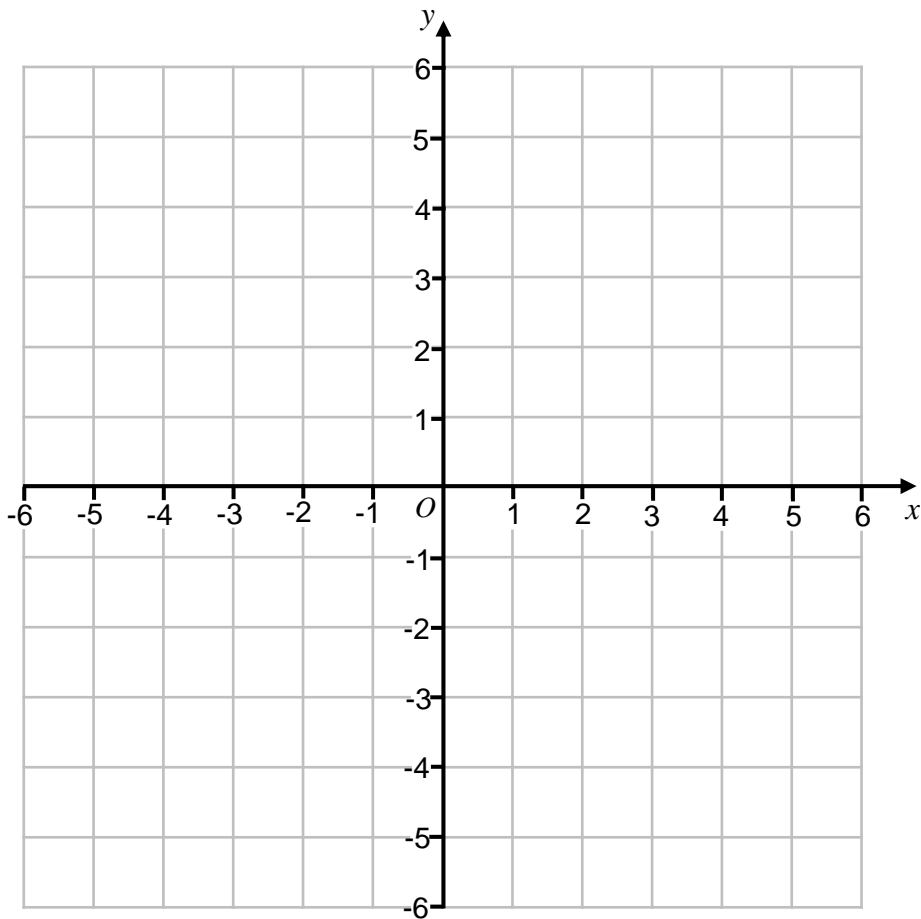
$$y \geq -1$$

$$y \leq x + 5$$

$$y \leq 4 - 3x$$

Label the region R.

[3 marks]



$\frac{\quad}{9}$

Turn over ►





6 On the grid, identify the region represented by

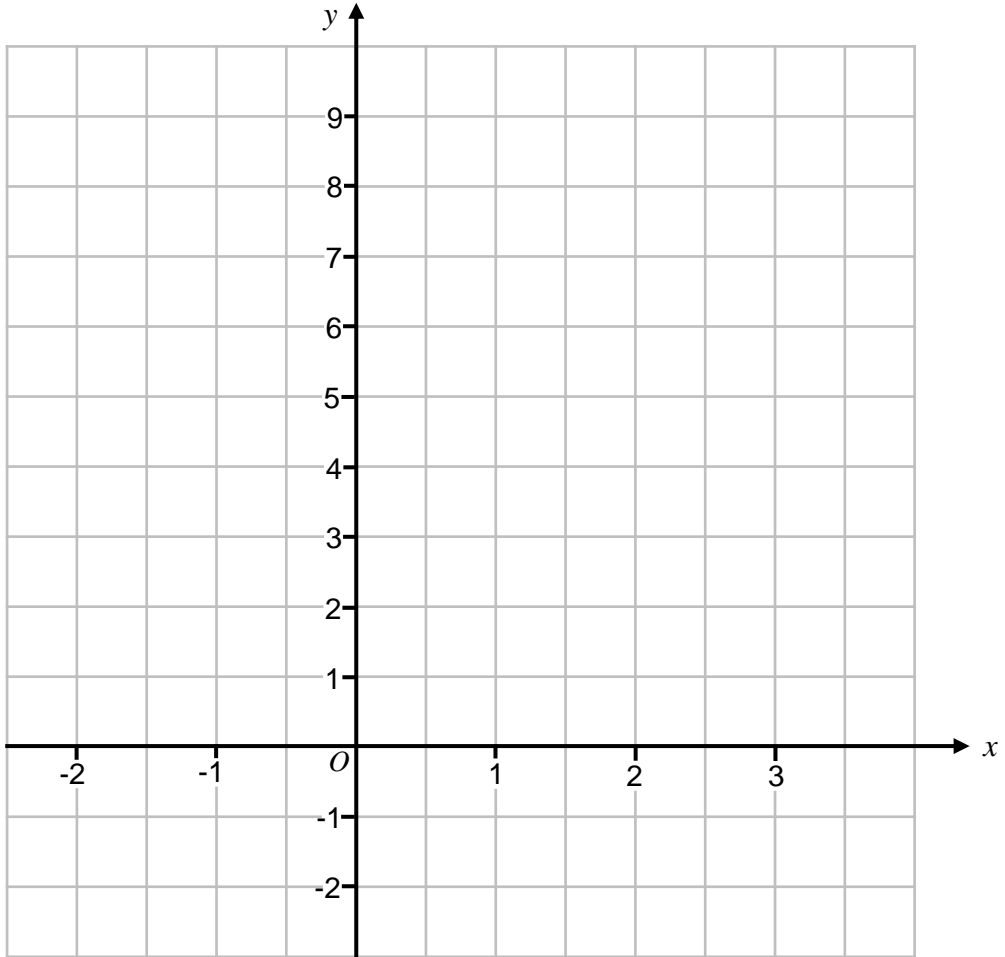
$$x \geq 0$$

$$y < x + 2$$

$$y < 5 - 2x$$

Label the region R.

[3 marks]



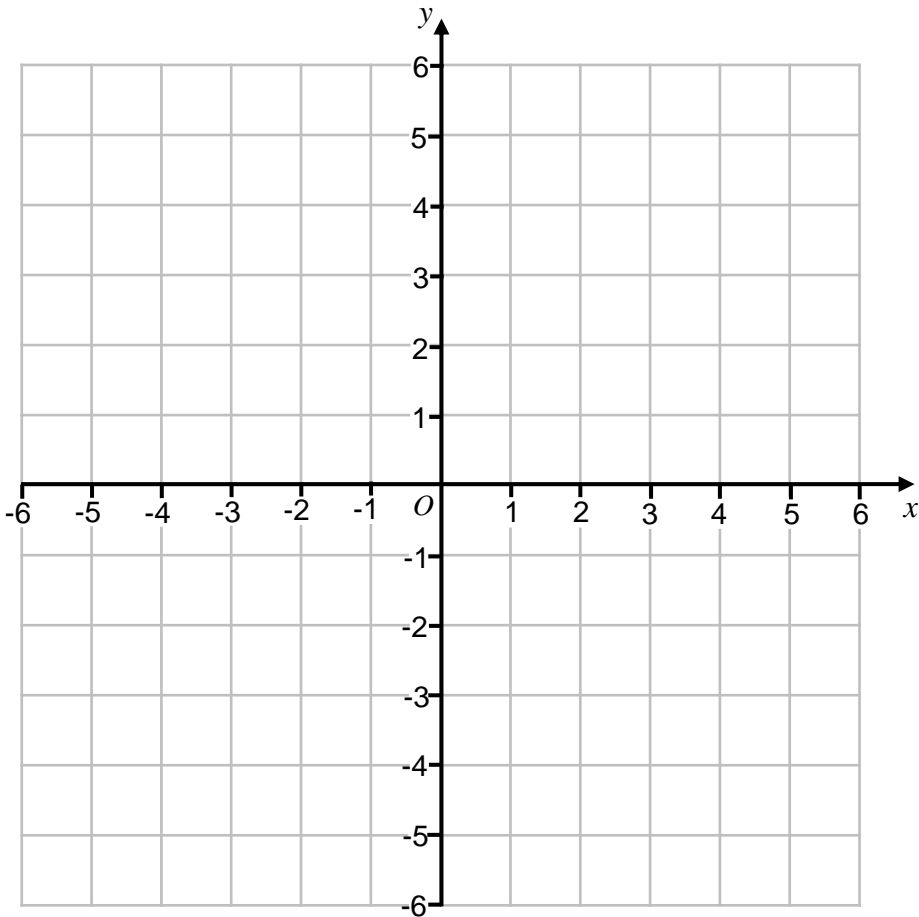


7 On the grid, identify the region represented by

$$x > -4 \quad y > \frac{1}{2}x - 1 \quad x + 2y \leq 6$$

Label the region R.

[3 marks]



$\frac{1}{6}$

Turn over ►





8 On the grid, identify the region represented by

$x < 1$

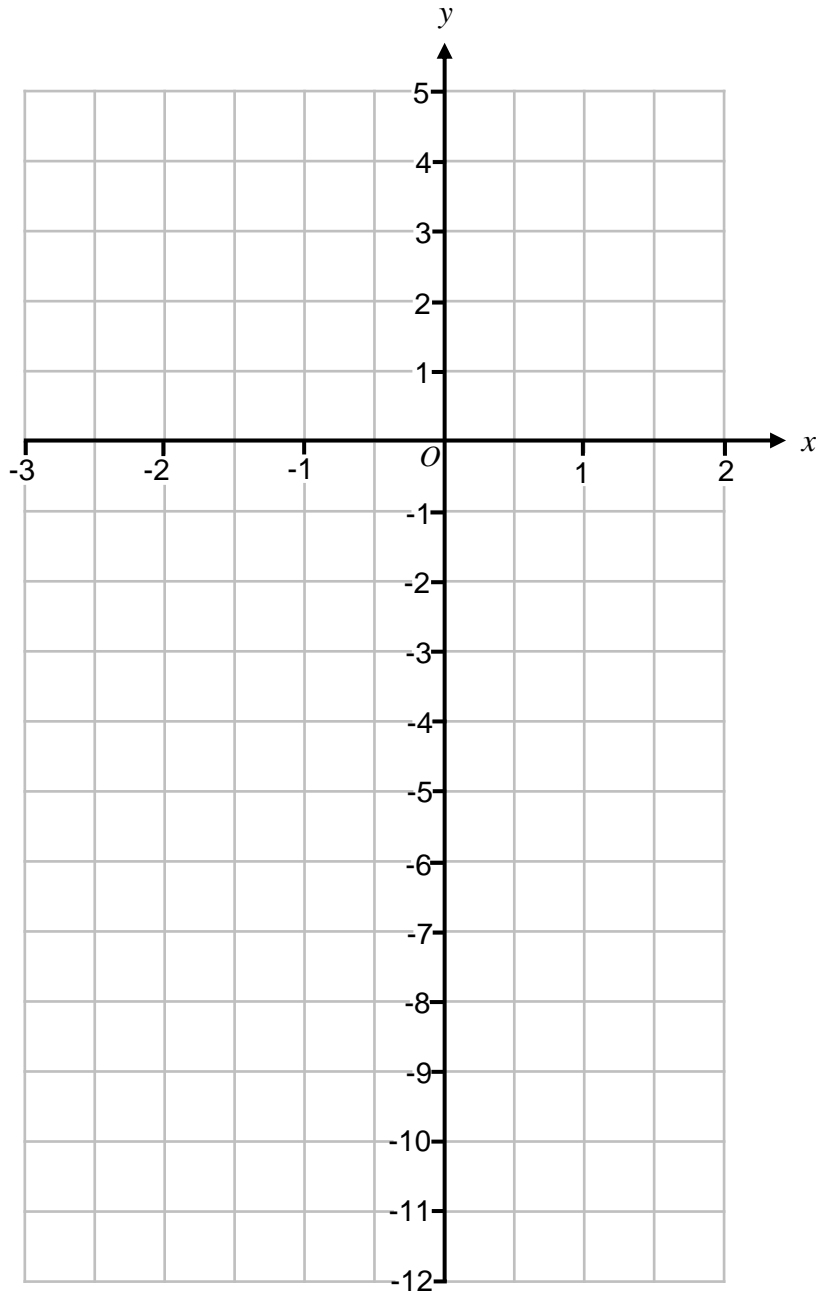
$y \leq 0$

$y \leq x + 1$

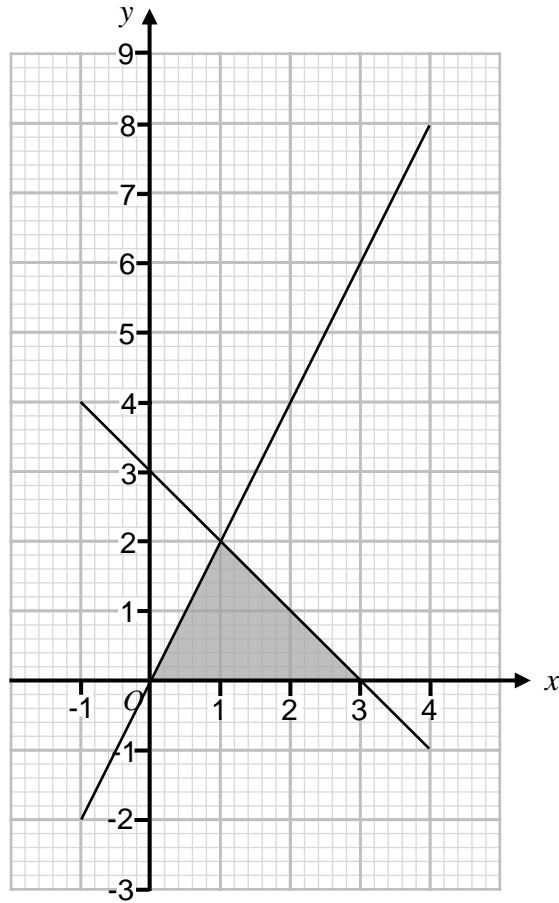
$3x + y \geq -6$

Label the region R.

[4 marks]



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



Write down the three inequalities that define the region.

[3 marks]

First inequality _____

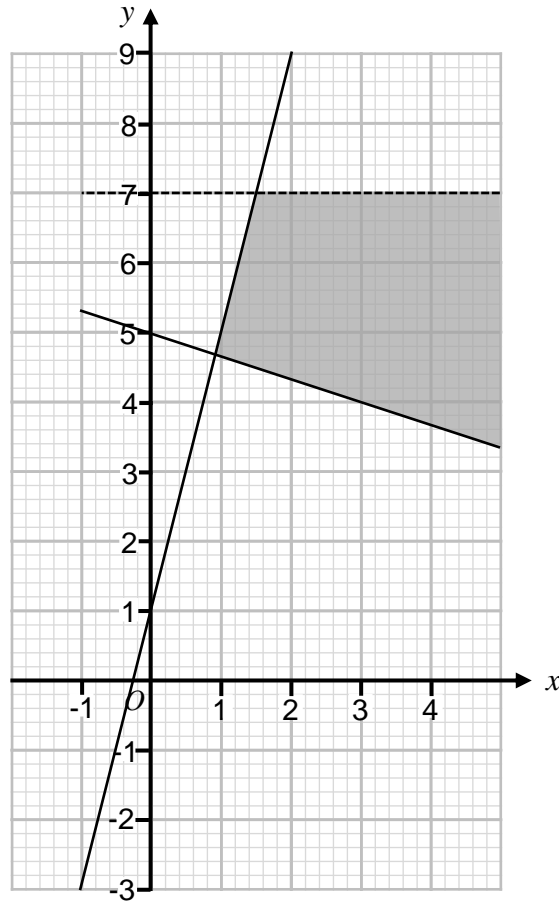
Second inequality _____

Third inequality _____





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



Write down the three inequalities that define the region.

[3 marks]

First inequality _____

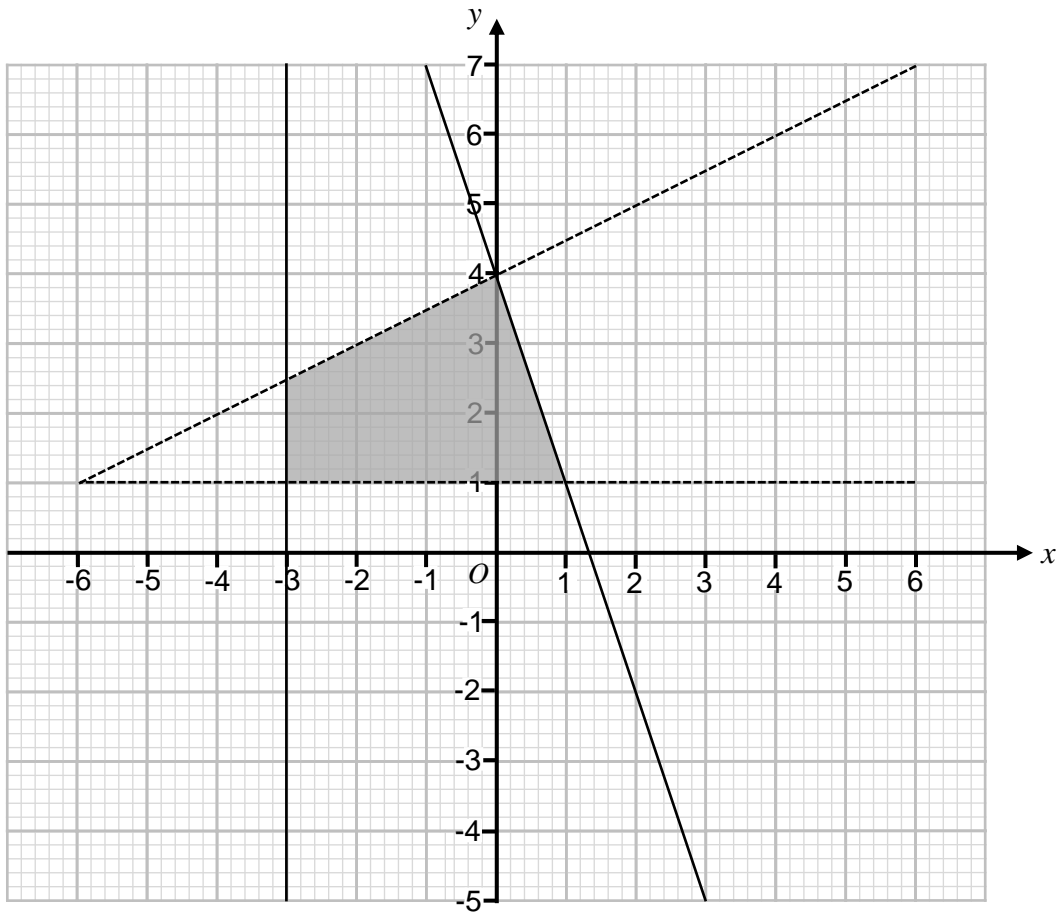
Second inequality _____

Third inequality _____





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



Write down the four inequalities that define the region.

[4 marks]

First inequality _____

Second inequality _____

Third inequality _____

Fourth inequality _____



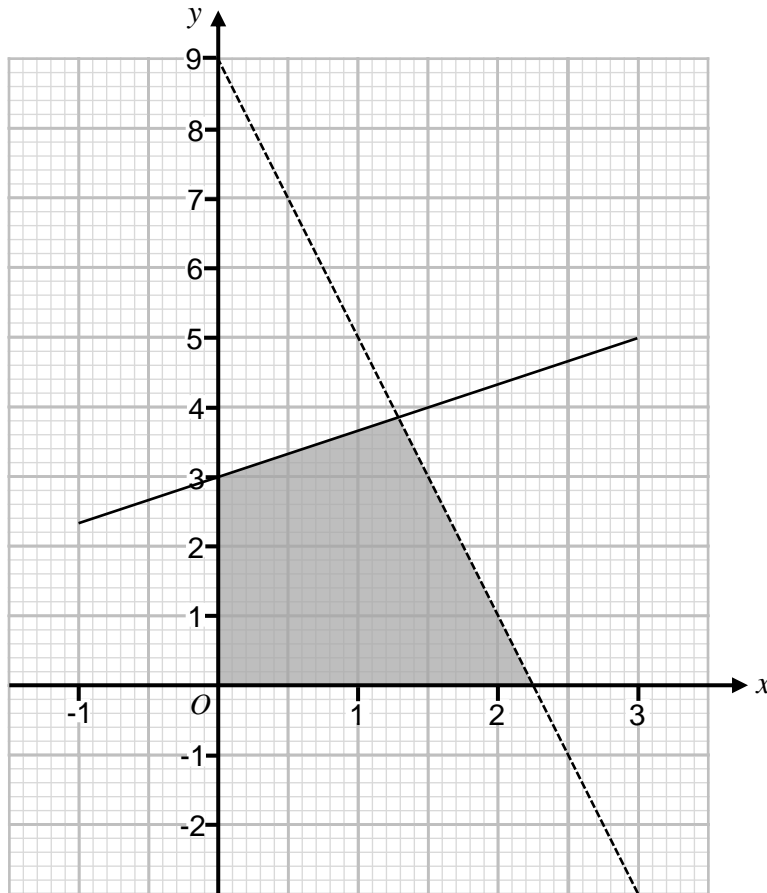
7

Turn over ►





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



Write down the four inequalities that define the region.

[4 marks]

First inequality _____

Second inequality _____

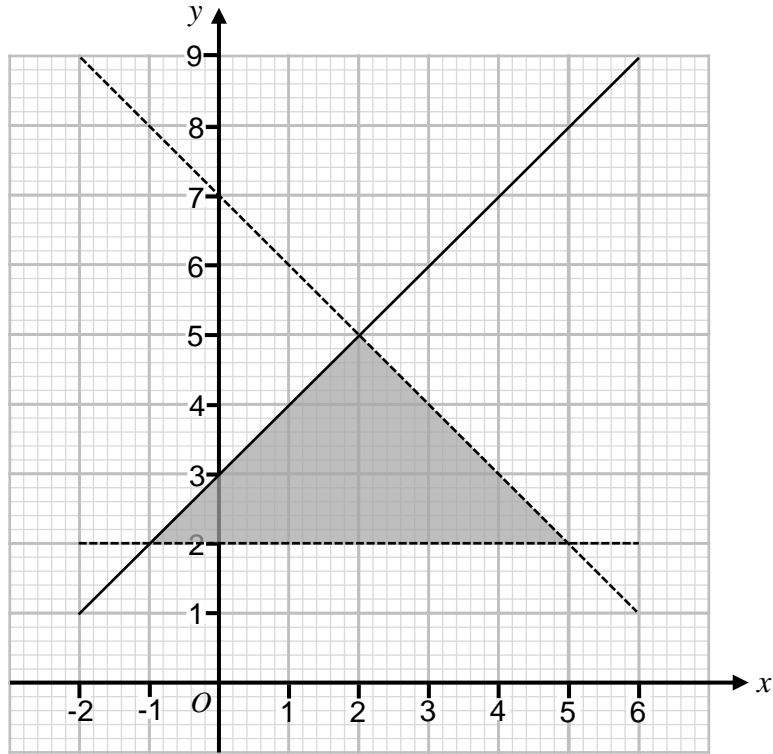
Third inequality _____

Fourth inequality _____



13 The diagram below shows the region that satisfies the inequalities

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



Tick the correct box for each statement below.

[3 marks]

	True	False	Not possible to tell
The point (4, 1) satisfies all three of the inequalities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The point (1, 4) satisfies all three of the inequalities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The point (-1, 2) satisfies all three of the inequalities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

$\frac{7}{7}$

Turn over ►

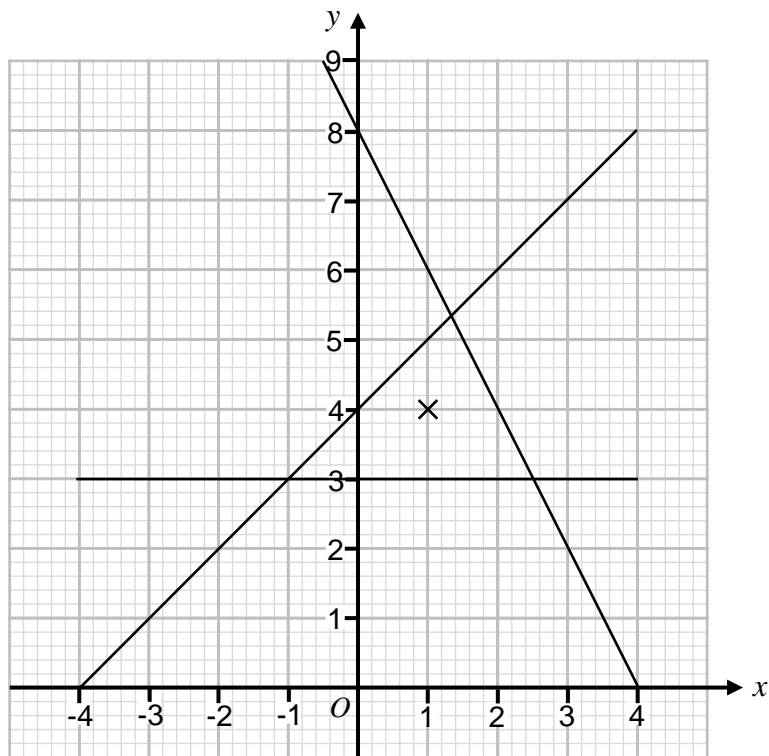


14 The diagram below shows the lines with equations

$$y = 3$$

$$y = x + 4$$

$$2x + y = 8$$



x and y are **integers**.

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

$$y \geq 3$$

$$y \leq x + 4$$

$$2x + y < 8$$

One has been done for you.

[2 marks]

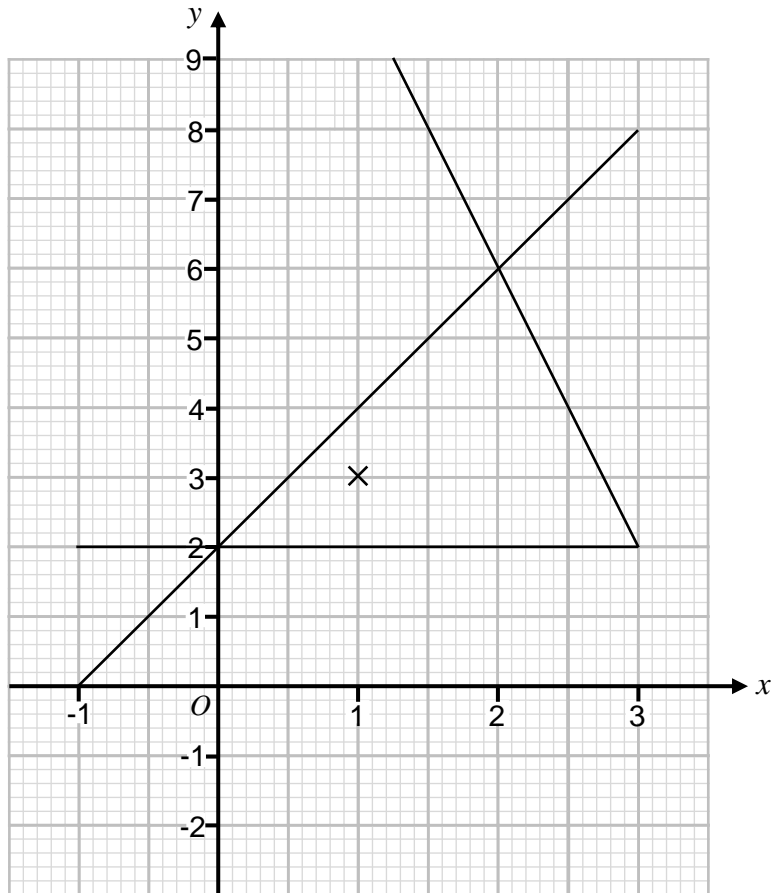


15 The diagram below shows the lines with equations

$$y = 2$$

$$y = 2x + 2$$

$$y = 14 - 4x$$



x and y are **integers**.

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

$$y > 2$$

$$y \leq 2x + 2$$

$$y \leq 14 - 4x$$

One has been done for you.

[2 marks]

