



SCAN ME

Inequalities and Regions



SCAN ME



REVISE THIS TOPIC

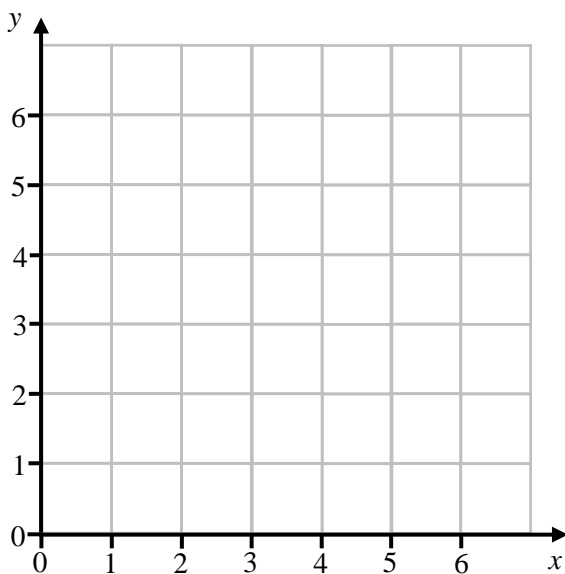


CHECK YOUR ANSWERS

1 On the grid, identify the region represented by

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

Label the region R.

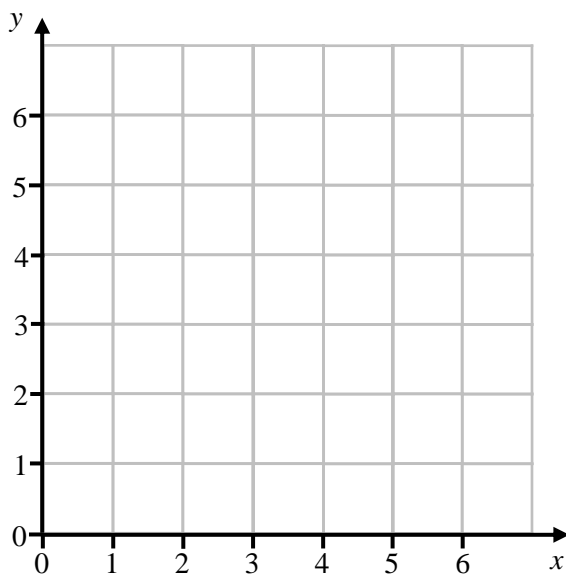


(Total for Question 1 is 2 marks)

2 On the grid, identify the region represented by

$$1 \leq x < 5$$

Label the region R.



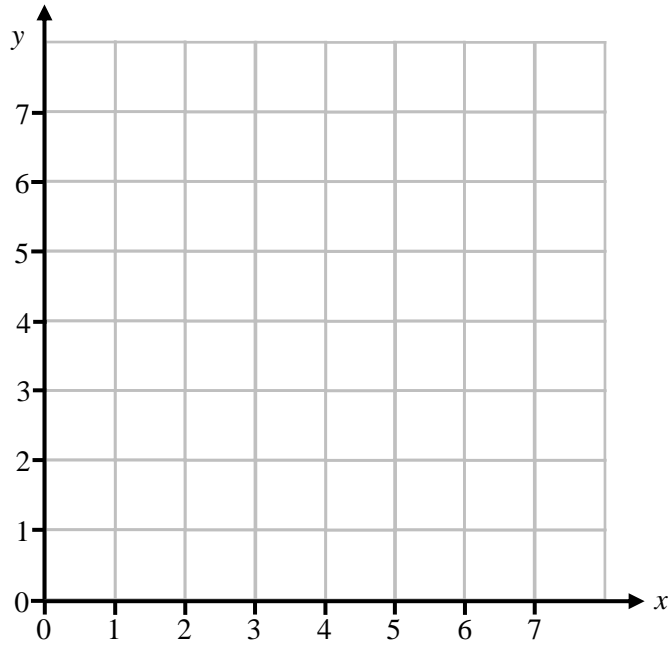
(Total for Question 2 is 2 marks)



3 On the grid, identify the region represented by

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

Label the region R.

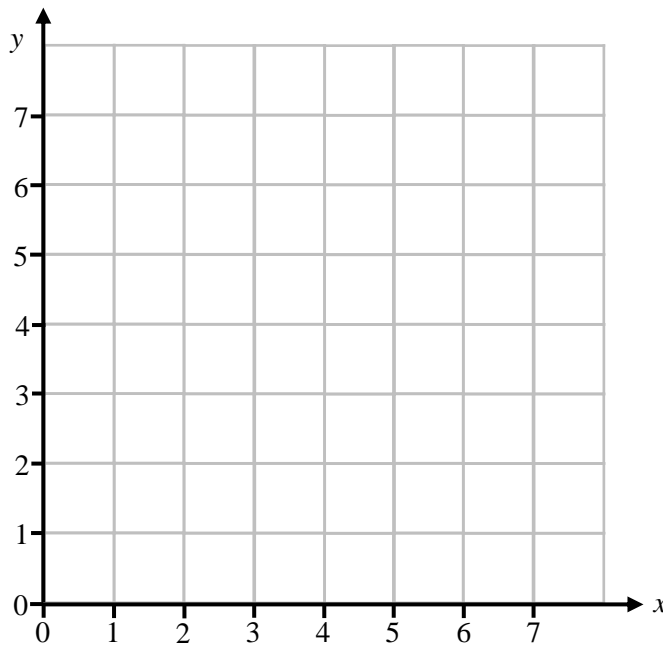


(Total for Question 3 is 3 marks)

4 On the grid, identify the region represented by

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

Label the region R.



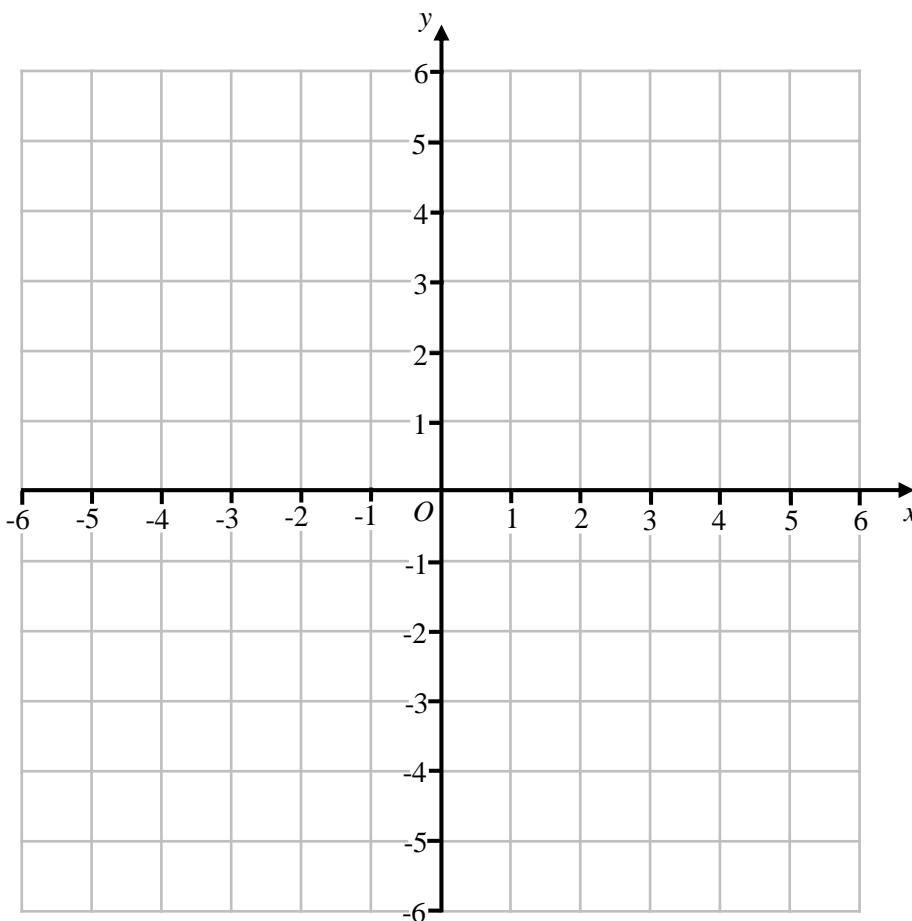
(Total for Question 4 is 3 marks)



5 On the grid, identify the region represented by

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

Label the region R.



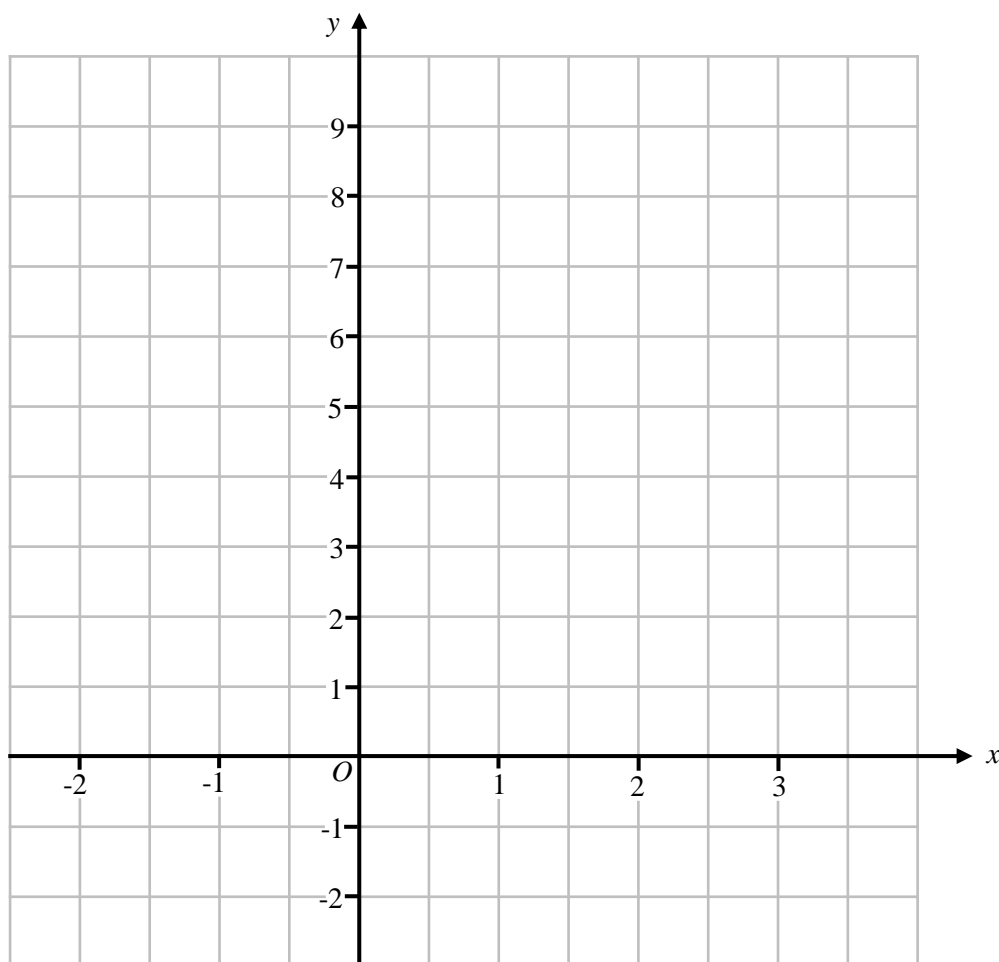
(Total for Question 5 is 3 marks)



6 On the grid, identify the region represented by

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

Label the region R.



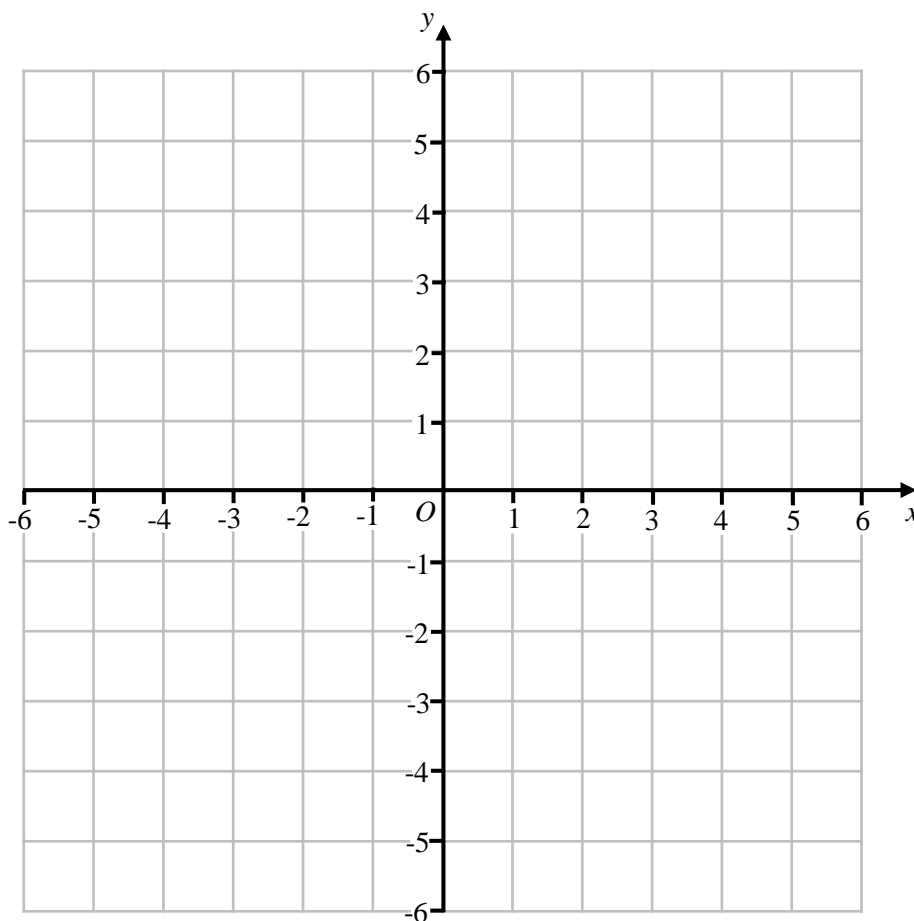
(Total for Question 6 is 3 marks)



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.



(Total for Question 7 is 3 marks)



8 On the grid, identify the region represented by

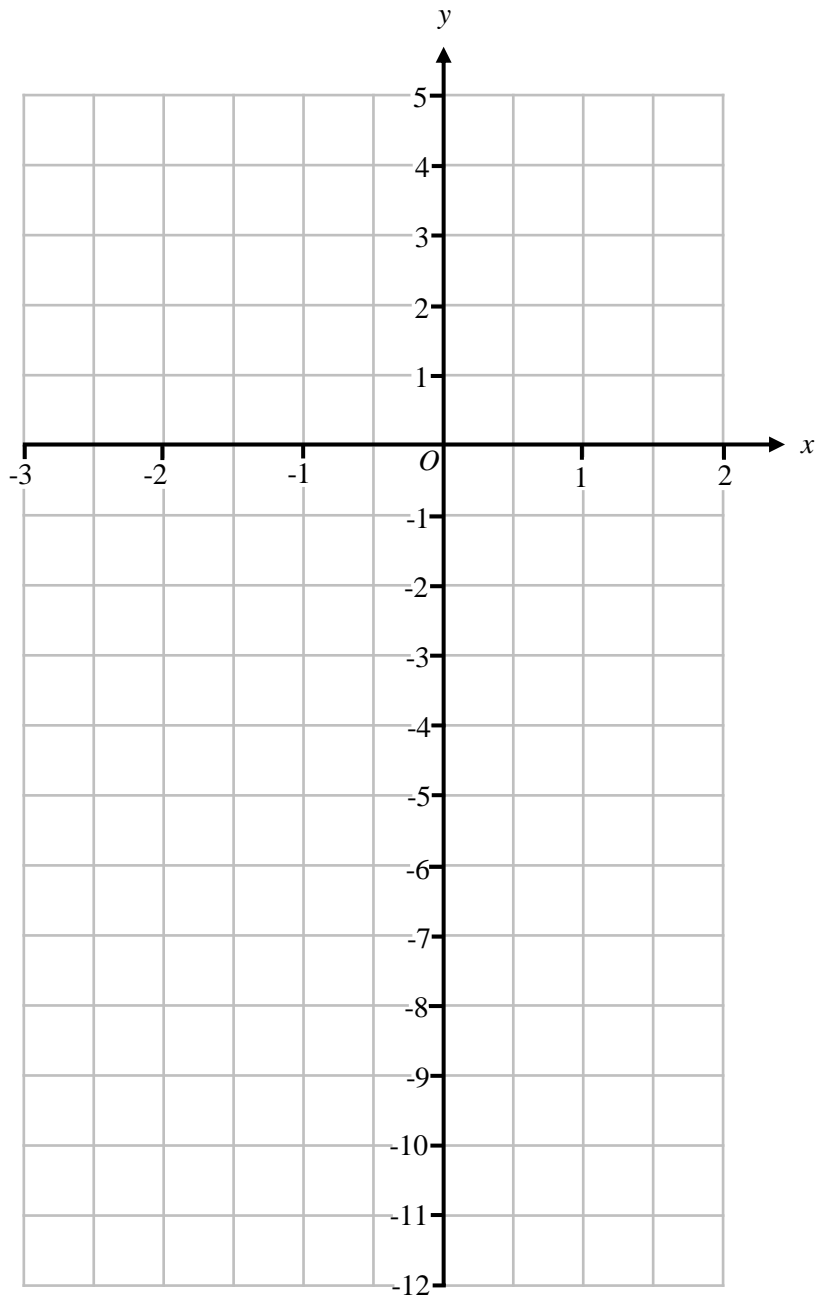
$x < 1$

$y \leq 0$

$y \leq x + 1$

$3x + y \geq -6$

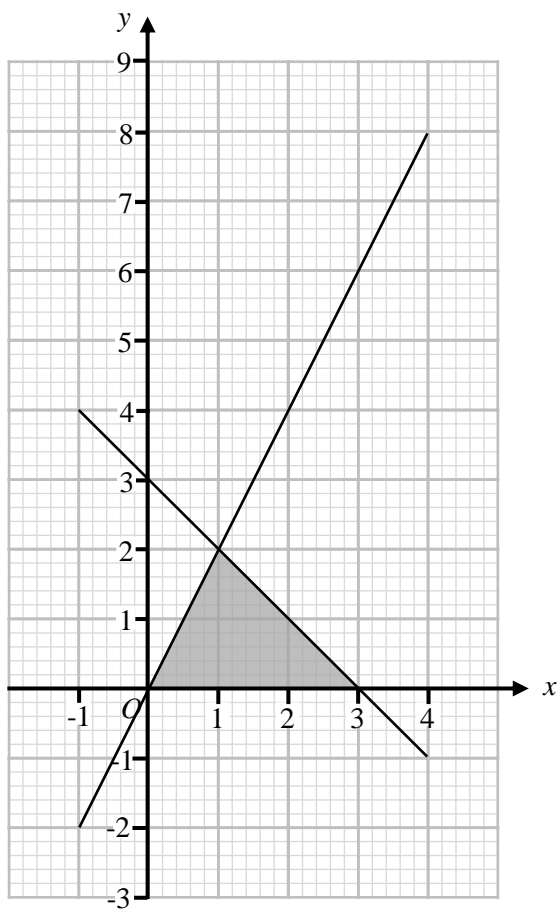
Label the region R.



(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.

.....

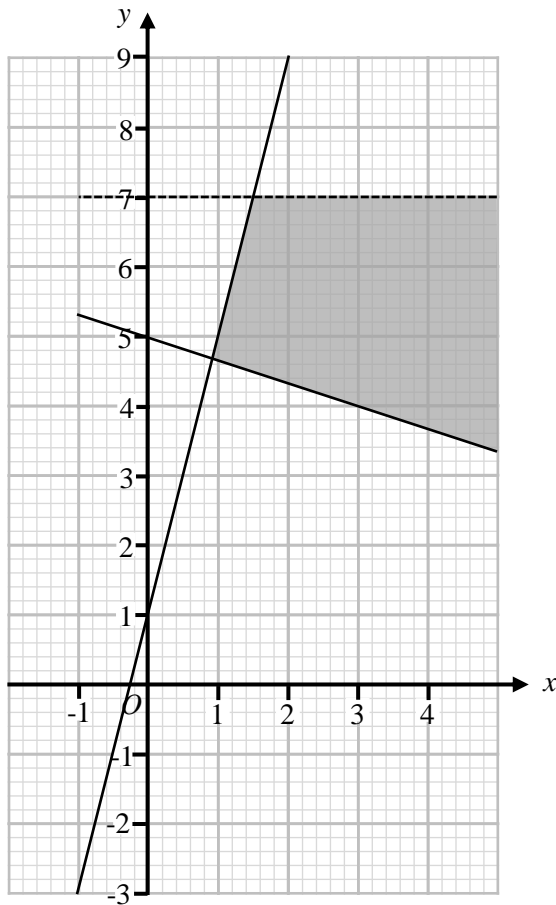
.....

.....

(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.

.....

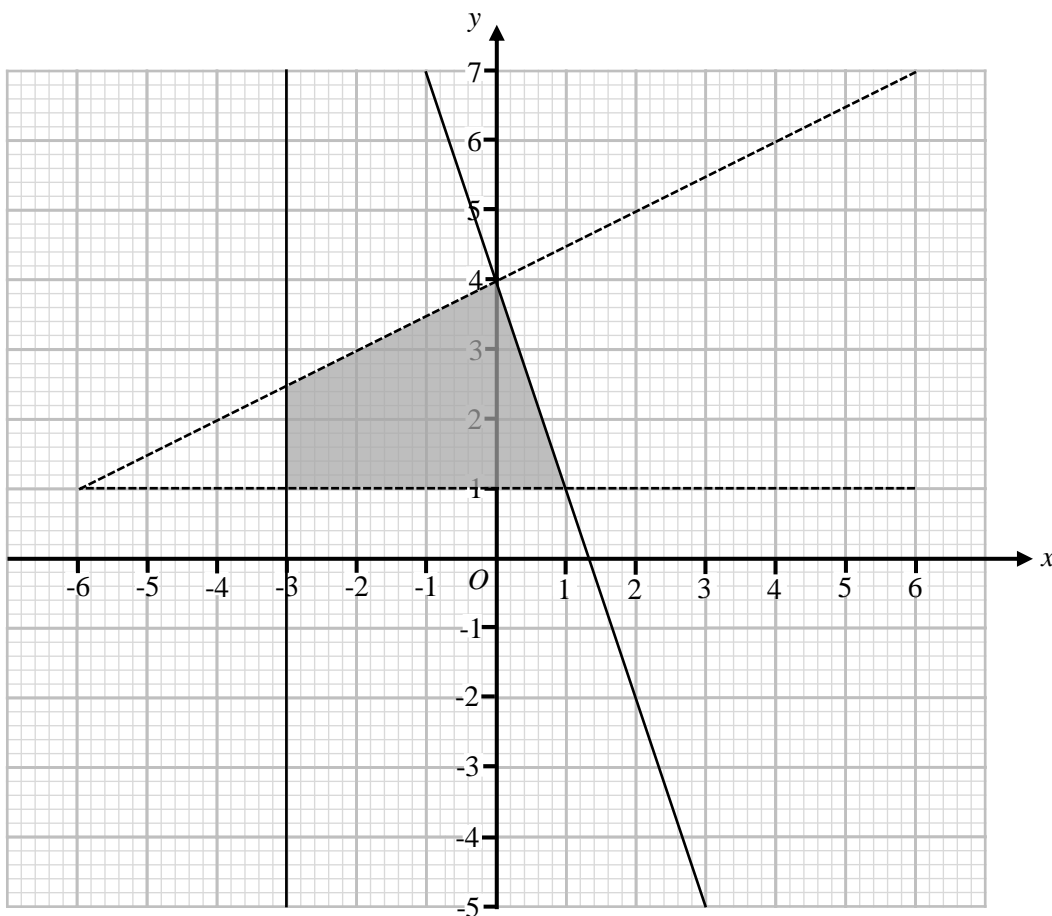
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.....

(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.

.....

.....

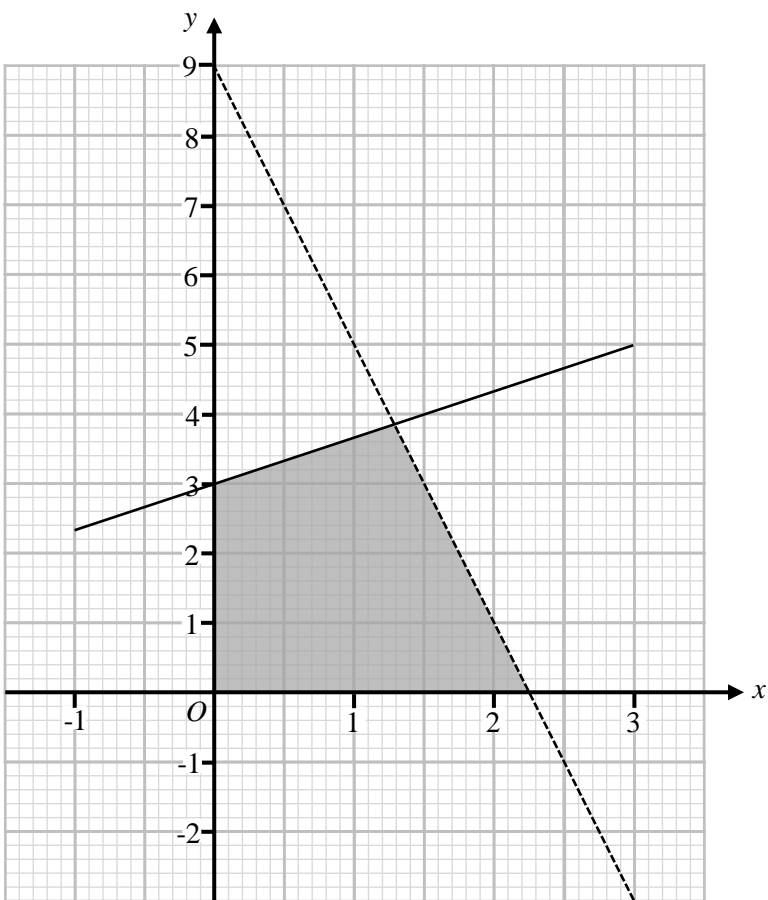
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(Total for Question 11 is 4 marks)



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



Write down the four inequalities that define the region.

.....

.....

.....

.....

(Total for Question 12 is 4 marks)

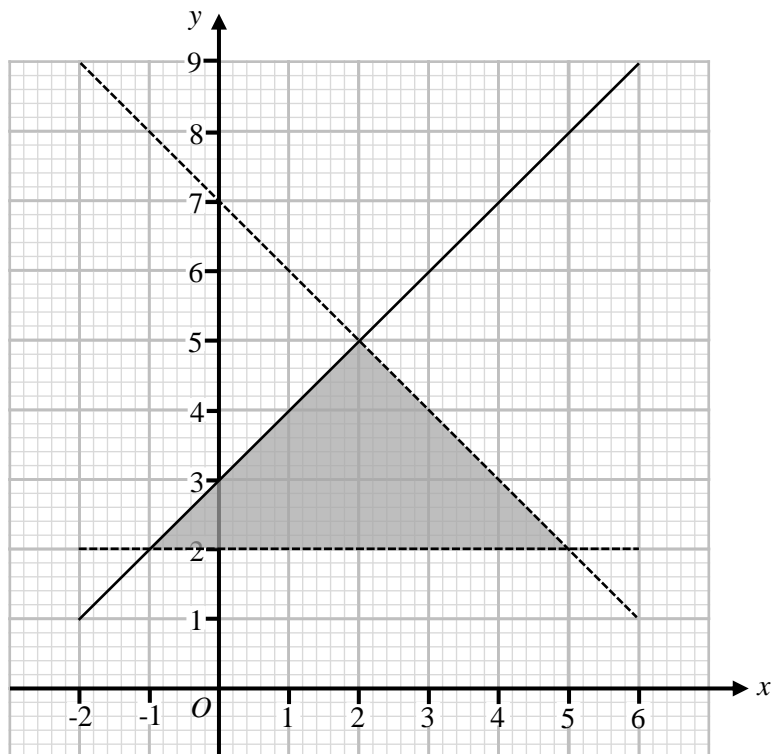


13 The diagram below shows the region that satisfies the inequalities

$$y > 2$$

$$y \leq x + 3$$

$$x + y < 7$$



Tick the correct box for each statement below.

	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"/>



(Total for Question 13 is 3 marks)

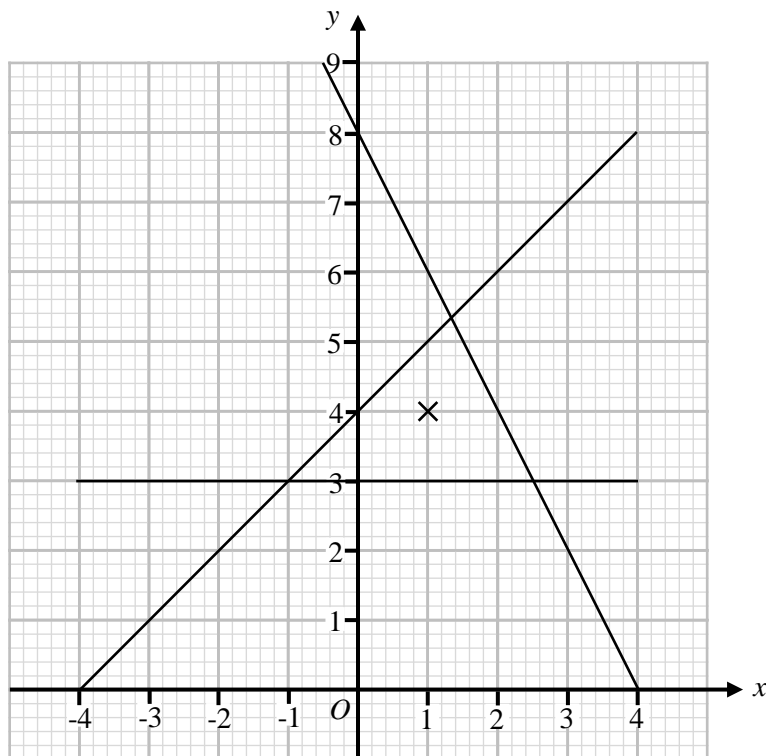


14 The diagram below shows the lines with equations

$$y = 3$$

$$y = x + 4$$

$$2x + y = 8$$



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.

(Total for Question 14 is 2 marks)

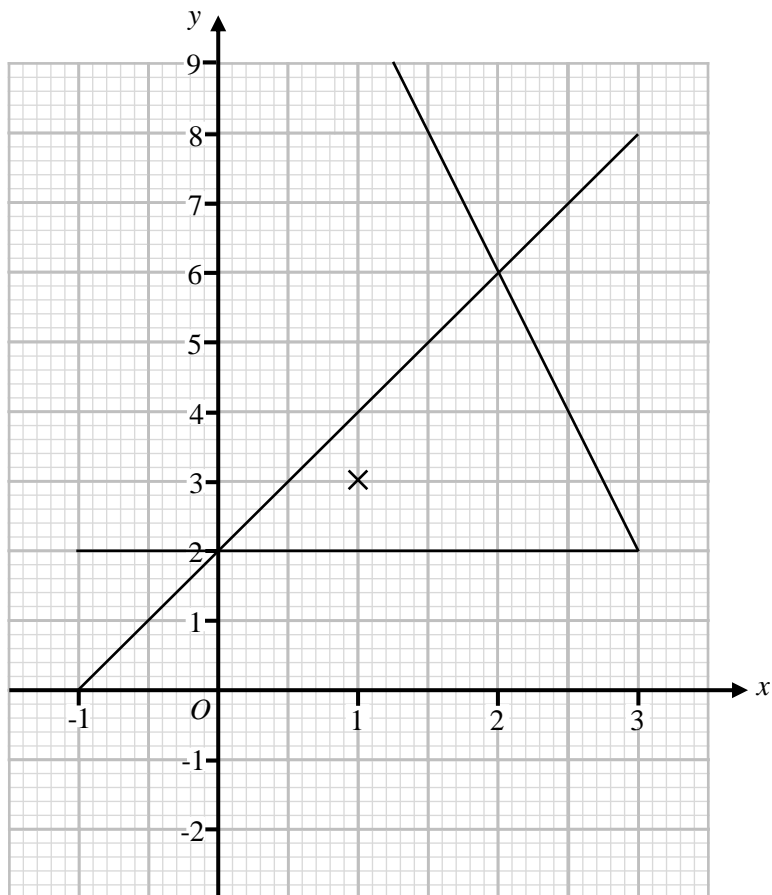


15 The diagram below shows the lines with equations

$$y = 2$$

$$y = 2x + 2$$

$$y = 14 - 4x$$



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.

(Total for Question 15 is 2 marks)

