



EXAM PAPERS PRACTICE

GCSE OCR Math J560

Inequalities on graph

Question Paper

*"We will help you to
achieve A Star "*

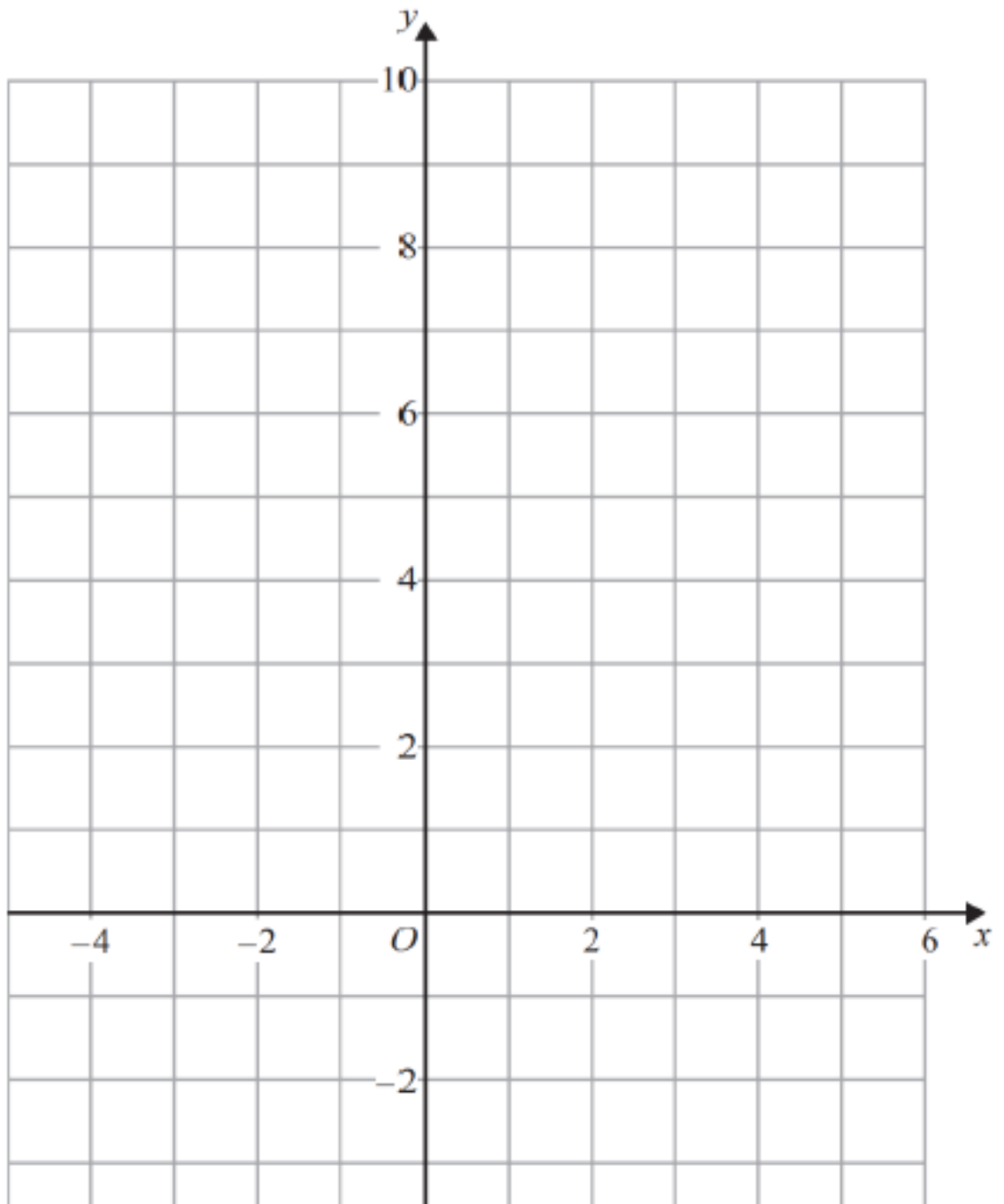


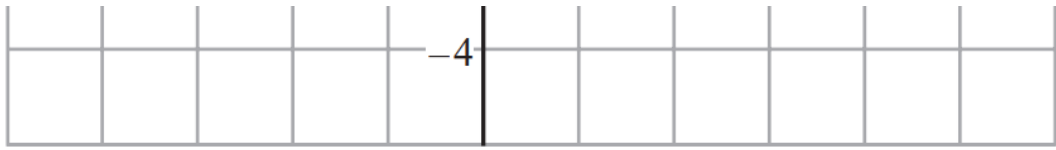
Question 1

On the grid, shade the region that satisfies all these inequalities.

$$x + y < 4 \quad y > x - 1 \quad y < 3x$$

Label the region **R**.





[4 marks]

Question 2

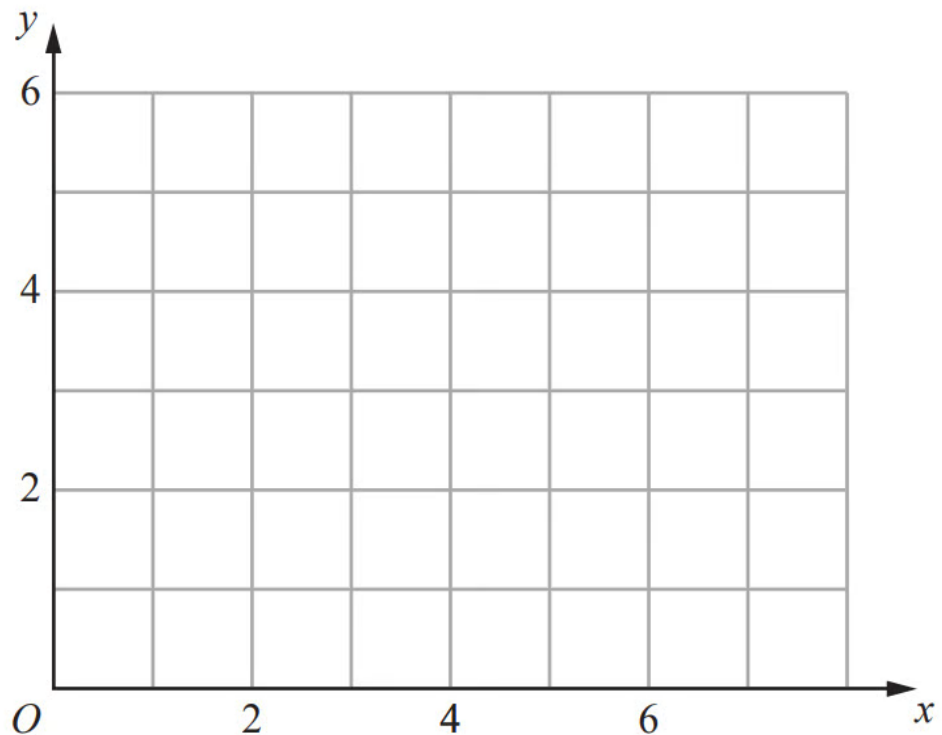
Show, by shading on the grid, the region defined by all three of the inequalities

$$x \leq 5$$

$$y \geq 3$$

$$y \leq x$$

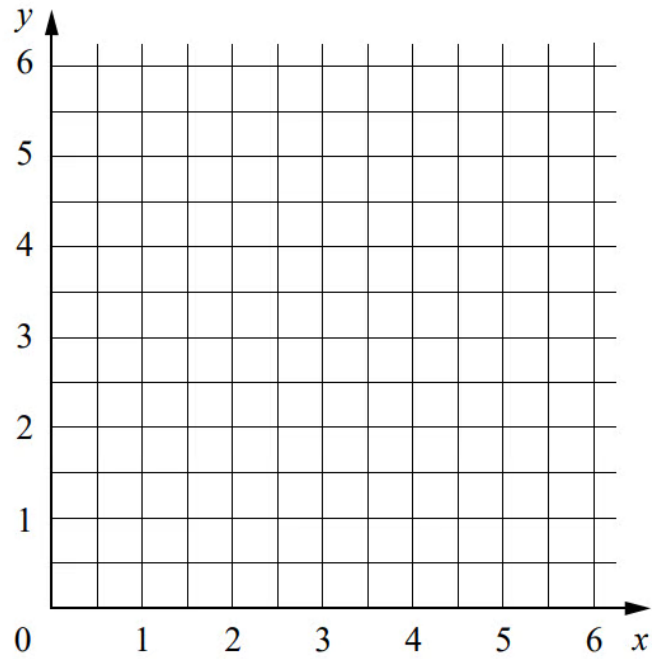
Label your region **R**.



[3 marks]



Question 3



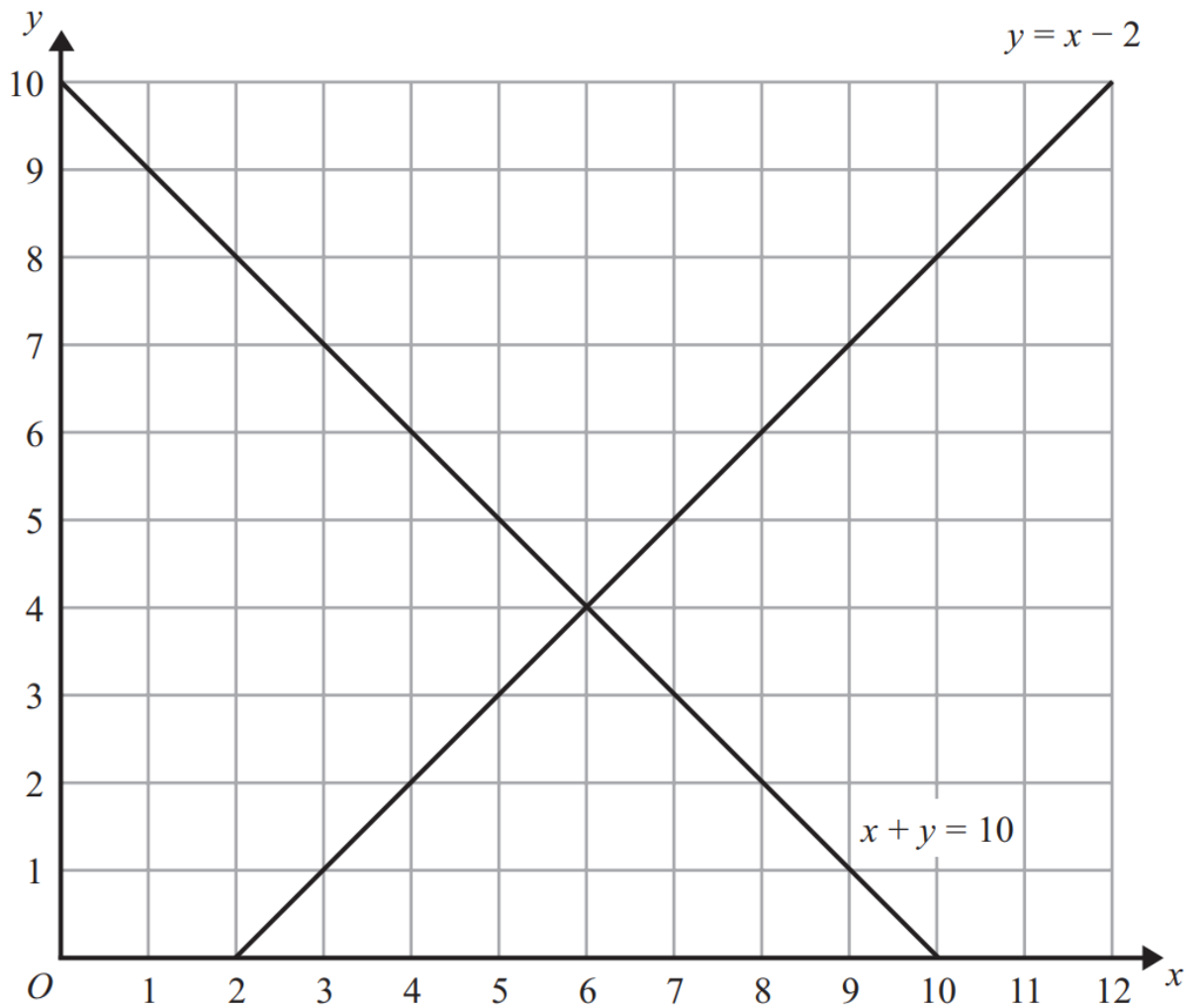
(a) On the grid, draw the lines $x = 1$, $y = 2$ and $x + y = 5$.

[3 marks]



Question 4

The lines $y = x - 2$ and $x + y = 10$ are drawn on the grid.



On the grid, mark with a cross (\times) each of the points with integer coordinates that are in the region defined by

$$\begin{aligned} y &> x - 2 \\ x + y &< 10 \\ x &> 3 \end{aligned}$$

[3 marks]



Question 5

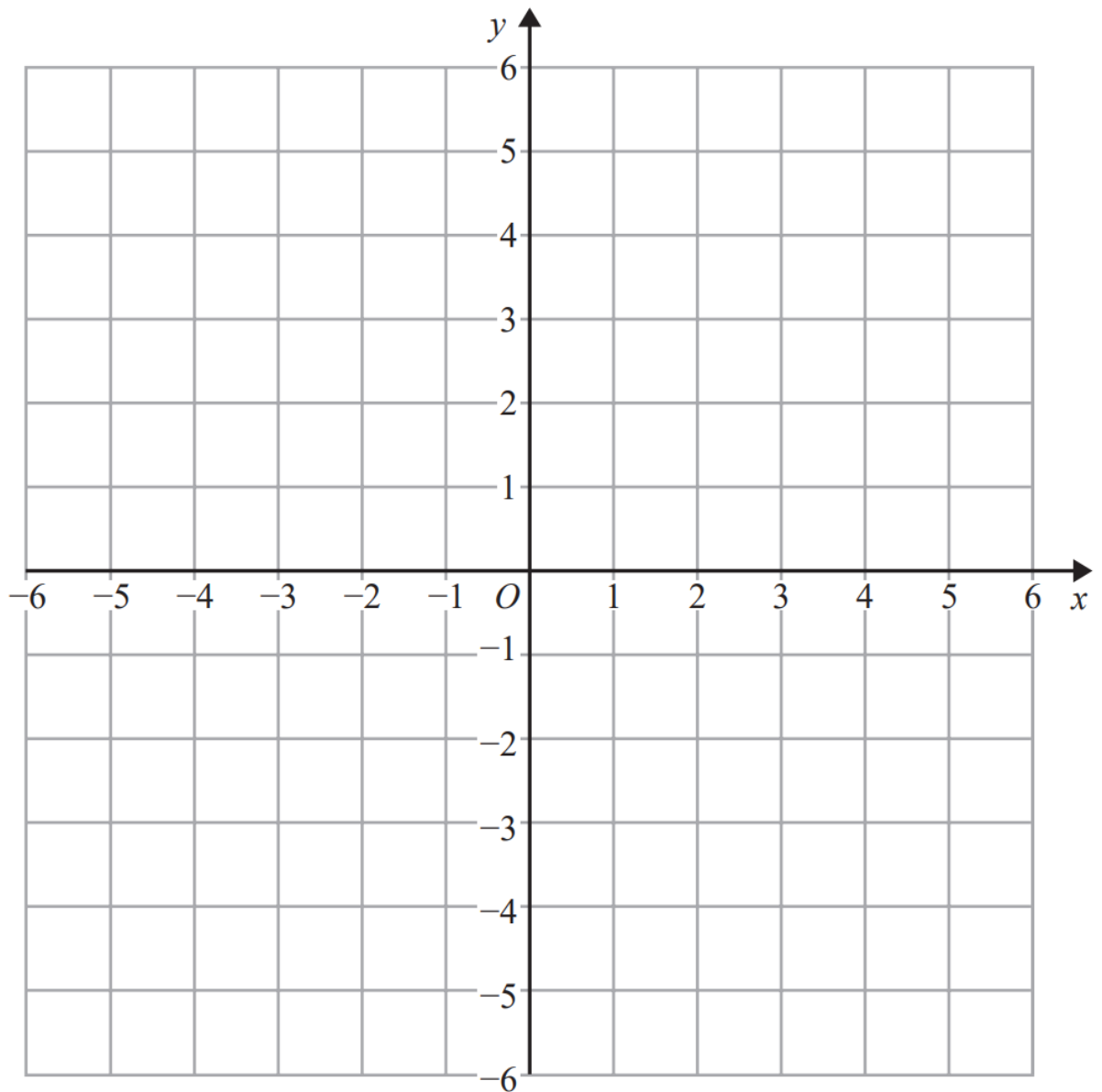
On the grid, shade the region that satisfies all these inequalities.

$$y > 1$$

$$x + y < 5$$

$$y > 2x$$

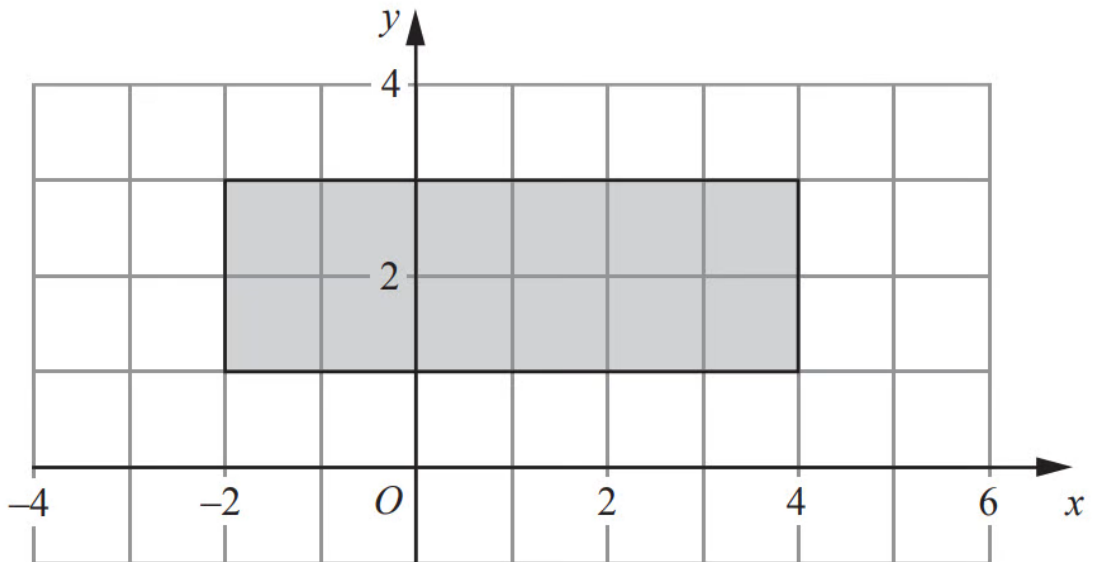
Label the region **R**.



[3 marks]



Question 6



Write down inequalities to fully define the shaded region.

[3 marks]

Question 7

(b) Write R in the region where $x \geq 1$, $y \geq 2$ and $x + y \geq 5$.

[1 mark]



Question 8

(a) Given that x and y are integers such that

$$3 < x < 7$$

$$4 < y < 9$$

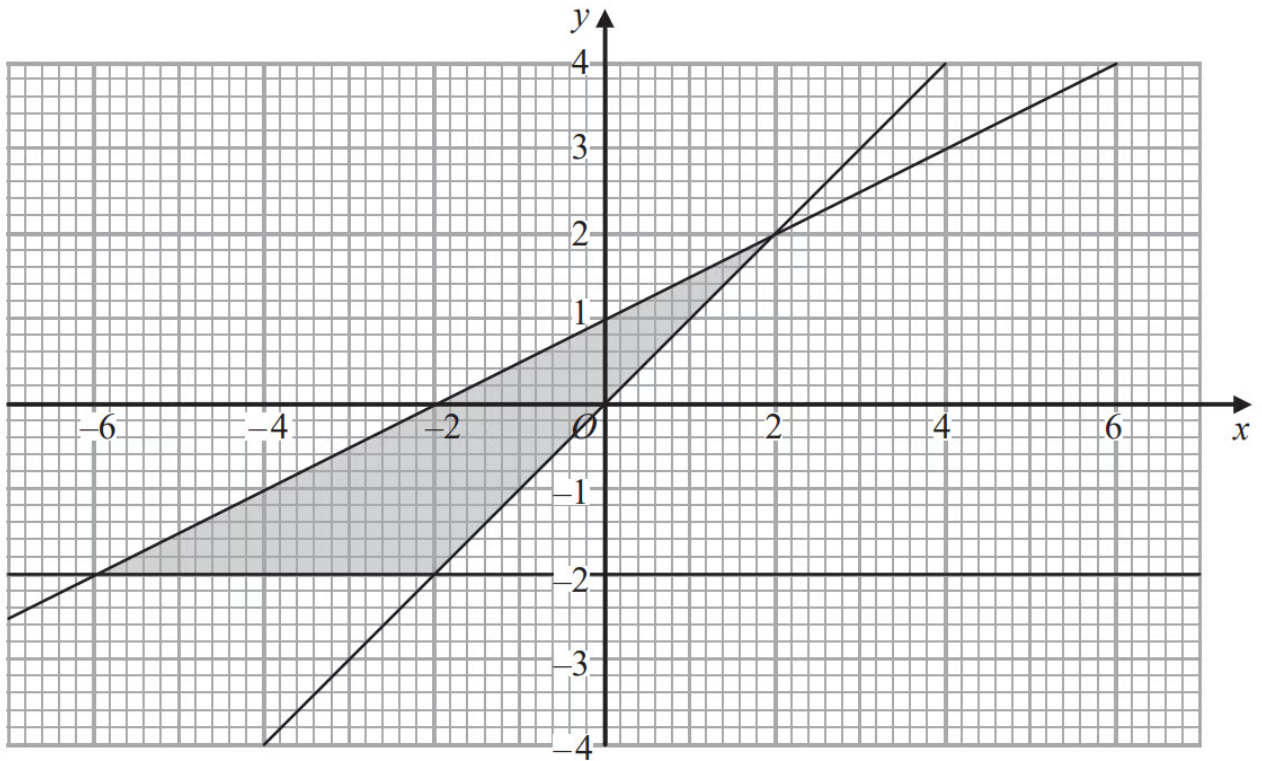
$$\text{and } x + y = 13$$

find all the possible values of x .

[2 marks]



Question 9

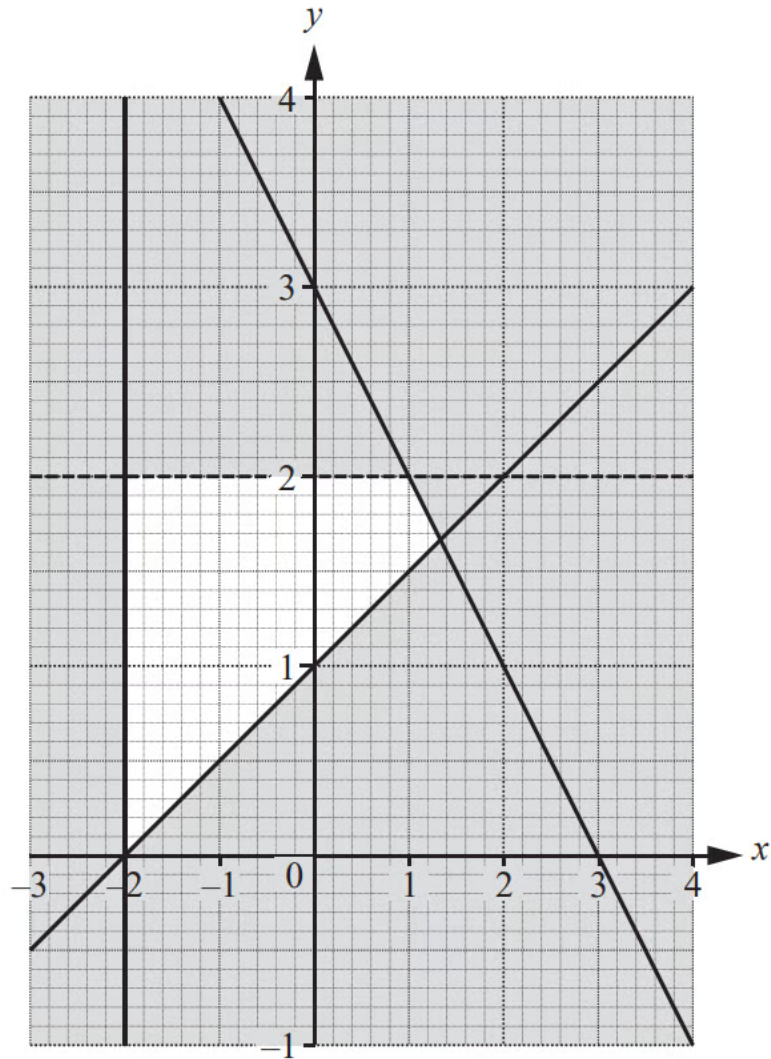


Write down the three inequalities that define the shaded region.

[4 marks]



Question 10



Find the four inequalities that define the region that is **not** shaded.

[5 marks]



Question 11

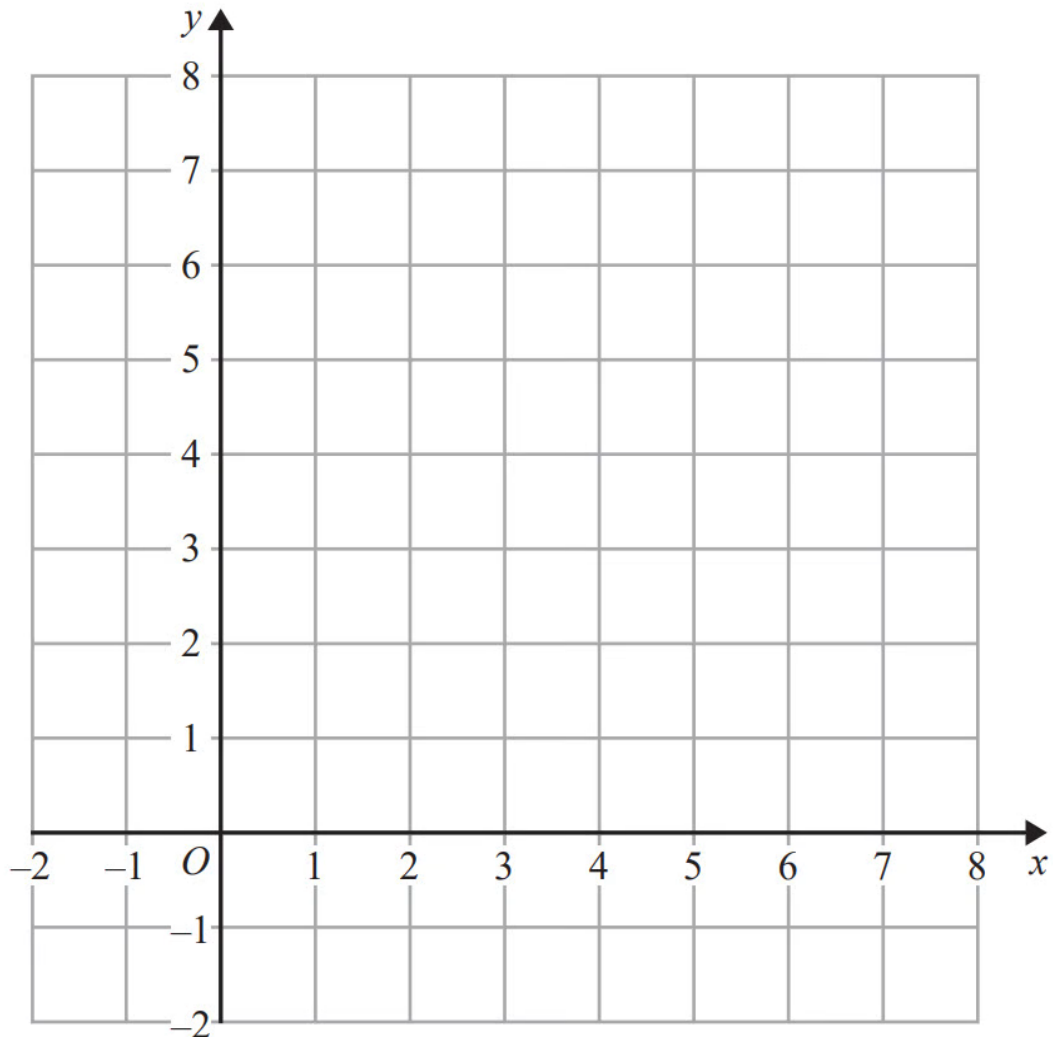
On the grid show, by shading, the region that satisfies all three of the inequalities

$$x + y < 7$$

$$y < 2x$$

$$y > 3$$

Label the region **R**.



[4 marks]

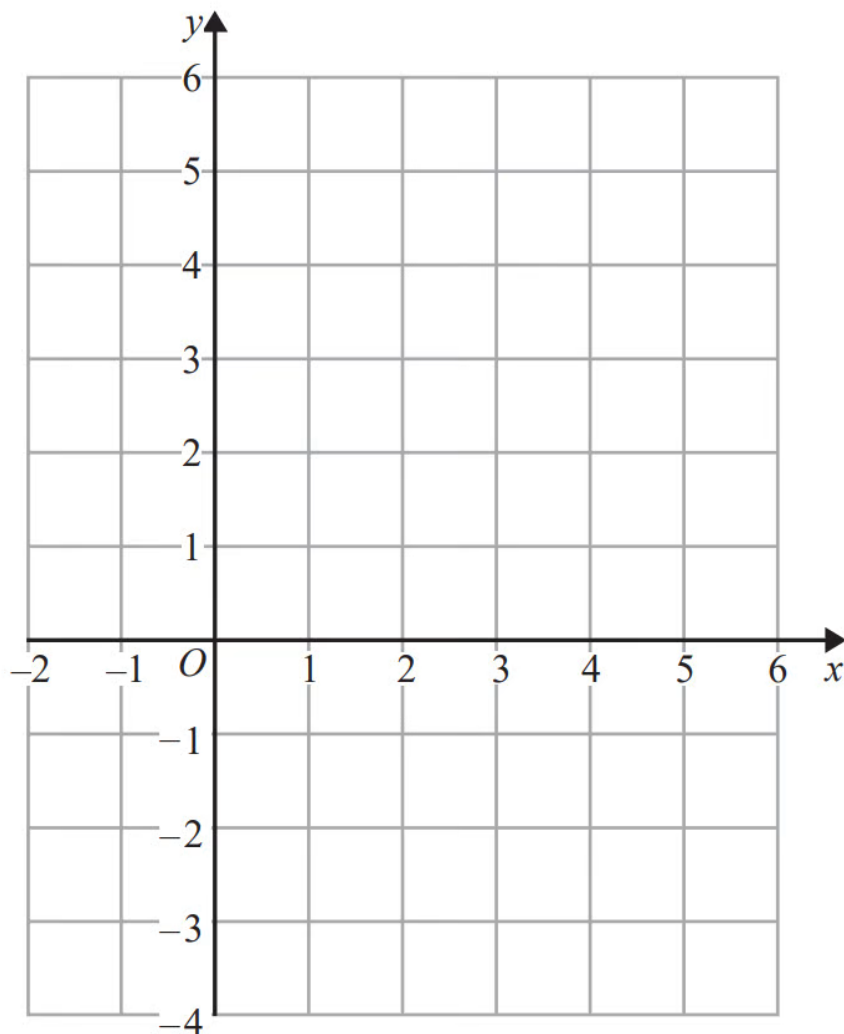


Question 12

(b) On the grid below show, by shading, the region defined by the inequalities

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

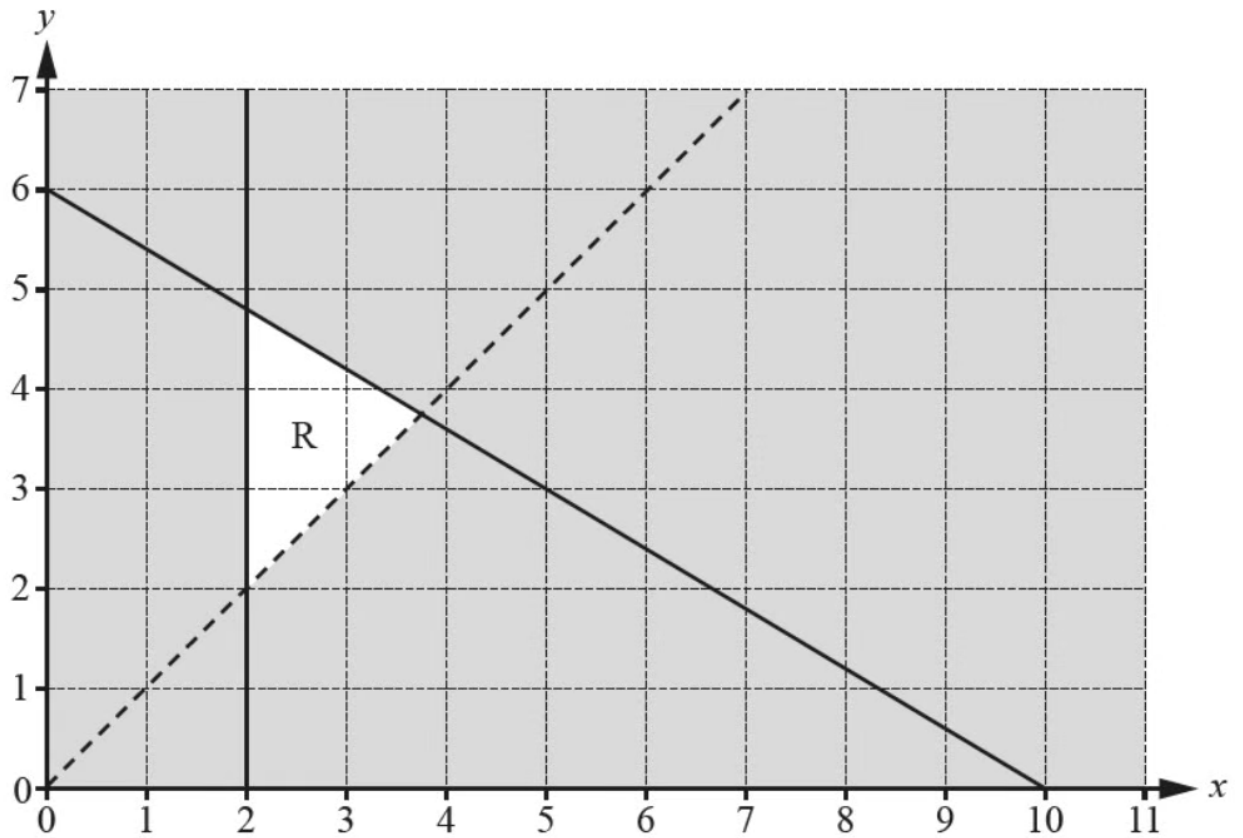
Mark this region with the letter R.



[4 marks]



Question 13

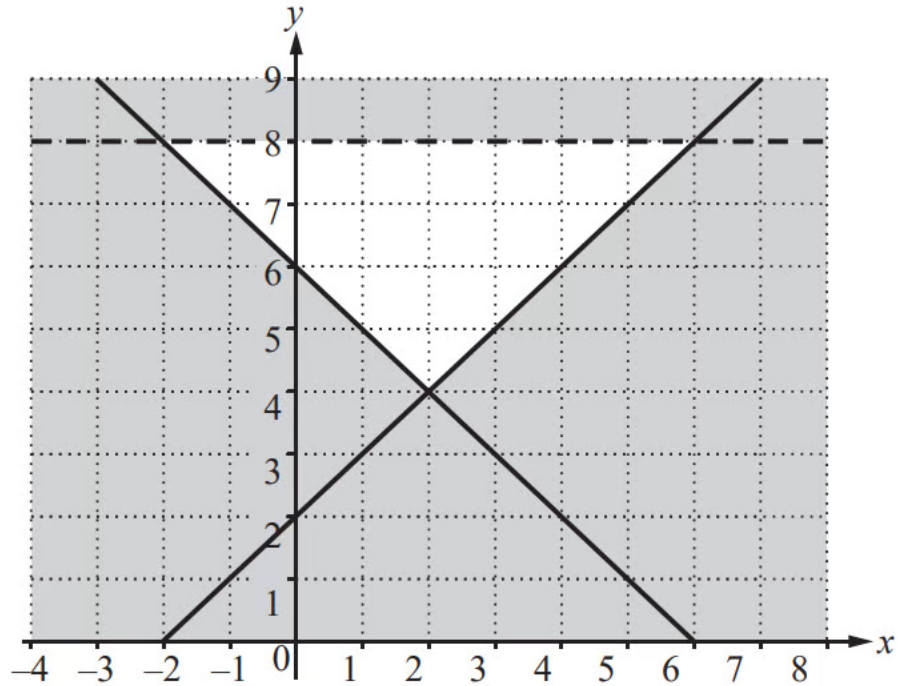


Find the three inequalities that define the unshaded region, R.

[5 marks]



Question 14



Write down the 3 inequalities which define the unshaded region.

[4 marks]