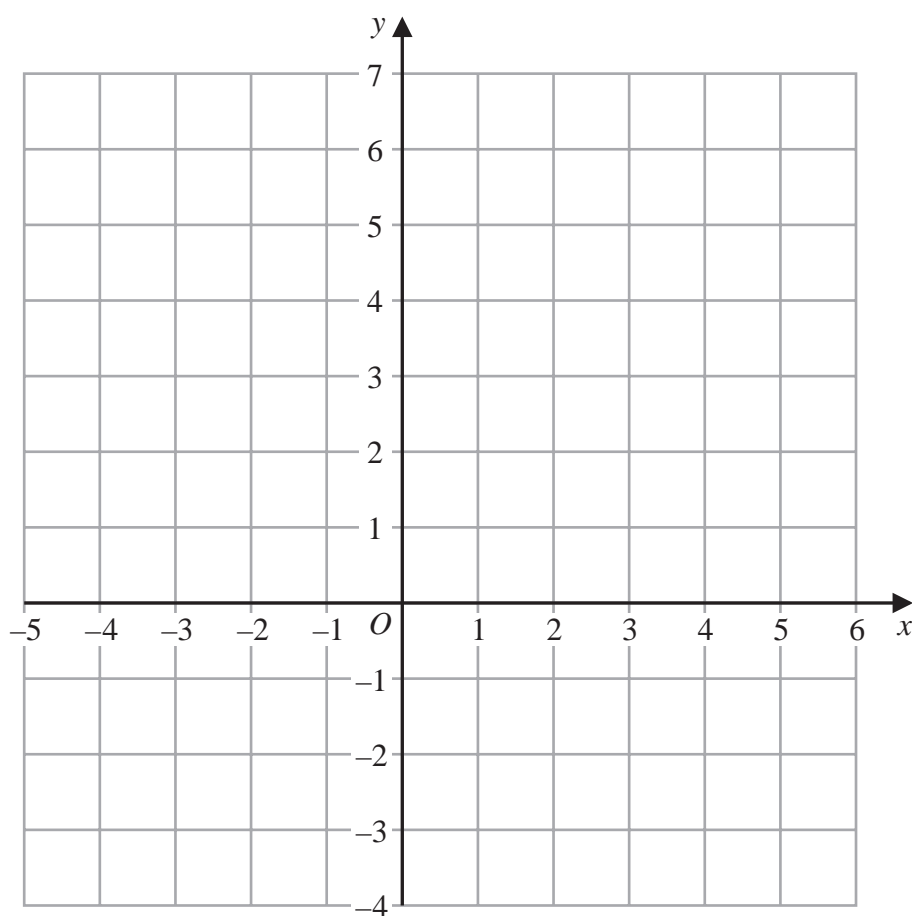


1 Show, by shading on the grid, the region that satisfies all three of the inequalities

$$x \leq 4 \quad \text{and} \quad y \geq -2 \quad \text{and} \quad y \leq x$$

Label the region **R**.



(Total for Question 1 is 3 marks)

- 2 (a) Write down the integer values of x that satisfy the inequality $-2 < x \leq 4$

.....
(2)

The region **R**, shown shaded in the diagram, is bounded by three straight lines.

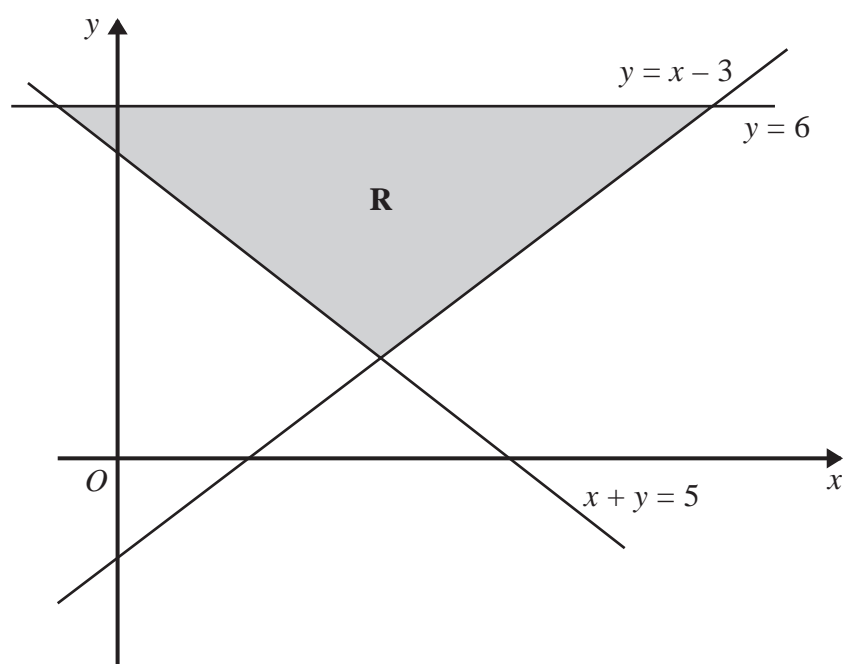


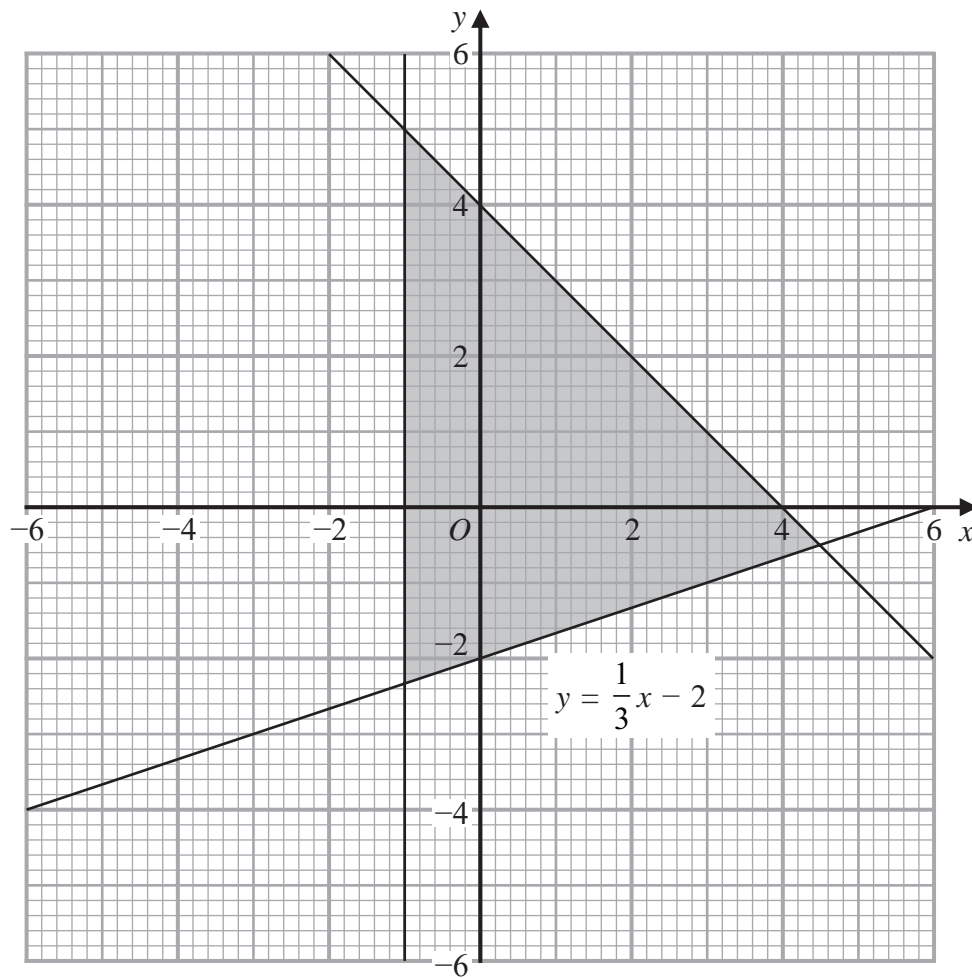
Diagram **NOT**
accurately drawn

- (b) Write down the three inequalities that define the region **R**.

.....
.....
.....
(2)

(Total for Question 2 is 4 marks)

- 3 The shaded region in the diagram is bounded by three lines.
The equation of one of the lines is given.



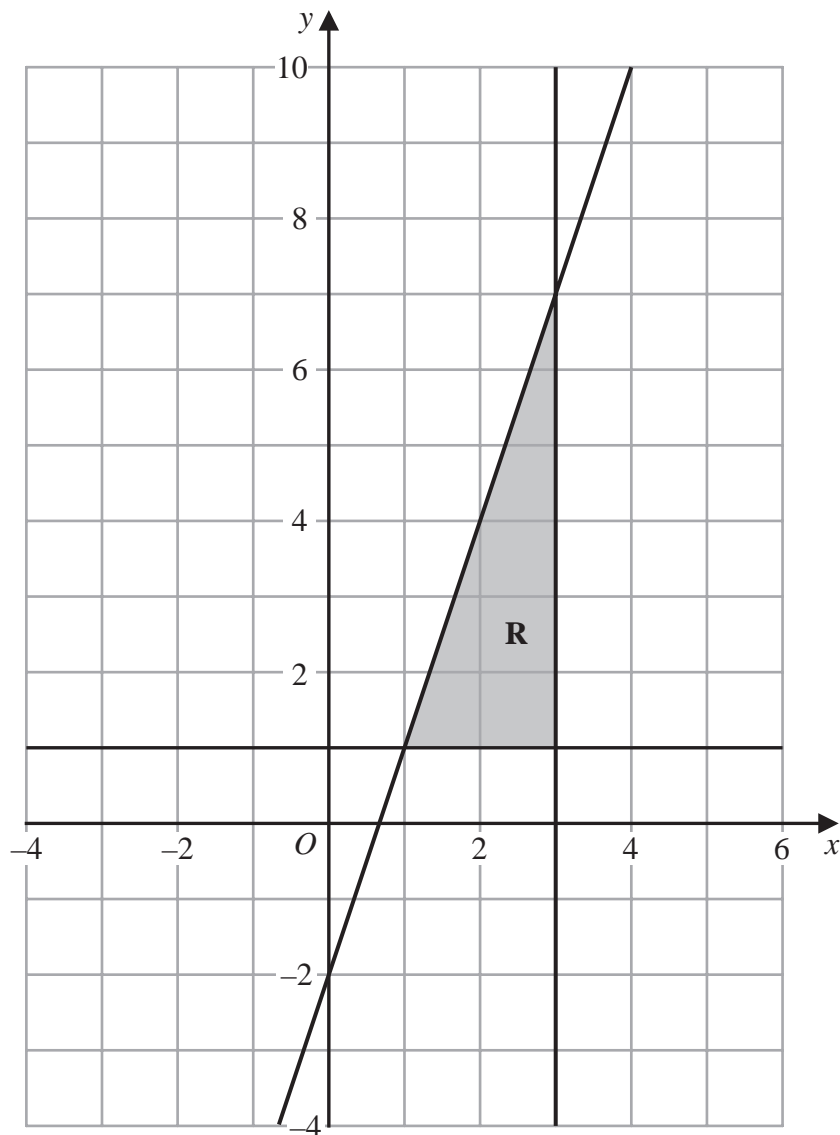
Write down the three inequalities that define the shaded region.

.....
.....
.....

(Total for Question 3 is 3 marks)

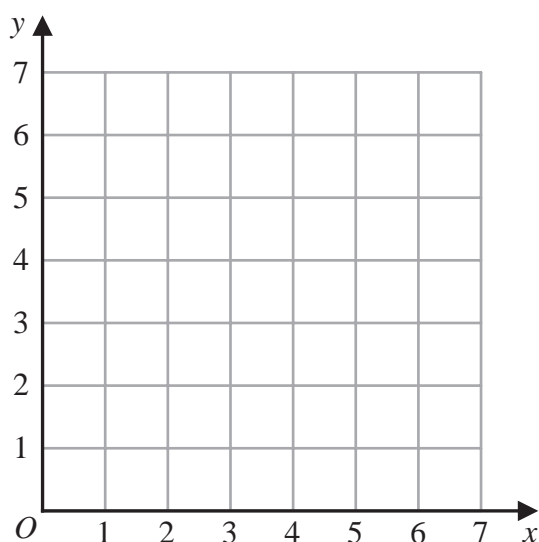
- 4 The shaded region **R**, shown in the diagram below, is bounded by the straight line with equation $y = 3x - 2$ and by two other straight lines.

Write down the three inequalities that define region **R**.



.....
.....
.....

(Total for Question 4 is 3 marks)

5

(a) On the grid, draw and **label** the straight line with equation

(i) $x = 1.5$

(ii) $y = x$

(iii) $x + y = 6$

(3)

(b) Show, by shading on the grid, the region that satisfies **all three** of the inequalities

$$x \geq 1.5$$

$$y \geq x$$

$$x + y \leq 6$$

Label the region **R**.

(1)

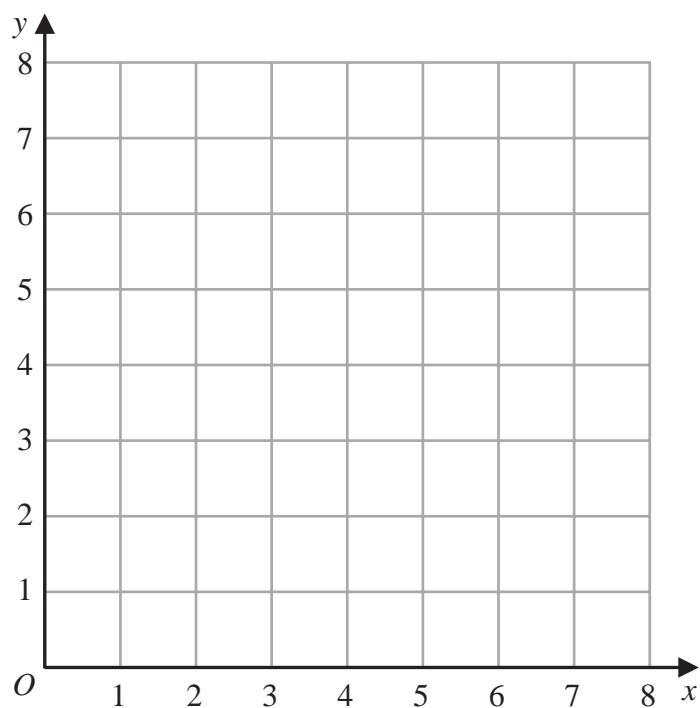
(Total for Question 5 is 4 marks)

6 (a) On the grid, draw and label with its equation the straight line with equation

(i) $y = 1$

(ii) $x = 2$

(iii) $x + y = 7$



(3)

(b) Show, by shading on the grid, the region that satisfies **all three** of the inequalities

$$y \geq 1$$

$$x \geq 2$$

$$x + y \leq 7$$

Label the region **R**.

(1)

(Total for Question 6 is 4 marks)

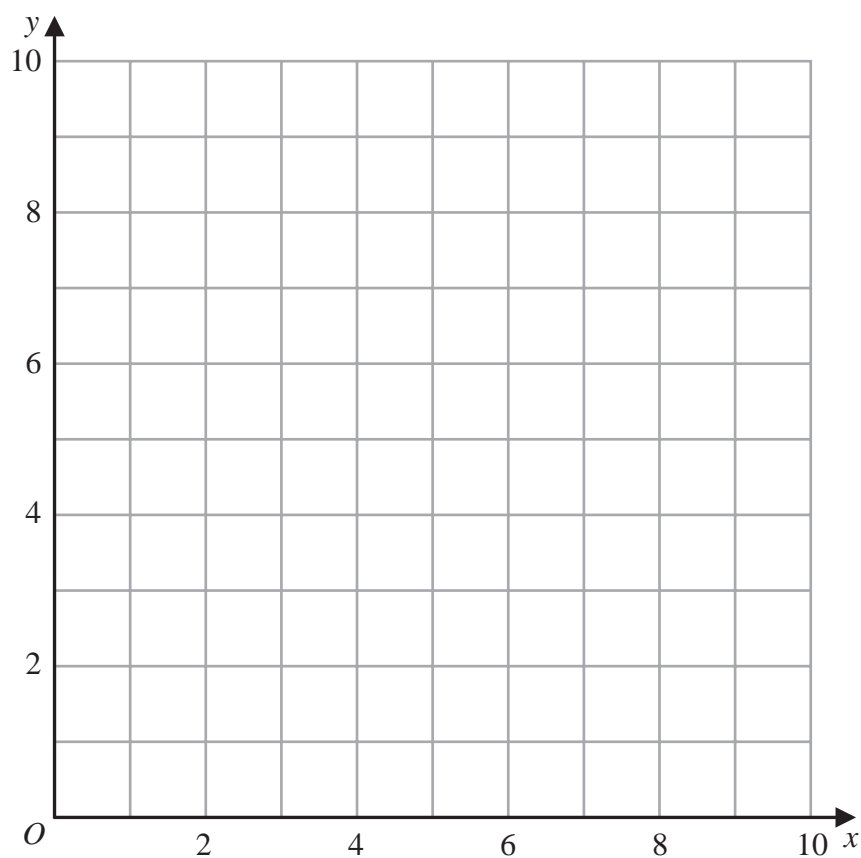
7 (b) Show, by shading on the grid, the region defined by **all three** of the inequalities

$$x \leq 6$$

$$y \geq 2$$

$$y \leq x + 1$$

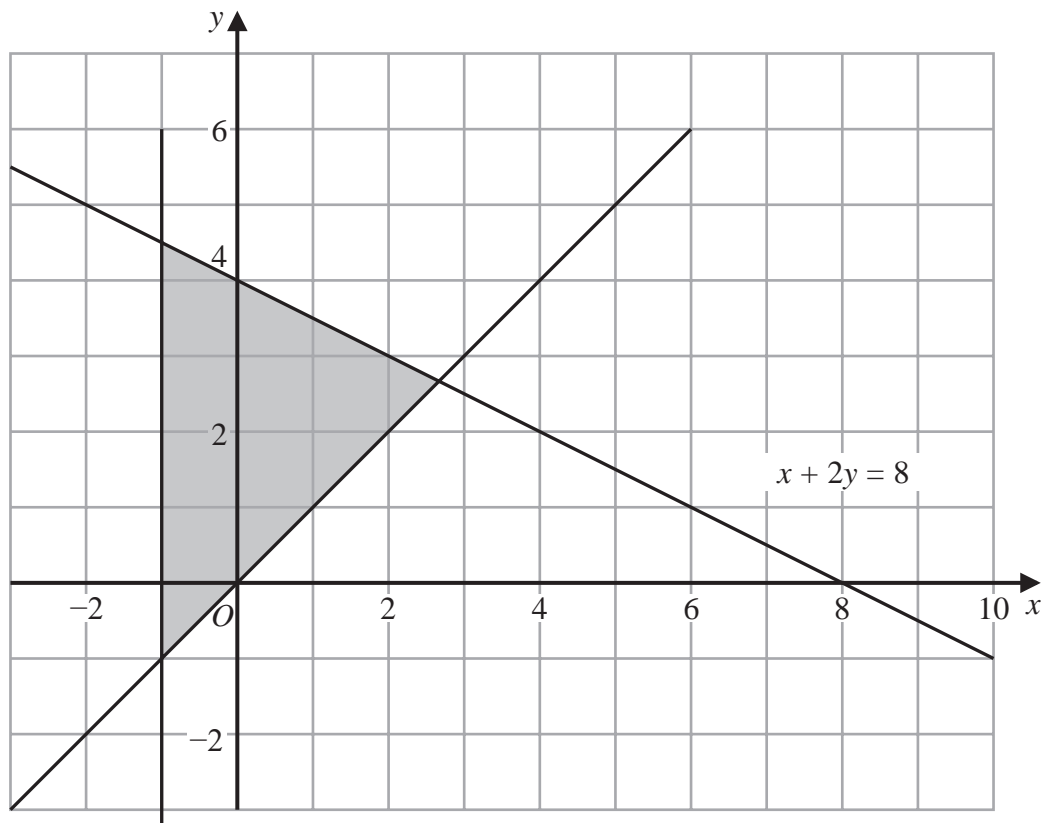
Label the region **R**



(3)

(Total for Question 7 is 3 marks)

- 8 The shaded region in the diagram is bounded by three lines.
The equation of one of the lines is given.

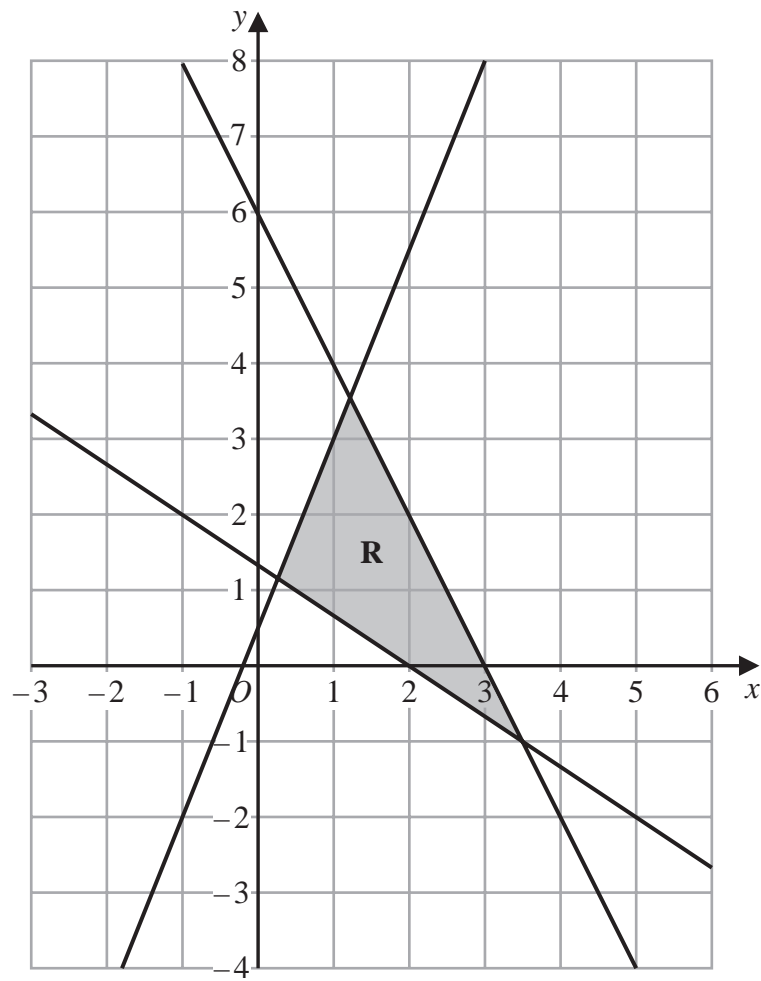


Write down three inequalities that define the shaded region.

.....
.....
.....

(Total for Question 8 is 3 marks)

9



The region **R**, shown shaded in the diagram, is bounded by the straight lines with equations

$$2x + y = 6$$

$$2y = 5x + 1$$

$$3y + 2x = 4$$

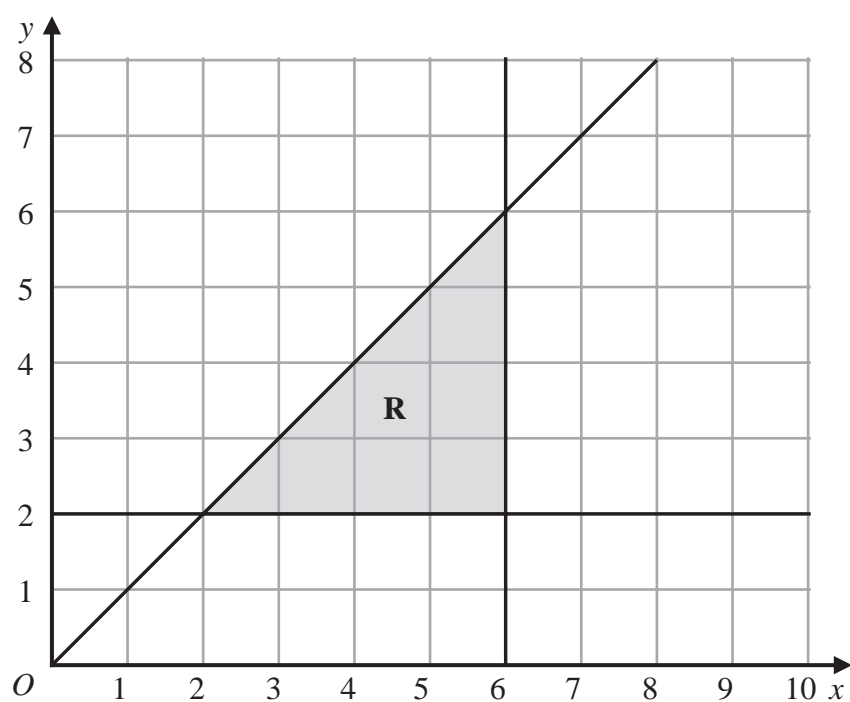
Write down the three inequalities that define **R**

.....

.....

.....

(Total for Question 9 is 3 marks)



10 (b) Write down the three inequalities that represent the shaded region **R**

.....

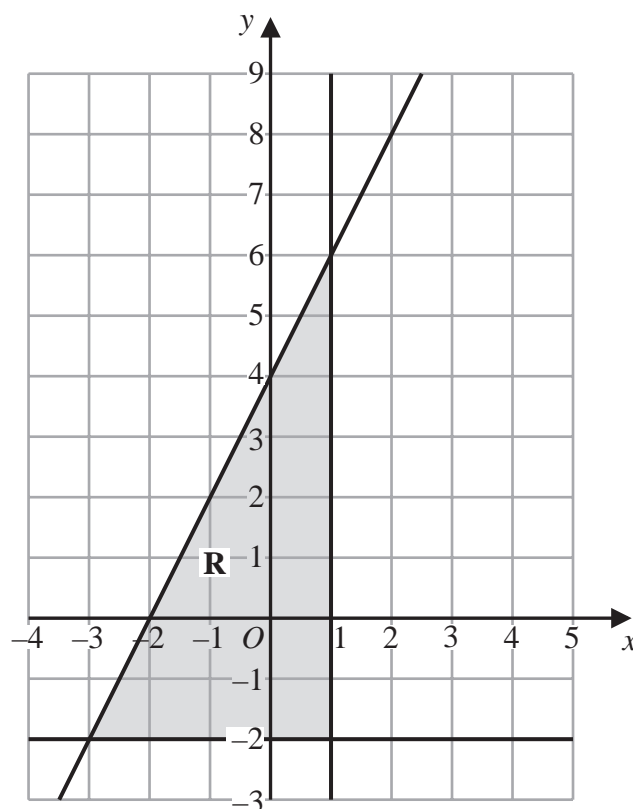
.....

.....

(3)

(Total for Question 10 is 3 marks)

11



The region **R**, shown shaded in the diagram, is bounded by three straight lines.

Find the inequalities that define **R**

.....
.....
.....

(Total for Question 11 is 4 marks)