

## GCSE QUESTIONS

### Q1. NON-CALCULATOR

$n$  is an integer such that  $3n + 2 \leq 14$  and  $\frac{6n}{n^2 + 5} > 1$

Find all the possible values of  $n$ .

.....  
(Total for question = 5 marks)

**Q2. CALCULATOR ALLOWED**

For her maths homework, Helen answered the following question.

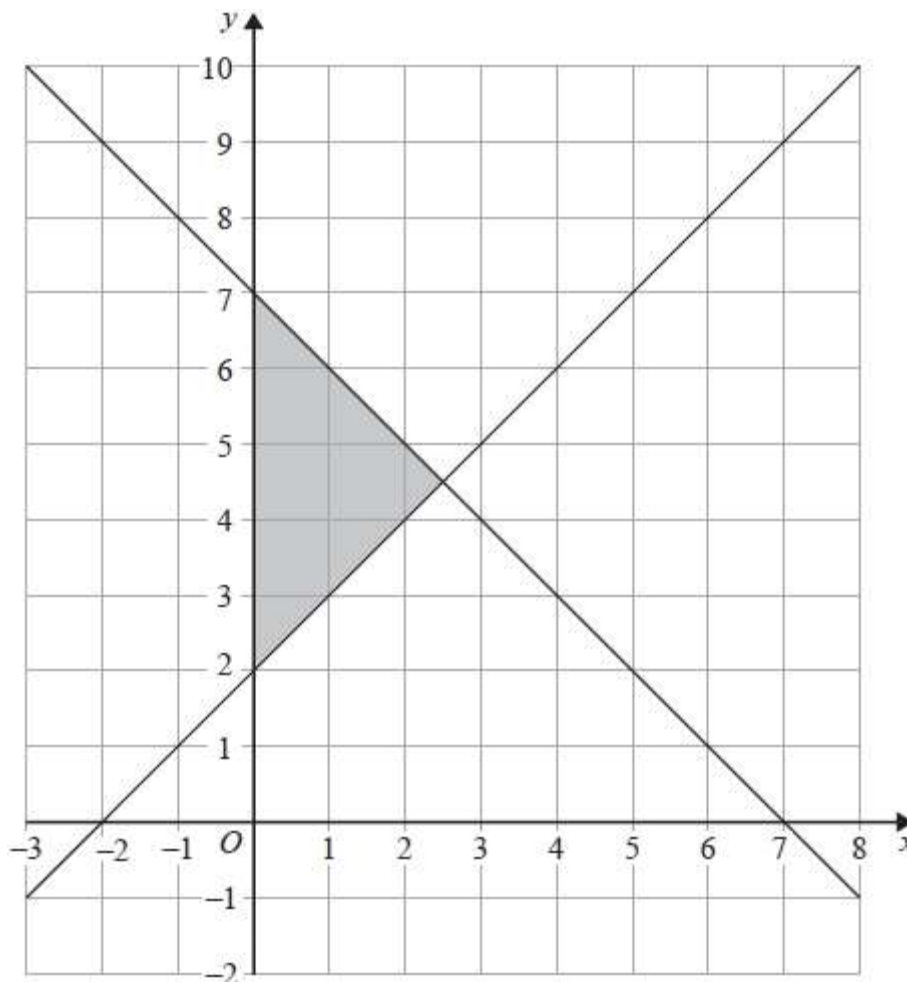
Shade the region that is defined by all these inequalities.

$$x + y \leq 6$$

$$y \geq 0$$

$$y \leq x + 2$$

Here is Helen's answer.



Helen made some mistakes when she answered the question.

Write down two mistakes Helen made.

1 .....

2 .....

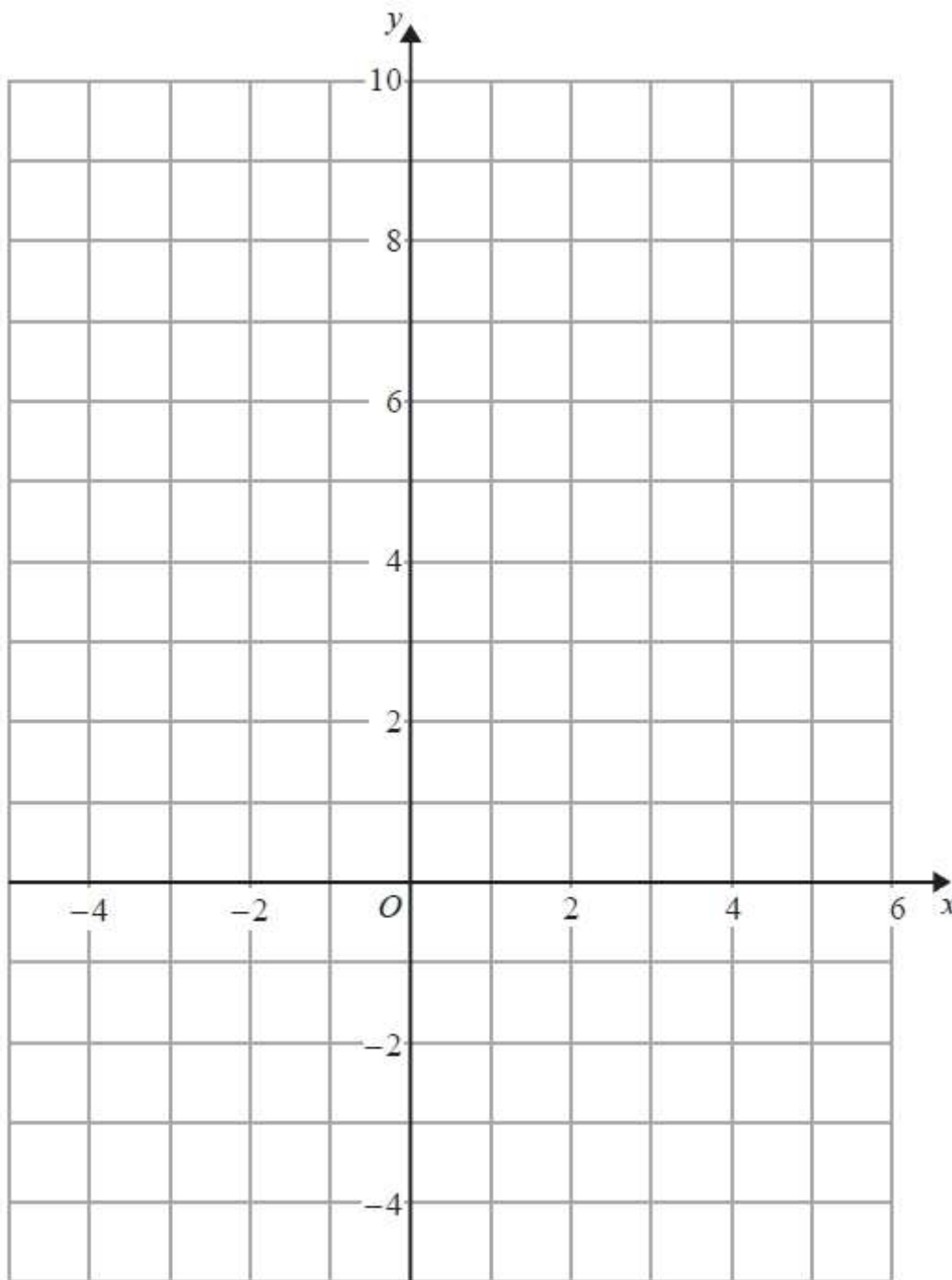
**(Total for question = 2 marks)**

**Q3. CALCULATOR ALLOWED**

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**.



(Total for question is 4 marks)

**Q4. CALCULATOR ALLOWED**

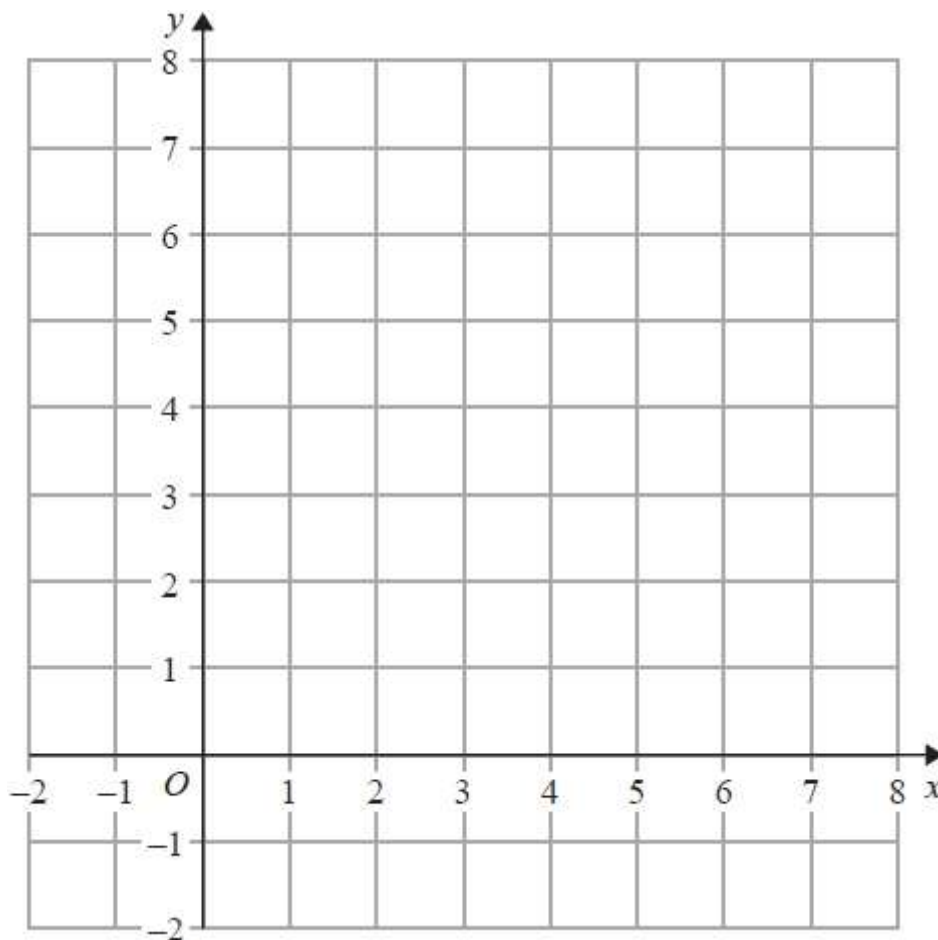
On the grid show, by shading, the region defined by the inequalities

$$x < 4$$

$$2x + y > 6$$

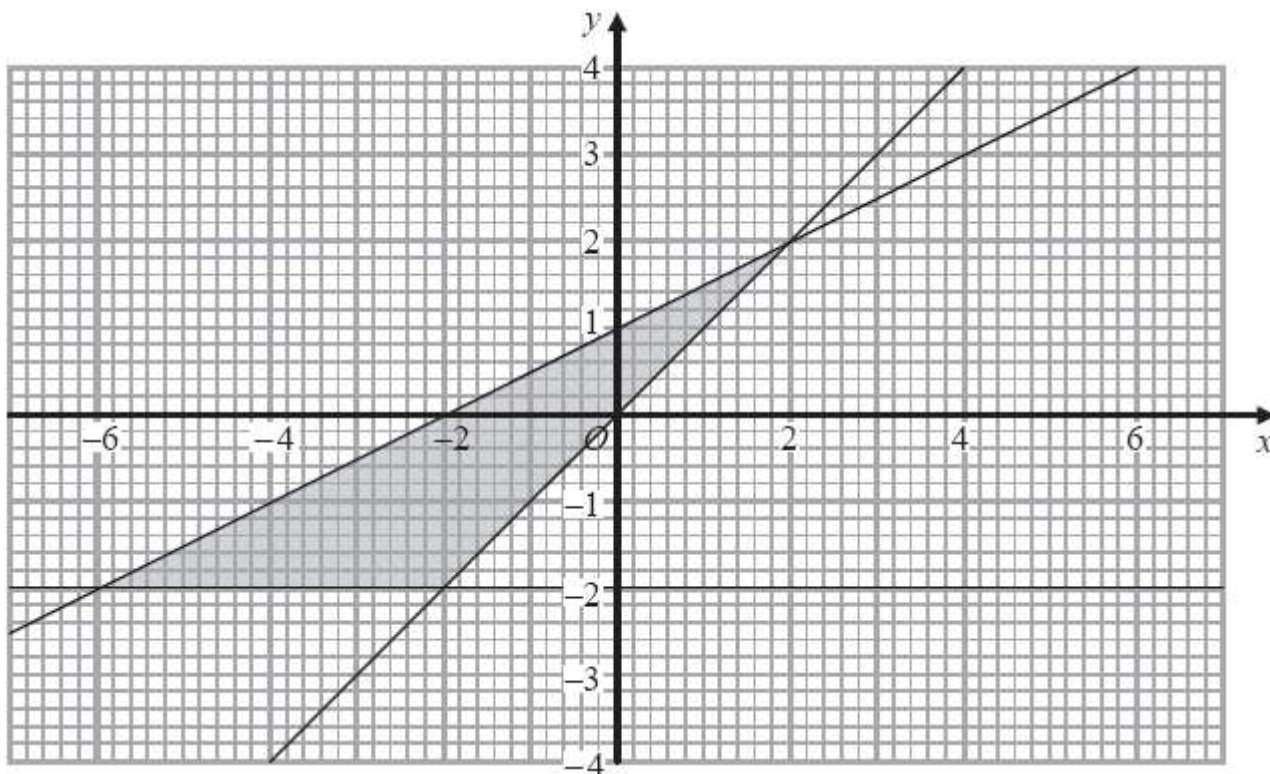
$$y > \frac{1}{3}x$$

Label the region **R**.



(Total for question = 3 marks)

**Q5. CALCULATOR ALLOWED**



Write down the three inequalities that define the shaded region.

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

(Total for question = 4 marks)