Q1.

Use inequalities to describe the shaded area on the grid.

Answer _____

_____

(Total 4 marks)

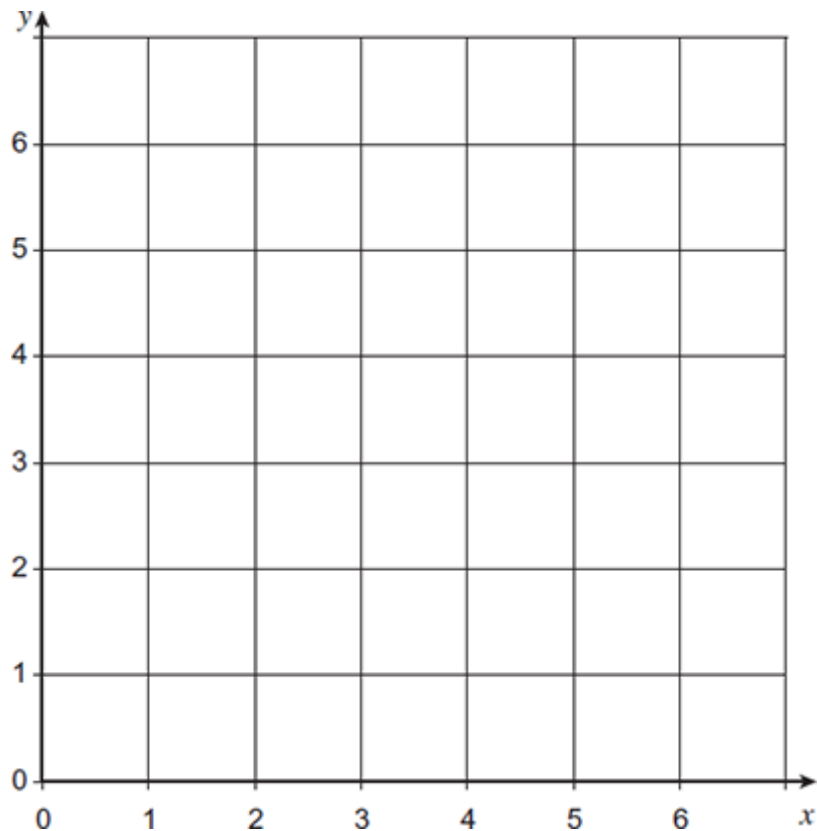**AQA GCSE Maths - Inequalities (H)**   *PhysicsAndMathsTutor.com*
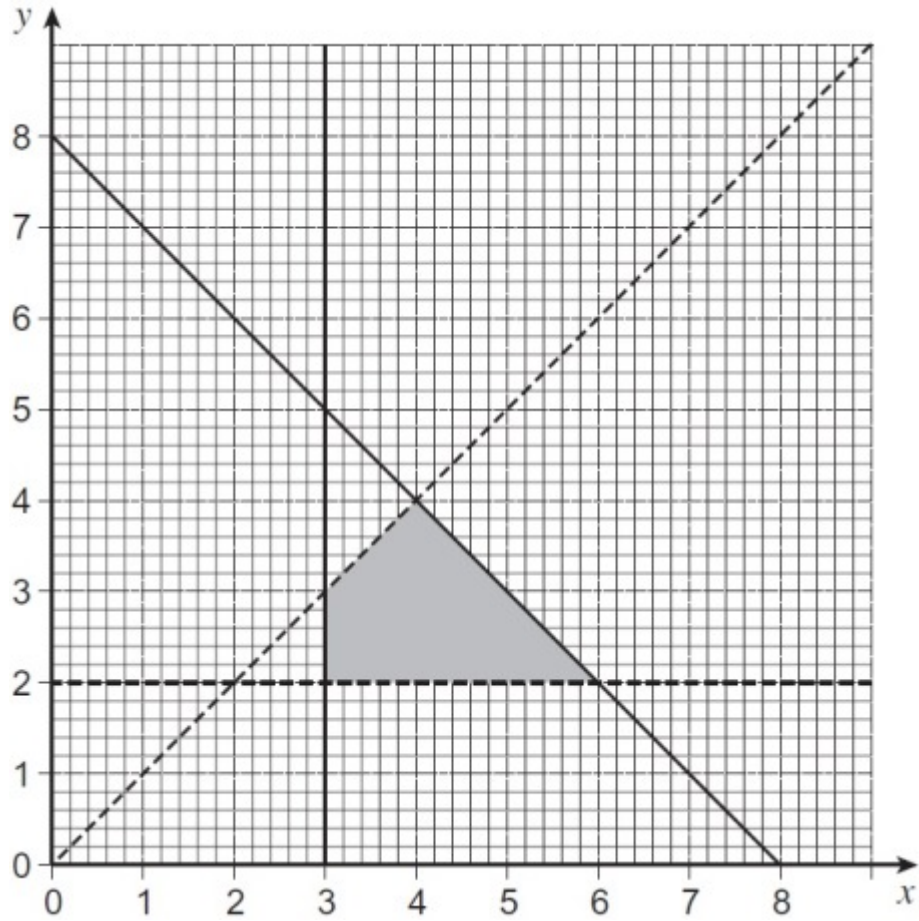
Q2.

On the grid draw lines to show the region satisfied by the three inequalities.

$$x \leq 4$$

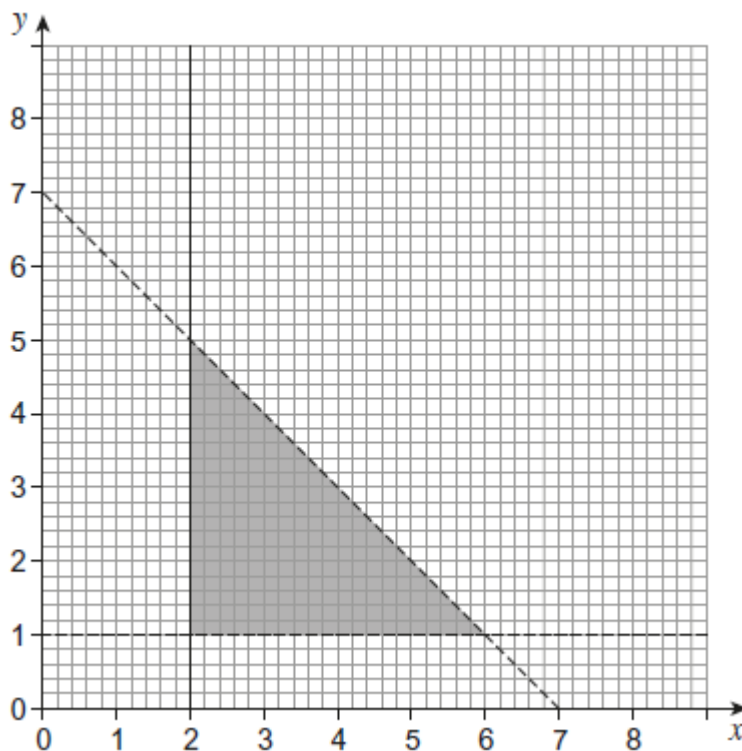$$y \leq x$$

$$x + y \geq 4$$

Label the region clearly with the letter R.

(Total 3 marks)

Q3.

Points in the shaded region satisfy three inequalities.

Use inequalities to describe the shaded region.

_____

_____
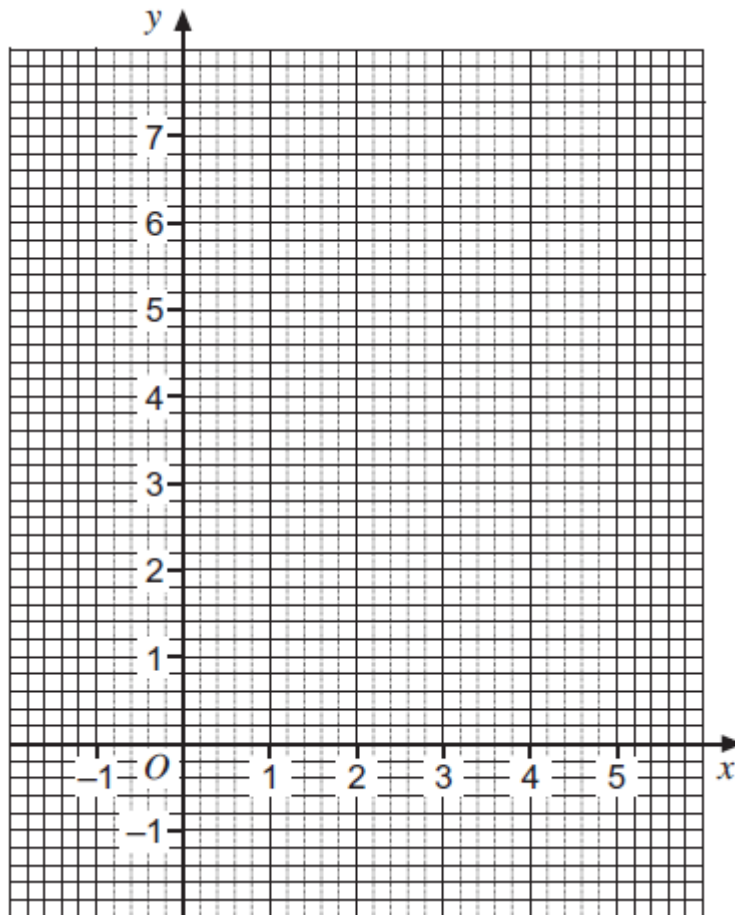
_____

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(Total 3 marks)

Q4.

Put a label, R, in the region on the grid satisfied by all three of these inequalities.

$x \leq 3$

$y \geq x$

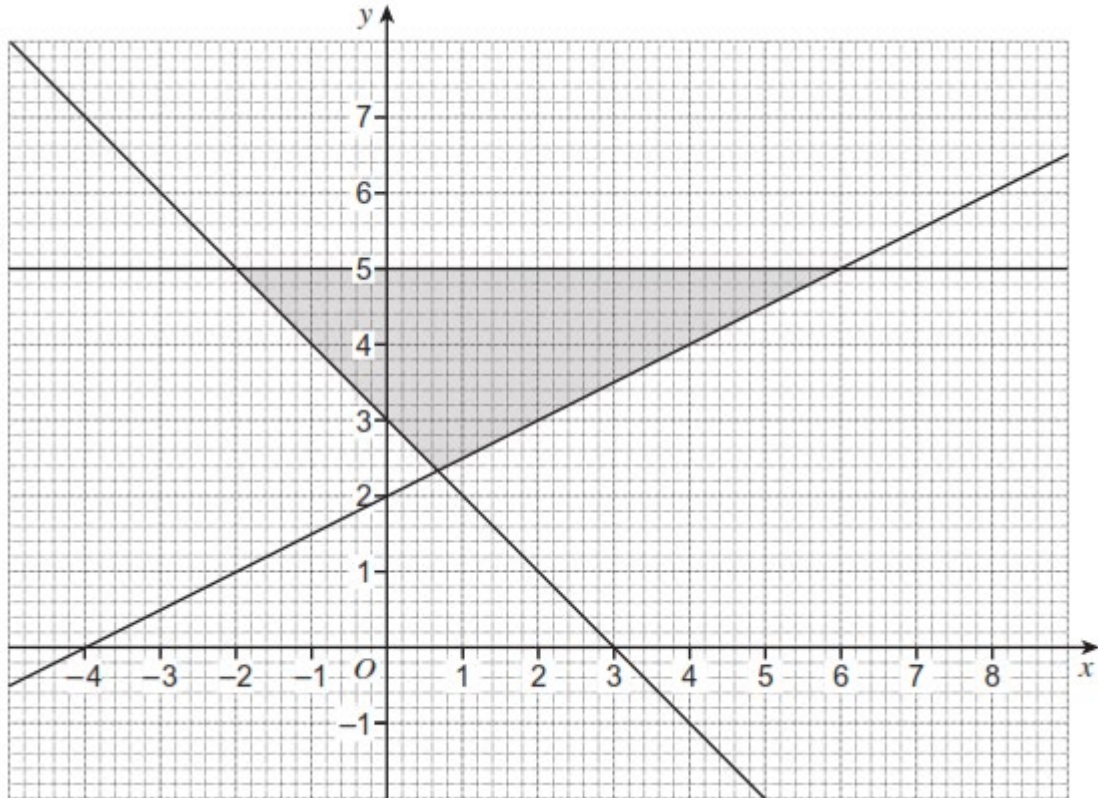$y \leq 2x - 1$

(Total 4 marks)

Q5.

Points in the shaded region satisfy three inequalities.

One of the inequalities is $y \leq 5$

Which of these are the other **two** inequalities?

A $\quad 2y \geq x - 4$ B $\quad x + y \geq 3$ C $\quad y \geq 2x + 4$

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

_____

_____

_____

_____

_____

_____

Answer _____ and _____

(Total 2 marks)

AQA GCSE Maths - Inequalities (H) *PhysicsAndMathsTutor.com*

Q6.

Points in the shaded region satisfy three inequalities.

One of the inequalities is $y \leq 2x + 5$
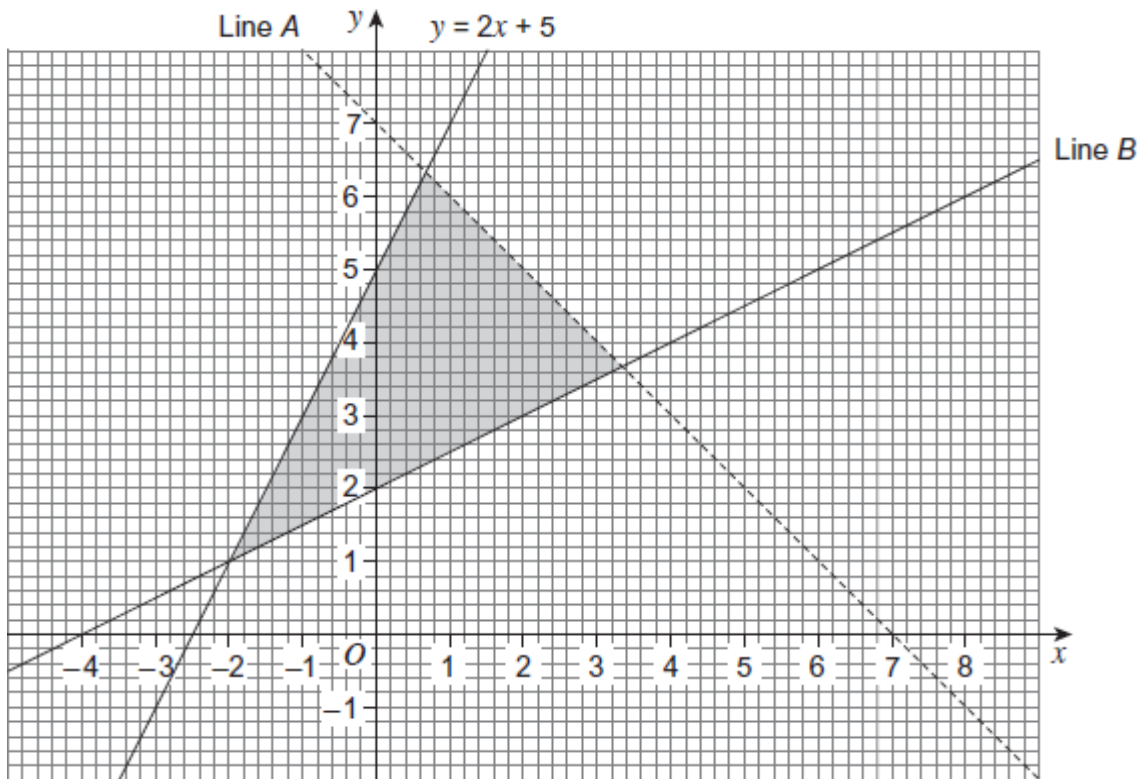
(a)   Circle the inequality with boundary line *A*.

$x + y \geq 7$ $x + y < 7$ $x + y \leq 7$ $x + y > 7$

(1)

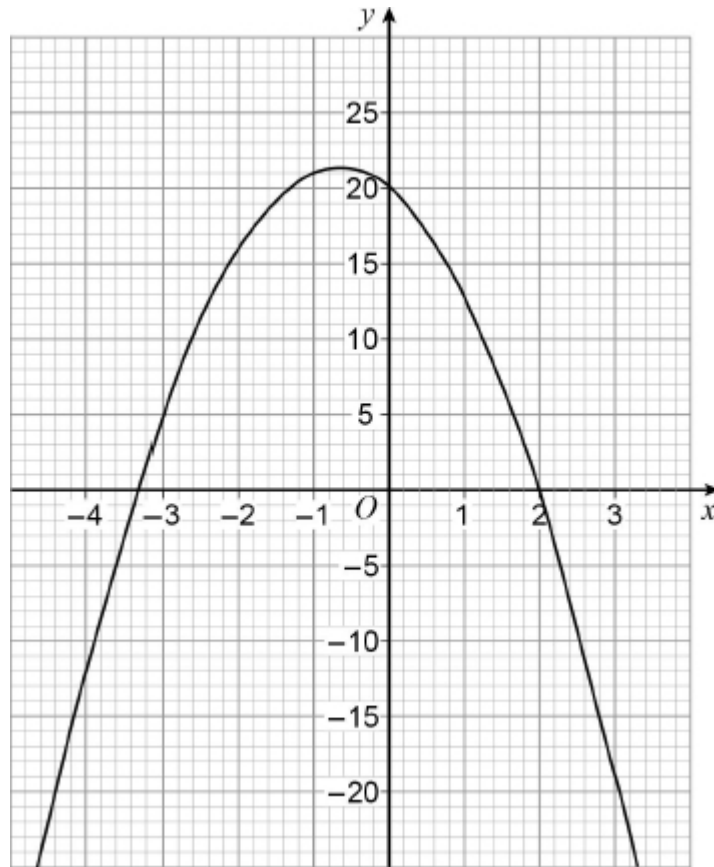(b)   Circle the inequality with boundary line *B*.

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

(1)
(Total 2 marks)

Calculator

Q7.

Here is the graph of $y = f(x)$ where $f(x)$ is a quadratic function.

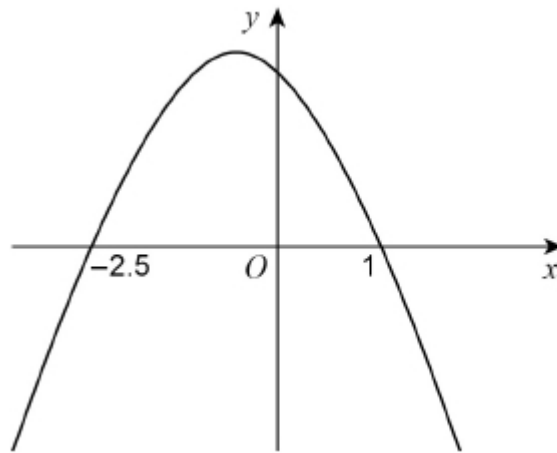

Write down all the **integer** solutions of $f(x) \geq 0$

_____

_____

_____

Answer _____

(Total 2 marks)

Q8.

Here is a sketch of $y = f(x)$ where $f(x)$ is a quadratic function.

The graph intersects the x-axis where $x = -2.5$ and $x = 1$

Not drawn accurately

Circle the solution of $f(x) > 0$

$x < -2.5$ or $x > 1$ $\qquad\qquad\qquad$ $x > -2.5$ or $x > 1$
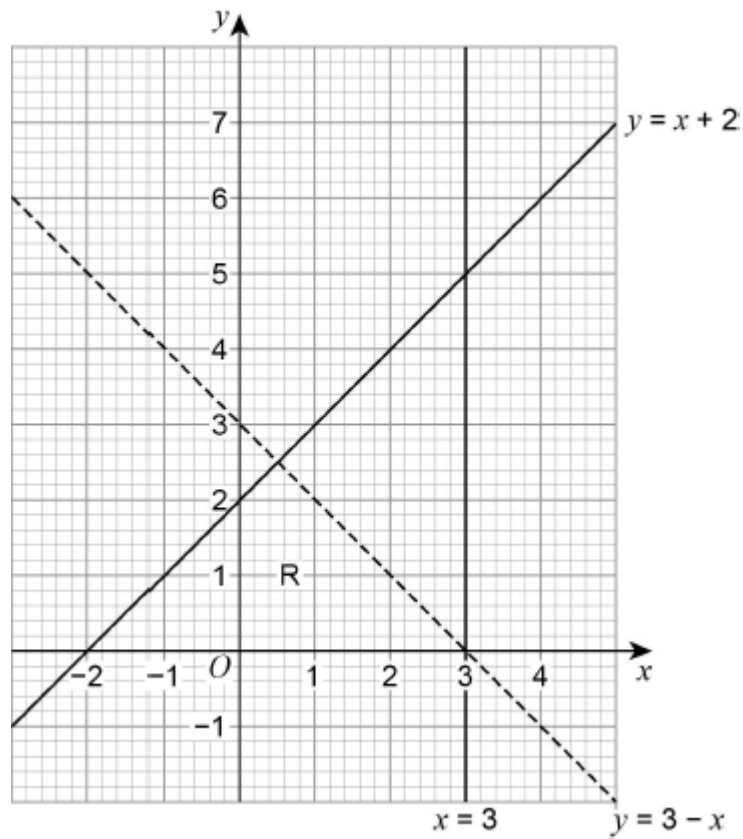
$-2.5 < x < 1$ $\qquad\qquad\qquad\qquad$ $x > -2.5$ or $x < 1$

(Total 1 mark)

Q9.

Joe draws this graph to identify the region R represented by

$$y \le x + 2 \quad \text{and} \quad y > 3 - x \quad \text{and} \quad x < 3$$

Make **two** criticisms of his graph.

Criticism 1 _____

_____

Criticism 2 _____

_____

(Total 2 marks)