

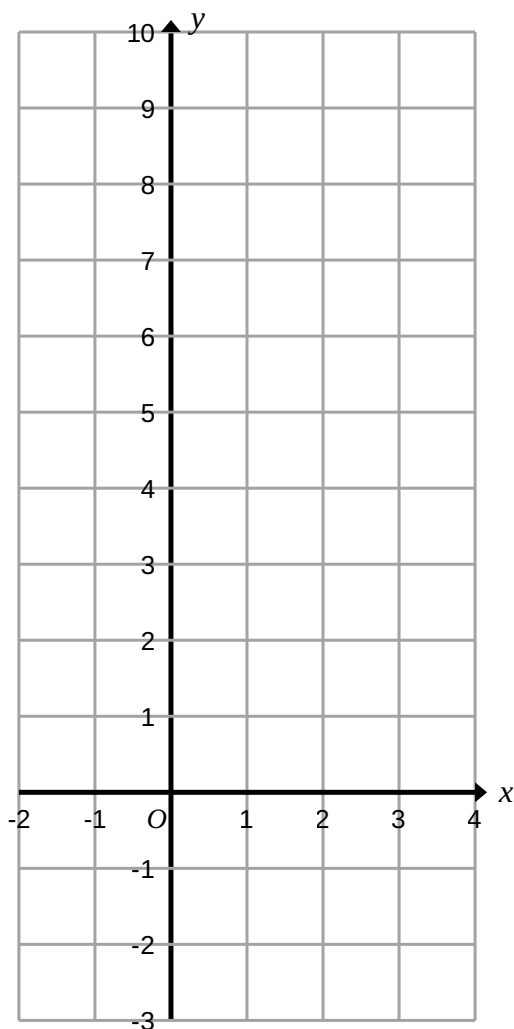
GRAPHS: DRAWING LINES & SHADING INEQUALITIES**Best Guess Mastery Worksheet (Target Grade 4/5)****I Do**

(a) On the grid, draw the graph of $y = -2x + 4$ for values of x from -2 to 3 .

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

$$x \geq 0 \quad y \geq -1 \quad y \leq -2x + 4$$

Label the region **R**.



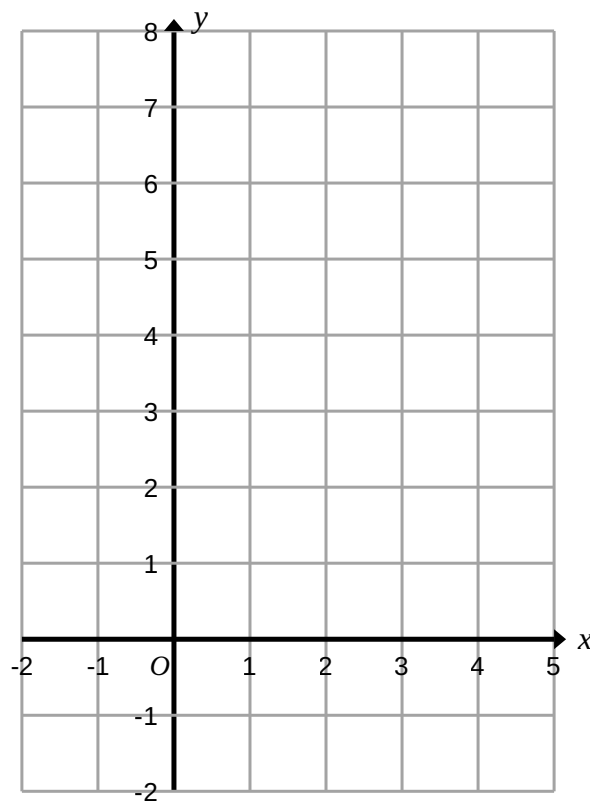
GRAPHS: DRAWING LINES & SHADING INEQUALITIES**Best Guess Mastery Worksheet (Target Grade 4/5)****We Do**

(a) On the grid, draw the graph of $y = -x + 3$ for values of x from -2 to 4 .

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

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

Label the region **R**.



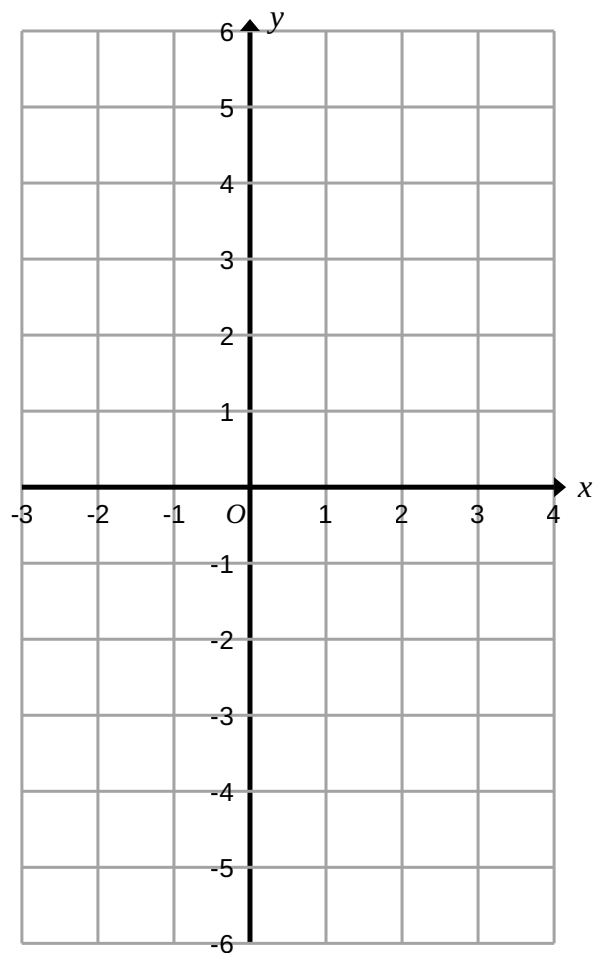
GRAPHS: DRAWING LINES & SHADING INEQUALITIES**Best Guess Mastery Worksheet (Target Grade 4/5)****You Do 1**

(a) On the grid, draw the graph of $y = 2x - 1$ for values of x from -2 to 3 .

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

$$x \leq 2 \quad y \geq -3 \quad y \geq 2x - 1$$

Label the region **R**.



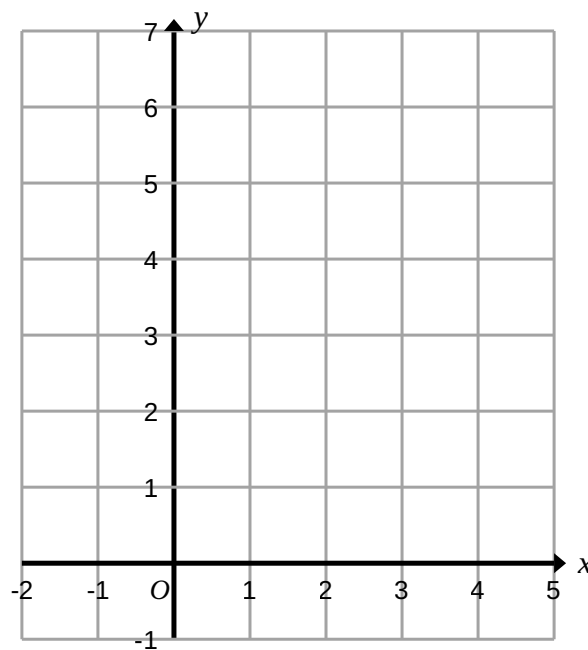
GRAPHS: DRAWING LINES & SHADING INEQUALITIES**Best Guess Mastery Worksheet (Target Grade 4/5)****You Do 2**

(a) On the grid, draw the graph of $y = \frac{1}{2}x + 2$ for values of x from -2 to 4 .

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

$$x \geq 0 \quad y \leq 4 \quad y \geq \frac{1}{2}x + 2$$

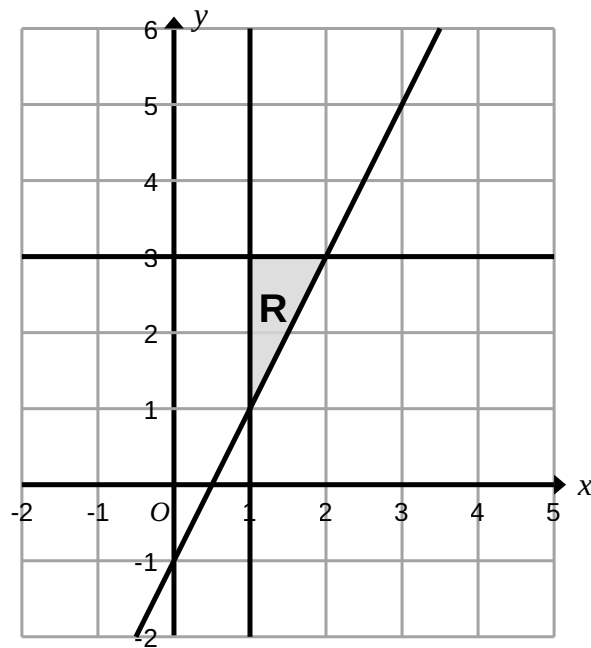
Label the region **R**.



GRAPHS: IDENTIFYING REGIONS**Best Guess Mastery Worksheet (Target Grade 4/5)****Challenge 1**

The region **R**, shown shaded in the diagram, is defined by three inequalities.

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

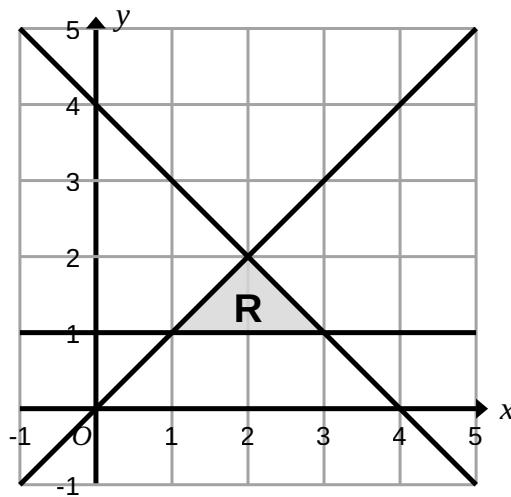


1.
2.
3.

GRAPHS: IDENTIFYING REGIONS**Best Guess Mastery Worksheet (Target Grade 4/5)****Challenge 2**

The region **R**, shown shaded in the diagram, is defined by three inequalities.

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



1.
2.
3.

Answers & Worked Solutions

I Do:

- (a) Plot the line passing through points like $(-2, 8)$, $(0, 4)$, and $(3, -2)$. Connect with a straight line.
- (b) Draw $x = 0$ (the y -axis) and $y = -1$ (horizontal line at -1). Shade the triangle bounded by the y -axis, $y = -1$, and the sloped line. The vertices of the shaded region R are **$(0, -1)$, $(2.5, -1)$, and $(0, 4)$** .

We Do:

- (a) Plot the line passing through points like $(-2, 5)$, $(0, 3)$, and $(4, -1)$. Connect with a straight line.
- (b) Draw $x = -1$ (vertical line) and $y = 1$ (horizontal line). Shade the triangle bounded by these lines and the sloped line. The vertices of the shaded region R are **$(-1, 1)$, $(2, 1)$, and $(-1, 4)$** .

You Do 1:

- (a) Plot the line passing through points like $(-2, -5)$, $(0, -1)$, and $(3, 5)$. Connect with a straight line.
- (b) Draw $x = 2$ and $y = -3$. Shade the triangle bounded by these lines and the sloped line. The vertices of the shaded region R are **$(-1, -3)$, $(2, -3)$, and $(2, 3)$** .

You Do 2:

- (a) Plot the line passing through points like $(-2, 1)$, $(0, 2)$, and $(4, 4)$. Connect with a straight line.
- (b) Draw $x = 0$ (y -axis) and $y = 4$. Shade the triangle bounded by these lines. The vertices of the shaded region R are **$(0, 2)$, $(4, 4)$, and $(0, 4)$** .

Challenge 1:

The region is bounded by a vertical line, a horizontal line, and a sloped line.

1. Vertical line is $x = 1$. The region is to the right, so $x \geq 1$.
2. Horizontal line is $y = 3$. The region is below, so $y \leq 3$.
3. Sloped line passes through $(0, -1)$ and $(1, 1)$. Gradient = 2, y -intercept = -1 . Line is $y = 2x - 1$. The region is above it, so $y \geq 2x - 1$.

Challenge 2:

The region is bounded by a horizontal line and two sloped lines.

1. Horizontal line is $y = 1$. The region is above, so $y \geq 1$.
2. First sloped line passes through $(0, 0)$ and $(2, 2)$. Line is $y = x$. The region is below it, so $y \leq x$.
3. Second sloped line passes through $(0, 4)$ and $(4, 0)$. Line is $y = -x + 4$. The region is below it, so $y \leq -x + 4$ (or $x + y \leq 4$).