Solving Inequalities & Systems of Inequalities

1 What is the solution set for $4(2 - x) > -3x + 9$?

(A) $x > 1$

(B) $x \leq -2$

(C) $x \geq -2$

(D) $x < -1$

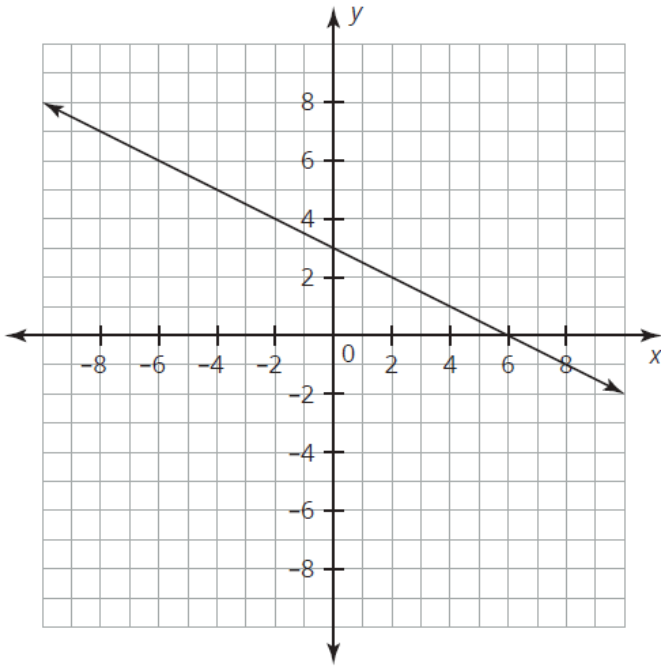
2 Solve the inequality, and use the following dropdown boxes to describe how to graph the solution on the number line.

$$6(x + 2) \geq -2(1 - x)$$

x [ ] or equal to [ ] .

The dot on the line would be [ ] , and the line is pointing to the [ ] .

3 The graph of $12 = 2x + 4y$ is shown on the grid.



Which ordered pair is in the solution set of $12 \geq 2x + 4y$?

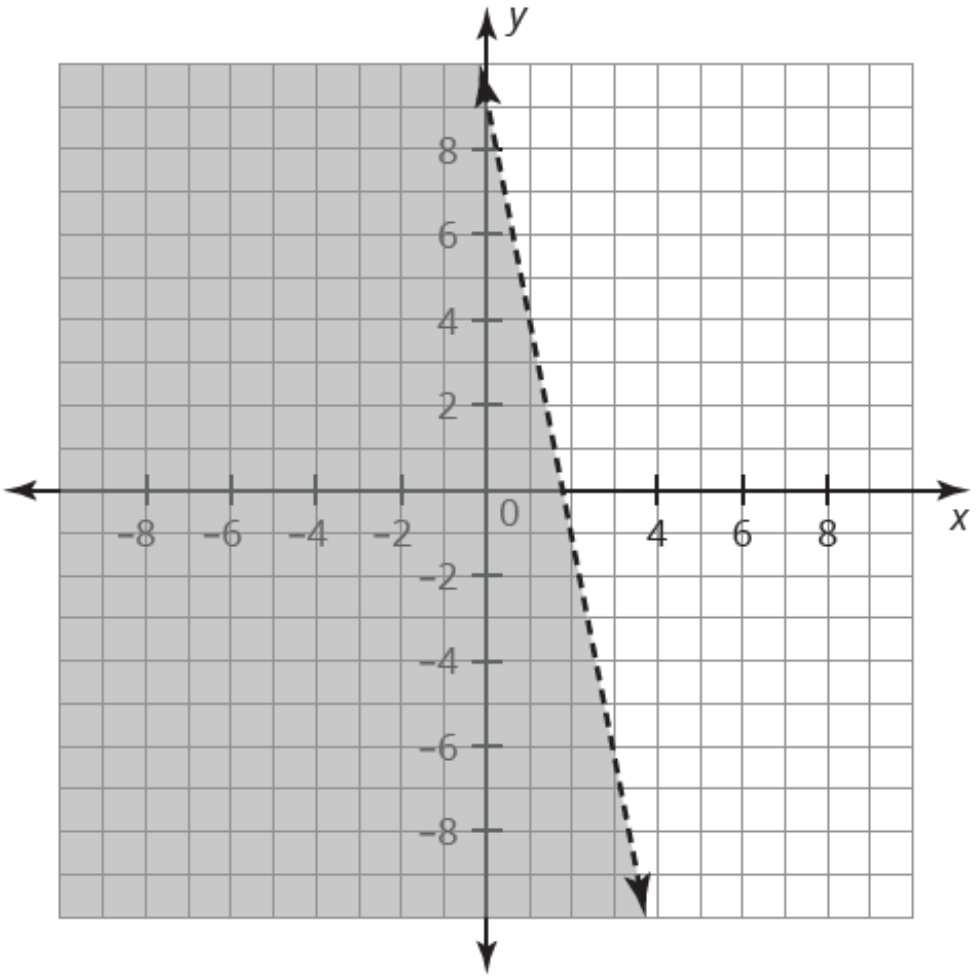
Ⓐ (6, 0)

Ⓑ (0, 6)

Ⓒ (3, 6)

Ⓓ (−2, 8)

4 Which inequality is represented by the graph?



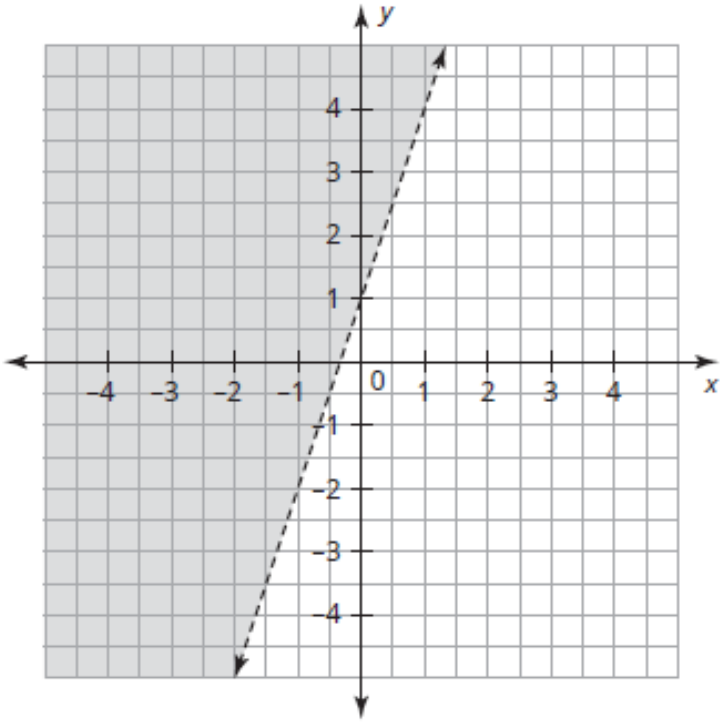
Ⓐ $y \leq -5x + 9$

Ⓑ $y \geq -5x + 9$

Ⓒ $y < -5x + 9$

Ⓓ $y > -5x + 9$

5 Which inequality is represented by the graph?



(A) $y > 3x + 1$

(B) $y < 3x + 1$

(C) $y \geq 3x + 1$

(D) $y \leq 3x + 1$

6 Marli has \$1200 in her savings account. She wants at least y amount in her account at the end of the year. She withdraws \$150 each month. Which inequality represents this situation, where x is the number of months?

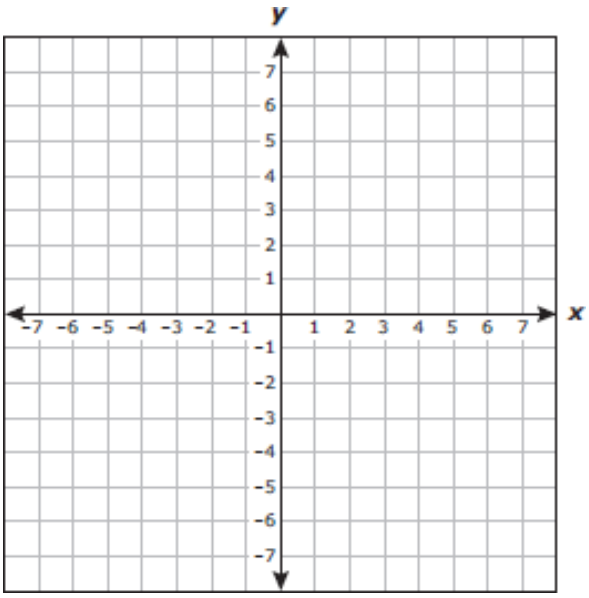
(A) $1200 + 150x \geq y$

(B) $1200 + 150x \leq y$

Ⓒ $1200 - 150x \geq y$

Ⓓ $1200 - 150x \leq y$

7 Which ordered pair is in the solution set of $8x + 16y > 32$?



Ⓐ (0, 2)

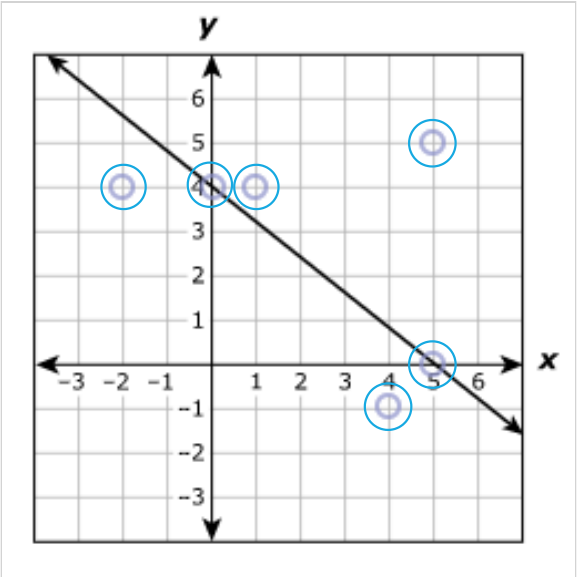
Ⓑ (−3, 5)

Ⓒ (−1, 1)

Ⓓ (4, 0)

8 The graph of **4x + 5y=20** is shown on the grid. Which points are in the solution set of **4x + 5y < 20**.

Select **TWO** correct answers.

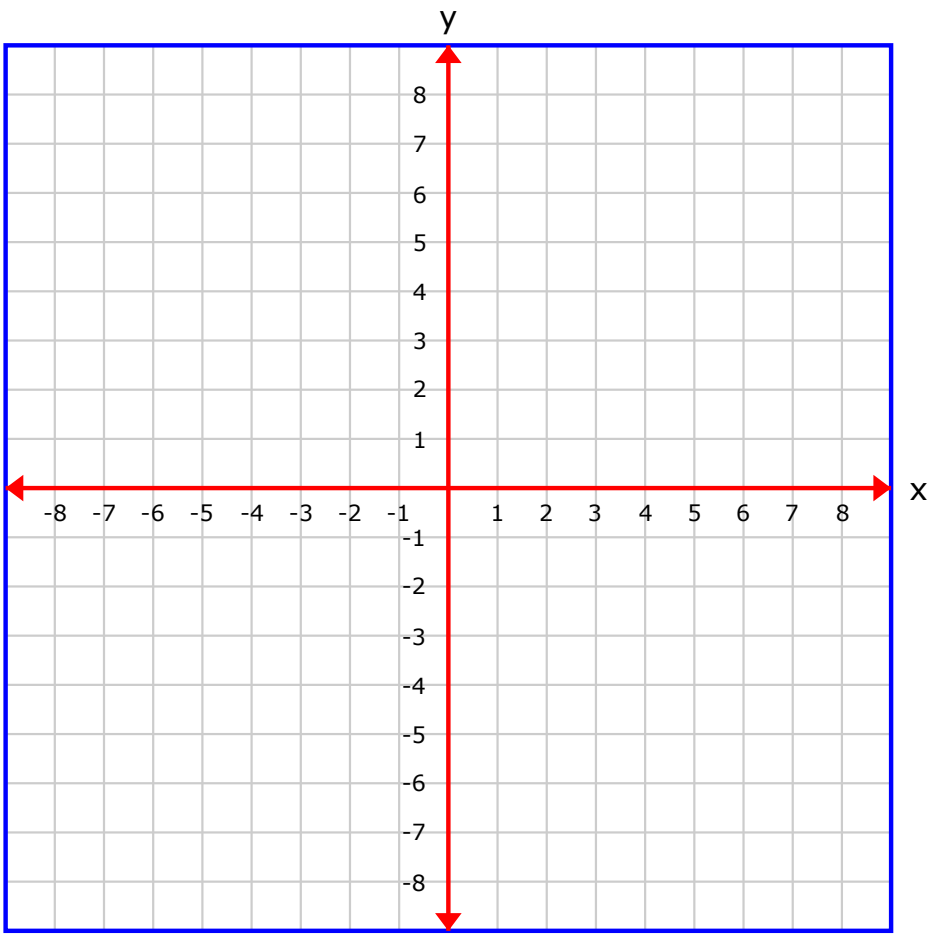


9

What is the solution set for $5x + 6y \leq 30$?

Graph the solution set of the linear inequality in the coordinate plane.

- First, select the Graph button to graph the line and choose the line style. To graph a line, select two points in the coordinate plane. A line will connect the points.
- Then select the Solution Set button to select the desired region.



Graph 1

solid

Solution Set