

Name:

Date:

Period:

Use different colored pencils to illustrate the solutions to each system of inequalities. Be sure to mark your solution set with an "S" and answer the additional questions, if applicable.

1. Solve the system of inequalities graphically:

$$y \leq \frac{1}{2}x$$

$$y \geq x - 3$$

m = _____ b = _____

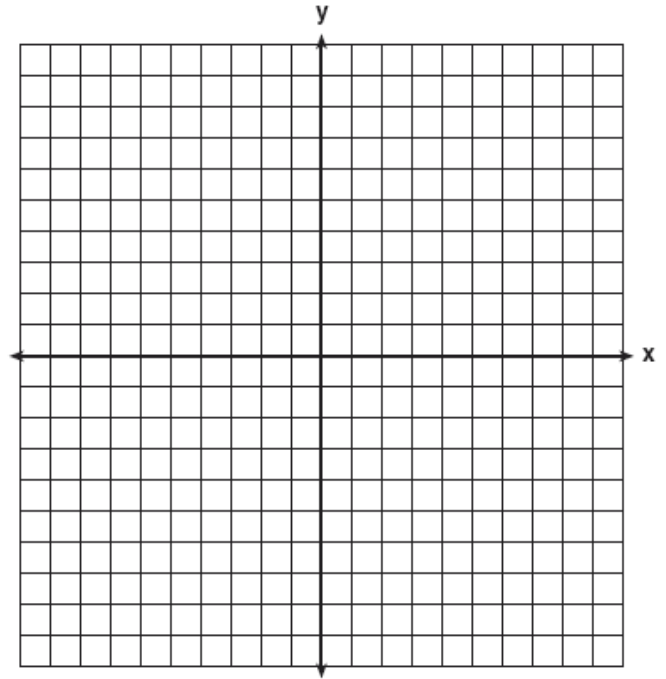
m = _____ b = _____

Solid or Dotted

Solid or Dotted

Above or Below

Above or Below



2. On the same set of coordinate axes, graph the following system of inequalities:

$$3y \geq 2x - 6$$

$$x + y > 7$$

m = _____ b = _____

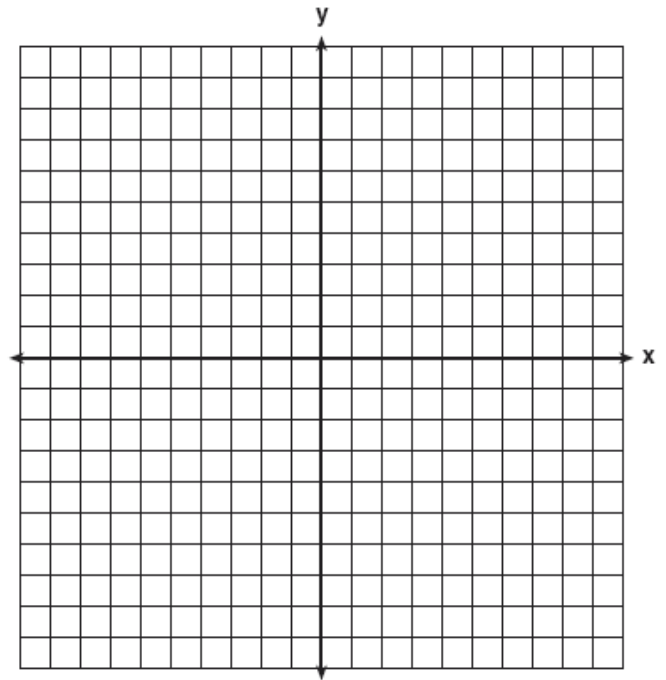
m = _____ b = _____

Solid or Dotted

Solid or Dotted

Above or Below

Above or Below



Based on the graph drawn in part a, write the coordinates of a point in the solution set of this system of inequalities.

3. Solve the system of inequalities graphically:

$$x < -3$$

$$y \leq 2$$

m = _____ b = _____

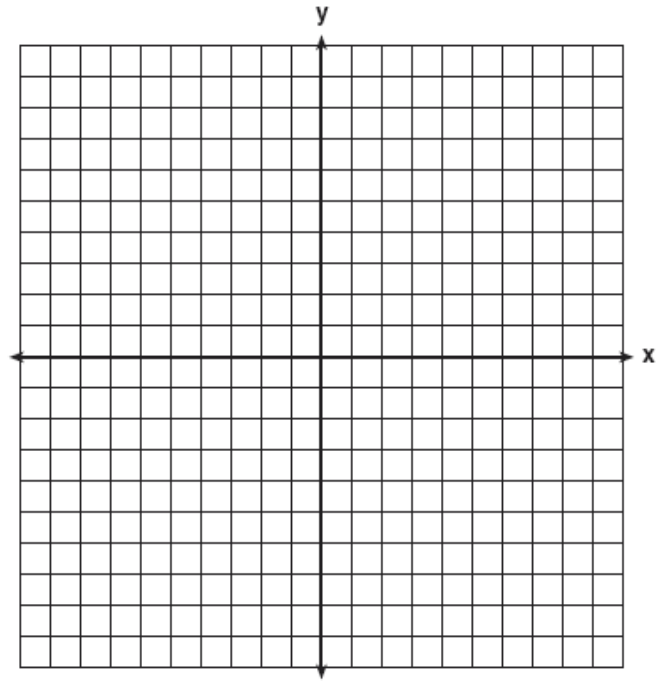
m = _____ b = _____

Solid or Dotted

Solid or Dotted

Above or Below

Above or Below



4. On the same set of coordinate axes, graph the following system of inequalities:

$$0 > 3x - 4 - y$$

$$x + 2y \leq 6$$

m = _____ b = _____

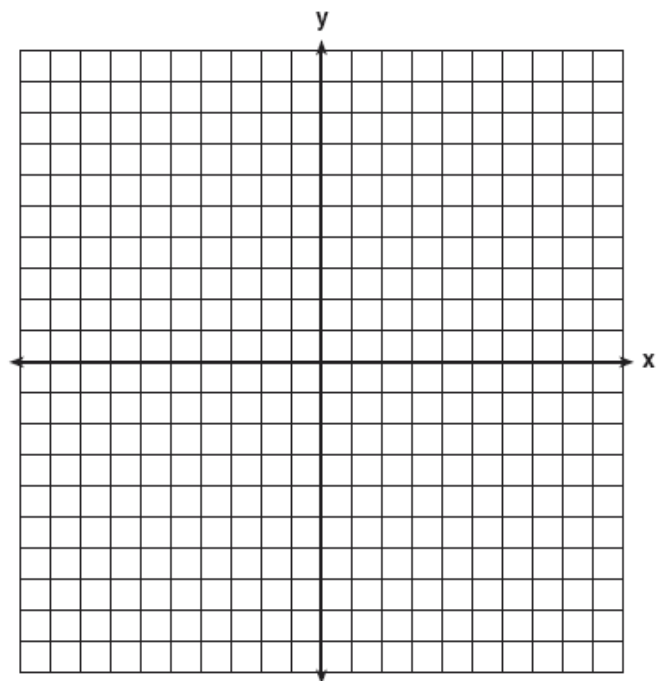
m = _____ b = _____

Solid or Dotted

Solid or Dotted

Above or Below

Above or Below



State the coordinates of a point that is NOT in the solution set of either inequality graphed in part a.

5. Determine if the given points are solutions to the system of inequalities. Justify your answer.

$$y + x < 7$$

$$y - 2x \geq 1$$

- a. $(-2, -1)$ b. $(1, 6)$ c. $(3, 1)$