Graphing Linear Inequalities

Steps for Graphing Inequalities
1. Solve for _____ or put into _____ form.
2. Determine solid (_____) or dashed (_____) line
3. Determine whether to shade above or shade below the line (Test Points)
4. If the test point is true, shade the half plane containing it.
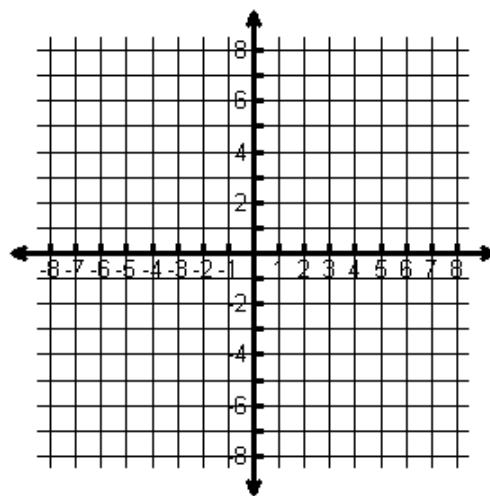5. If the test point is false, shade the half plane that does NOT contain the point.

Determine if the following are solutions to the inequality? $y \leq -3x + 7$

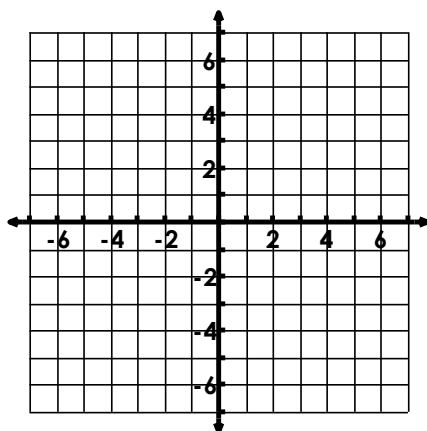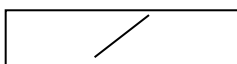A) (-2,1)   B) (0,0)   C) (1,4)   D) (4,1)
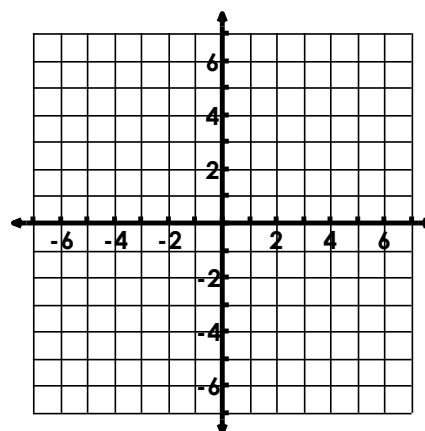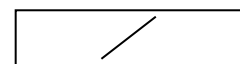
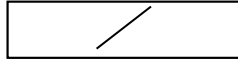1) $y \leq -2x + 7$
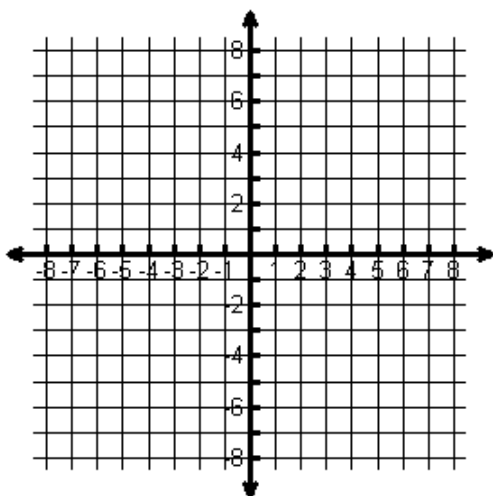
2) $x - 2y < 6$

3) $y \leq 2x + 1$
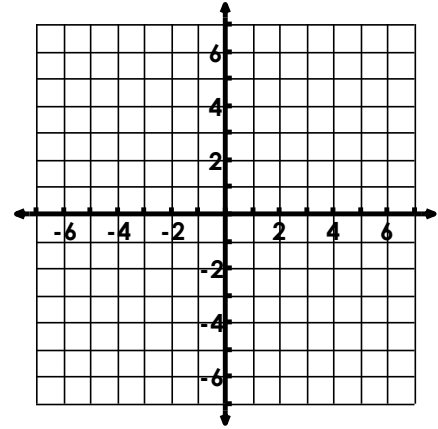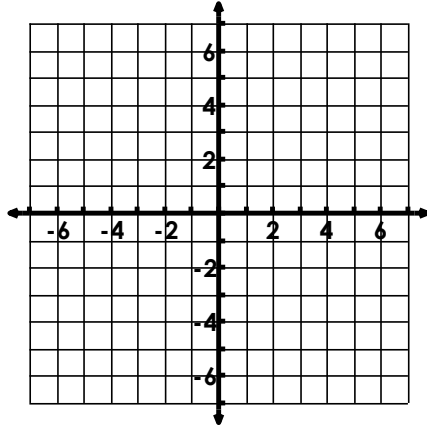$y > -2x + 5$

4) $y > 5x - 3$
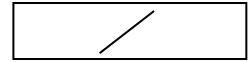$y \geq x + 1$

5) $x > 2$

$y > \dfrac{1}{2}x - 3$

6) $y \le 2x + 3$

$y > 2x - 1$

In Context

Josie is making baked goods for her cheer squad's bake sale. She is selling cookies for $1.50 and brownies for $3. She wants to make at least $45 from her baked goods, but only has enough batter to make 10 brownies.

A. Define your variables.

B. Write a system of inequalities that represents the scenario.

C. Graph the system. Be sure to label your axes.

D. Write two possible solutions using full sentences based on the graph.