

Lesson 5.6 • Graphing Inequalities in Two Variables

Name _____ Period _____ Date _____

1. Match each inequality with its graph.

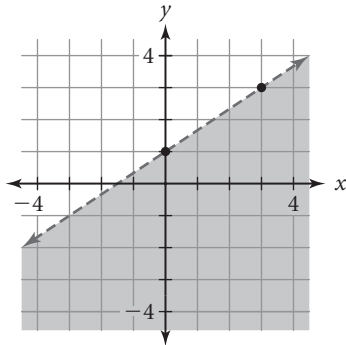
a. $y < \frac{2}{3}x + 1$

b. $y \geq -\frac{5}{2}x + \frac{1}{2}$

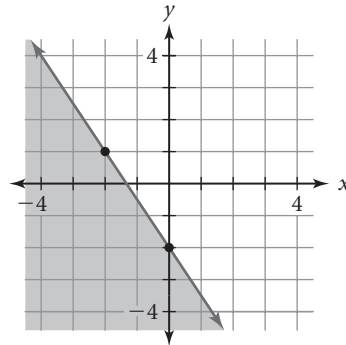
c. $y \leq -\frac{3}{2}x - 2$

d. $y < \frac{3}{4}x - \frac{9}{4}$

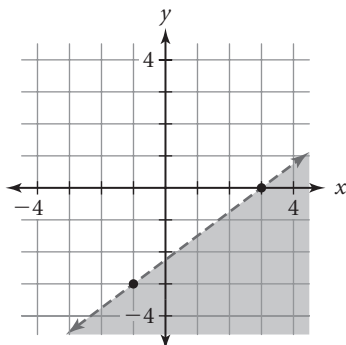
i.



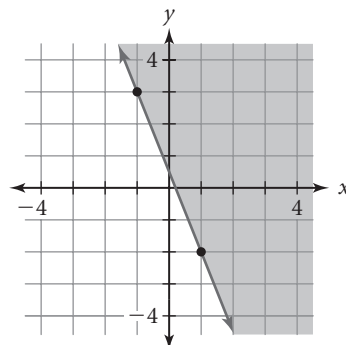
ii.



iii.



iv.



2. Solve each inequality for y .

a. $-2x + 3y > 9$

b. $1.5x - y \geq -4$

c. $-3x + 4y < 0$

3. Consider the inequality $y > 1.5x - 2$.

a. Graph the boundary line for the inequality on axes with scales from -6 to 6 .

b. Determine whether each given point satisfies the inequality. Plot each point on the graph you drew in 3a. Label the point T (true) if it is part of the solution region or F (false) if it is not part of the solution region.

i. $(0, 0)$

ii. $(2, 1)$

iii. $(-3, -1)$

iv. $(4, -4)$

v. $(1, 0.5)$

c. Use your results from 3b to shade the half-plane that represents the inequality.

4. Sketch each inequality.

a. $y \geq 3 - 2.5x$

b. $-4x - 3y > 12$