

Quiz for Lessons 6-5 Through 6-6

6-5 Solving Linear Inequalities

Tell whether the ordered pair is a solution of the inequality.

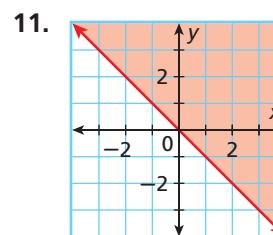
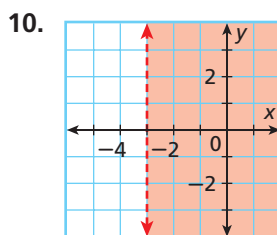
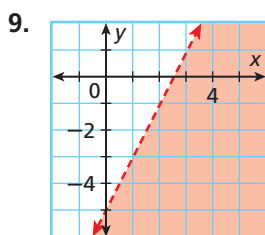
1. $(3, -2); y < -2x + 1$ 2. $(2, 1); y \geq 3x - 5$ 3. $(1, -6); y \leq 4x - 10$

Graph the solutions of each linear inequality.

4. $y \geq 4x - 3$ 5. $3x - y < 5$ 6. $2x + 3y < 9$ 7. $y \leq -\frac{1}{2}x$

8. Theo's mother has given him at most \$150 to buy clothes for school. The pants cost \$30 each and the shirts cost \$15 each. How many of each can he buy? Write a linear inequality to describe the situation. Graph the linear inequality and give three possible combinations of pants and shirts Theo could buy.

Write an inequality to represent each graph.



6-6 Solving Systems of Linear Inequalities

Tell whether the ordered pair is a solution of the given system.

12. $(-3, -1); \begin{cases} y > -2 \\ y < x + 4 \end{cases}$ 13. $(-3, 0); \begin{cases} y \leq x + 4 \\ y \geq -2x - 6 \end{cases}$ 14. $(0, 0); \begin{cases} y \geq 3x \\ 2x + y < -1 \end{cases}$

Graph each system of linear inequalities. Give two ordered pairs that are solutions and two that are not solutions.

15. $\begin{cases} y > -2 \\ y < x + 3 \end{cases}$ 16. $\begin{cases} x + y \leq 2 \\ 2x + y \geq -1 \end{cases}$ 17. $\begin{cases} 2x - 5y \leq -5 \\ 3x + 2y < 10 \end{cases}$

Graph each system of linear inequalities and describe the solutions.

18. $\begin{cases} y \geq x + 1 \\ y \geq x - 4 \end{cases}$ 19. $\begin{cases} y \geq 2x - 1 \\ y < 2x - 3 \end{cases}$ 20. $\begin{cases} y < -3x + 5 \\ y > -3x - 2 \end{cases}$

21. A grocer sells mangos for \$4/lb and apples for \$3/lb. The grocer starts with 45 lb of mangos and 50 lb of apples each day. The grocer's goal is to make at least \$300 by selling mangos and apples each day. Show and describe all possible combinations of mangos and apples that could be sold to meet the goal. List two possible combinations.