

Warm Up

March 7, 2018

1.) Vincent graphed a linear function. The function has a positive slope and a positive x -intercept. Which could be the function that Vincent graphed?

A.) $5x + 10y = 15$

B.) $5x - 10y = 15$

C.) $5x + 10y = -15$

D.) $5x - 10y = -15$

2.) Write the equation of the line passing between the points $(2, 3)$ and $(5, 9)$.

3.) Find the fifth term of the arithmetic sequence defined below:

$$a_n = a_{n-1} + 3.5; a_1 = 4.2$$

Quiz 5-2 Instructions

8 points
per question

- 1.) CUBES Annotation - 1 pt.
- 2.) Define variables - 1 pt.
- 3.) Create equations - 1 pt.
- 4.) Solve equations **correctly** - 4 pts.
- 5.) Clearly identify your solution - 1 pt.

Main Ideas/Questions

Notes/Examples

Systems of Linear Inequalities

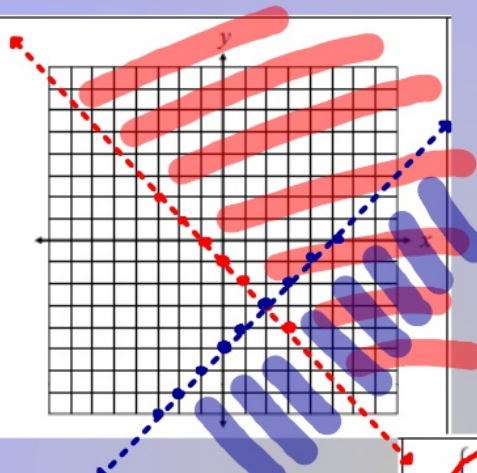
two or more linear inequalities with the same set of unknowns

SOLUTION
to a System of Linear Inequalities

all coordinate points in the overlapping shaded region

1. $y > -x - 1$
 $y < x - 5$

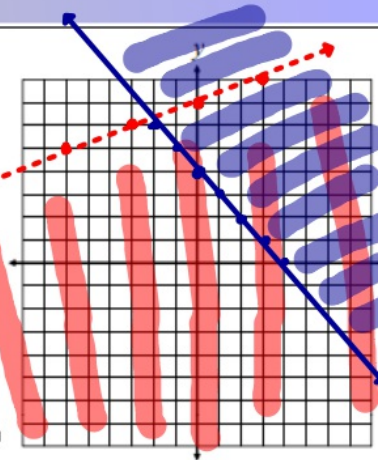
Quads
I and
IV

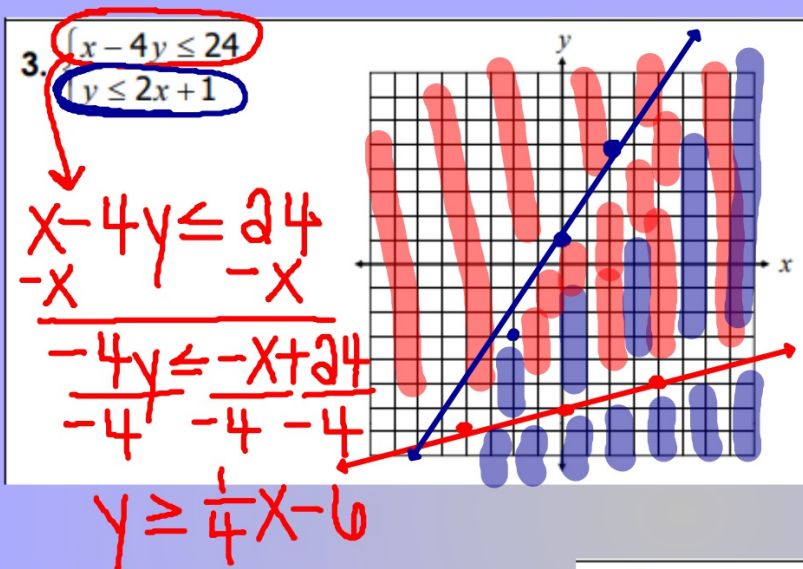


2. $y < \frac{1}{3}x + 7$
 $y \geq -x + 4$

Quads
I, II, + IV

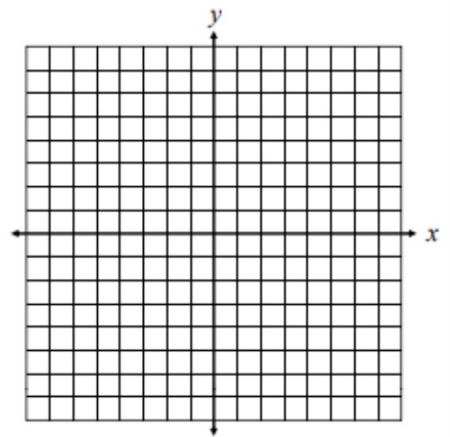
(4,3) (5,3)
(7,7)





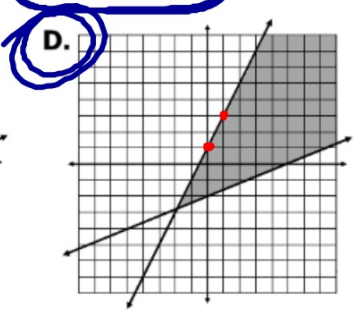
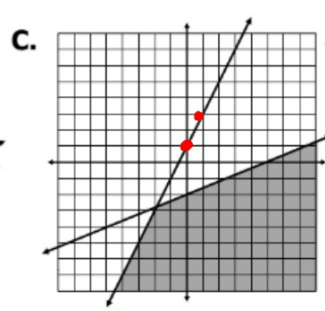
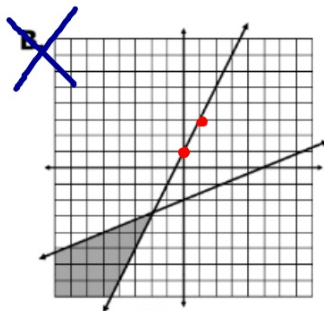
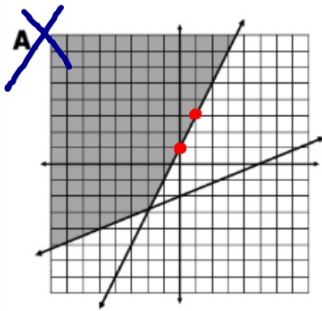
Quads
I, III, +IV

4. $\begin{cases} x < -4 \\ 3x + 2y \leq -2 \end{cases}$



16. Which graph represents the solution to the following system of inequalities?

$$\begin{cases} y \leq 2x + 1 \\ 2x - 5y \leq 10 \end{cases}$$



$$\begin{aligned} 2x - 5y &\leq 10 \\ -5y &\leq -2x + 10 \\ \frac{-5y}{-5} &\leq \frac{-2x + 10}{-5} \\ y &\geq \frac{2}{5}x - 2 \end{aligned}$$



