

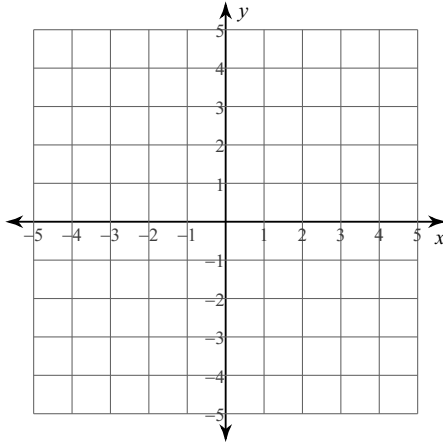
Systems of Equations and Inequalities Review

Date _____ Block _____

Solve each system by graphing. Show your answer both graphically and as an ordered pair.

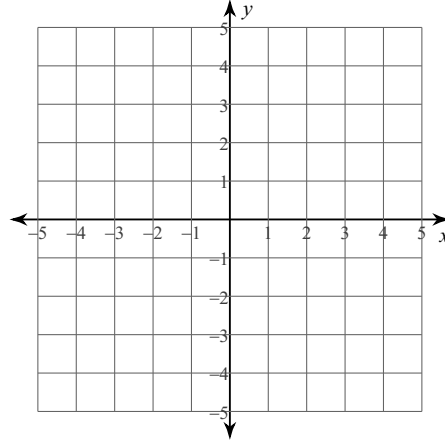
1) $y = x + 1$

$y = -\frac{2}{3}x - 4$



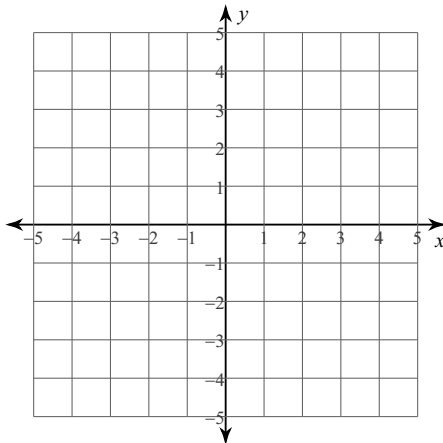
2) $y = -x - 4$

$y = x + 2$



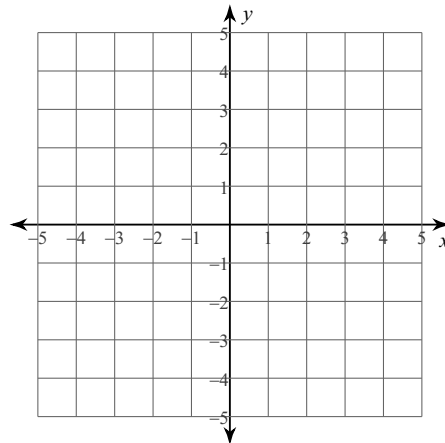
3) $x - y = 4$

$3x + y = 4$



4) $3x - 2y = 4$

$3x + 2y = 8$



Solve each system by substitution. Must show work. Show your answer as an ordered pair.

$$\begin{aligned} 5) \quad y &= -4x - 12 \\ y &= 4x + 12 \end{aligned}$$

$$\begin{aligned} 6) \quad y &= 2x - 12 \\ y &= -4x + 12 \end{aligned}$$

Solve each system by elimination, showing the solution as an ordered pair. MUST SHOW ALL WORK TO RECEIVE CREDIT.

$$\begin{aligned} 7) \quad 10x - 10y &= -30 \\ -7x + 10y &= 27 \end{aligned}$$

$$\begin{aligned} 8) \quad 8x + 7y &= -22 \\ 8x + 2y &= -12 \end{aligned}$$

$$\begin{aligned} 9) \quad -12x - 3y &= 12 \\ -4x - 2y &= 12 \end{aligned}$$

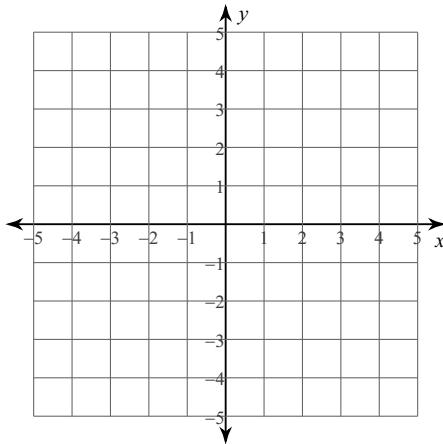
$$\begin{aligned} 10) \quad 4x - 7y &= -16 \\ 6x + 2y &= -24 \end{aligned}$$

11) The school that Darryl goes to is selling tickets to a choral performance. On the first day of ticket sales the school sold 9 adult tickets and 6 student tickets for a total of \$165. The school took in \$105 on the second day by selling 3 adult tickets and 12 student tickets. What is the price each of one adult ticket and one student ticket?

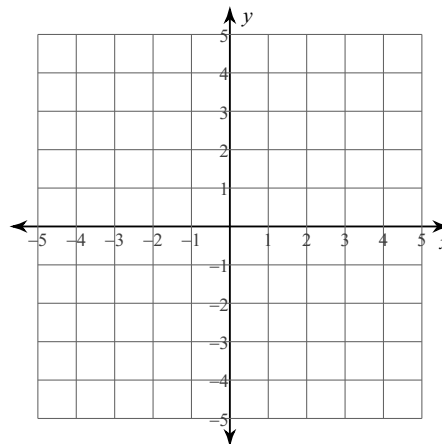
12) Heather and Amanda each improved their yards by planting rose bushes and geraniums. They bought their supplies from the same store. Heather spent \$50 on 2 rose bushes and 3 geraniums. Amanda spent \$186 on 6 rose bushes and 12 geraniums. What is the cost of one rose bush and the cost of one geranium?

Sketch the solution to each system of inequalities. Show all work!

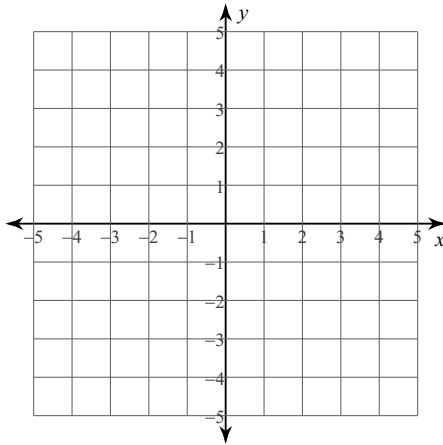
13) $y > -x + 1$
 $y \leq \frac{1}{3}x - 3$



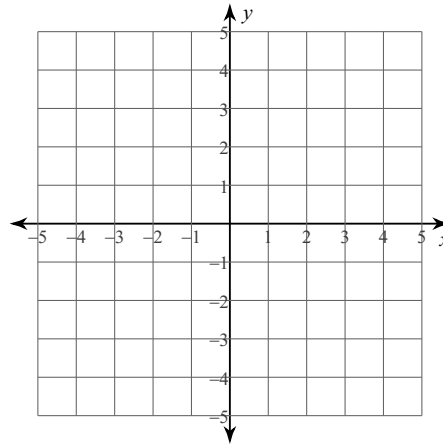
14) $y \geq \frac{4}{3}x + 2$
 $y < \frac{1}{3}x - 1$



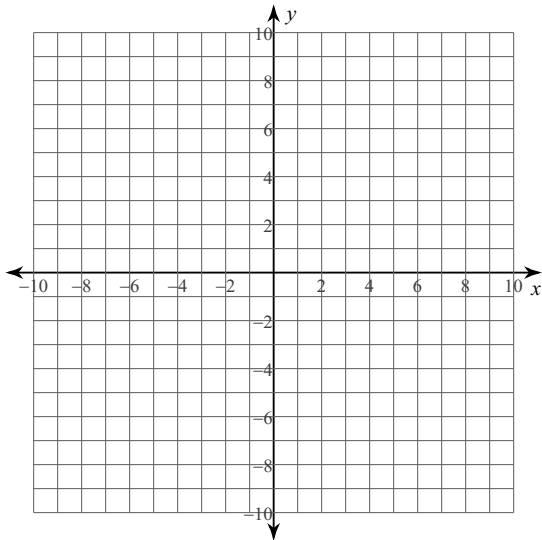
$$15) \begin{aligned} 2x - 3y &\geq 3 \\ x + 3y &> 6 \end{aligned}$$



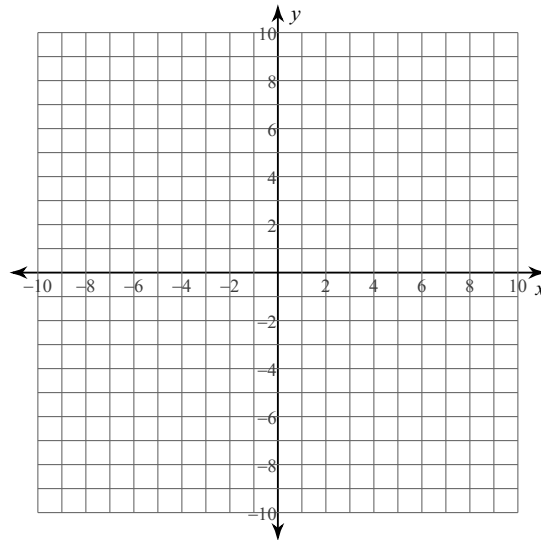
$$16) \begin{aligned} x + y &\geq -3 \\ 3x - y &> -1 \end{aligned}$$



$$17) \begin{aligned} 7x + 4y &> 4 \\ x + 2y &> 12 \end{aligned}$$



$$18) \begin{aligned} 13x - y &> 8 \\ 2x + y &< 7 \end{aligned}$$

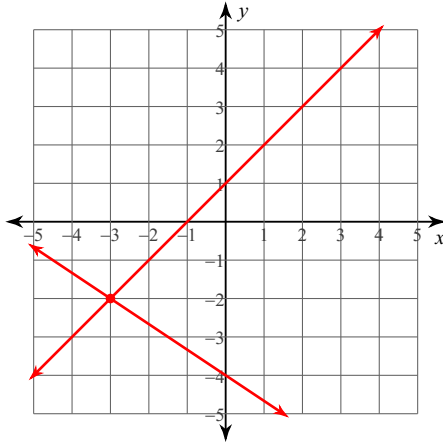


Systems of Equations and Inequalities Review

Solve each system by graphing. Show your answer both graphically and as an ordered pair.

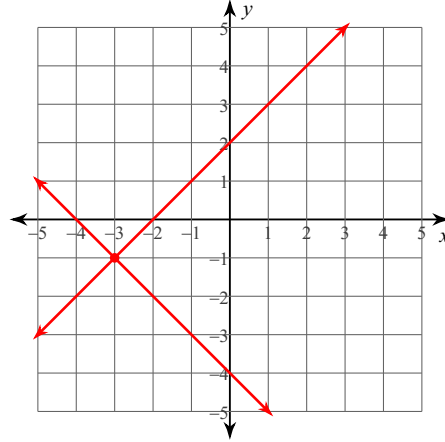
1) $y = x + 1$

$y = -\frac{2}{3}x - 4$

 $(-3, -2)$

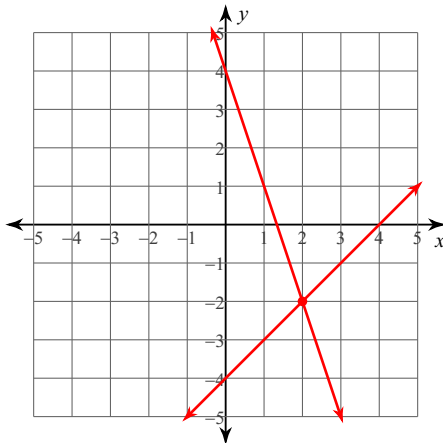
2) $y = -x - 4$

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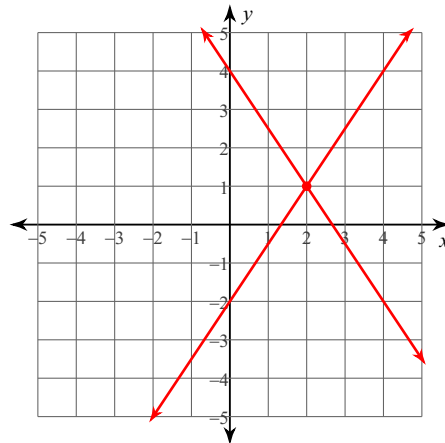
3) $x - y = 4$

$3x + y = 4$

 $(2, -2)$

4) $3x - 2y = 4$

$3x + 2y = 8$

 $(2, 1)$

Solve each system by substitution. Must show work. Show your answer as an ordered pair.

$$\begin{aligned} 5) \quad y &= -4x - 12 \\ y &= 4x + 12 \\ & \quad (-3, 0) \end{aligned}$$

$$\begin{aligned} 6) \quad y &= 2x - 12 \\ y &= -4x + 12 \\ & \quad (4, -4) \end{aligned}$$

Solve each system by elimination, showing the solution as an ordered pair. MUST SHOW ALL WORK TO RECEIVE CREDIT.

$$\begin{aligned} 7) \quad 10x - 10y &= -30 \\ -7x + 10y &= 27 \\ & \quad (-1, 2) \end{aligned}$$

$$\begin{aligned} 8) \quad 8x + 7y &= -22 \\ 8x + 2y &= -12 \\ & \quad (-1, -2) \end{aligned}$$

$$\begin{aligned} 9) \quad -12x - 3y &= 12 \\ -4x - 2y &= 12 \\ & \quad (1, -8) \end{aligned}$$

$$\begin{aligned} 10) \quad 4x - 7y &= -16 \\ 6x + 2y &= -24 \\ & \quad (-4, 0) \end{aligned}$$

- 11) The school that Darryl goes to is selling tickets to a choral performance. On the first day of ticket sales the school sold 9 adult tickets and 6 student tickets for a total of \$165. The school took in \$105 on the second day by selling 3 adult tickets and 12 student tickets. What is the price each of one adult ticket and one student ticket?

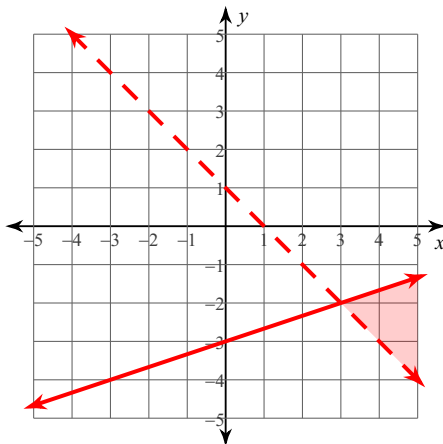
adult ticket: \$15, student ticket: \$5

- 12) Heather and Amanda each improved their yards by planting rose bushes and geraniums. They bought their supplies from the same store. Heather spent \$50 on 2 rose bushes and 3 geraniums. Amanda spent \$186 on 6 rose bushes and 12 geraniums. What is the cost of one rose bush and the cost of one geranium?

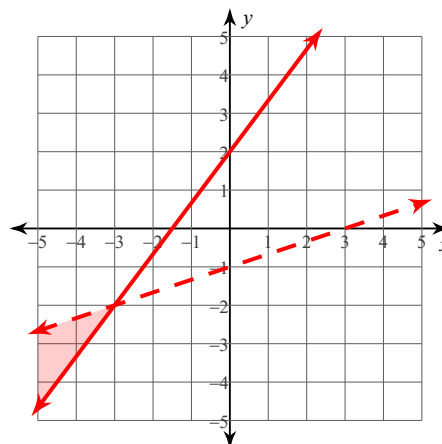
rose bush: \$7, geranium: \$12

Sketch the solution to each system of inequalities. Show all work!

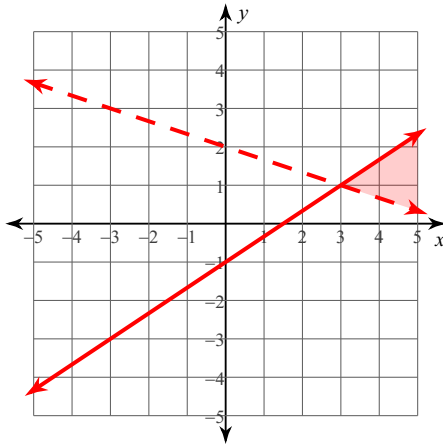
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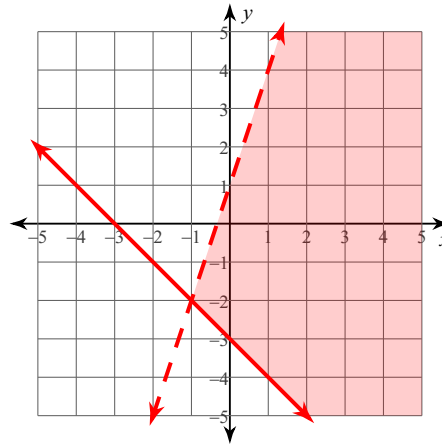
14) $y \geq \frac{4}{3}x + 2$
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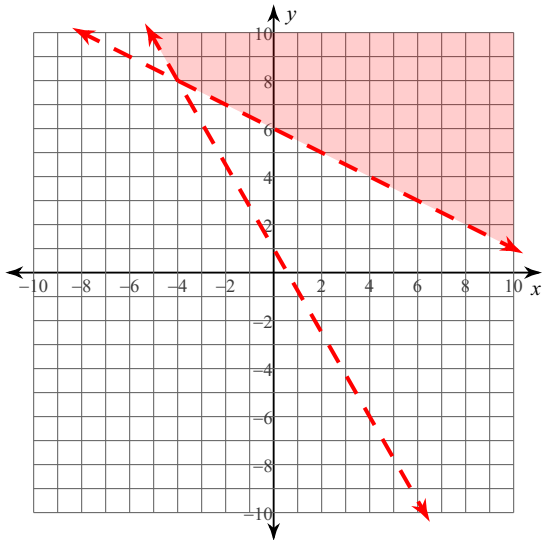
15) $2x - 3y \geq 3$
 $x + 3y > 6$



16) $x + y \geq -3$
 $3x - y > -1$



17) $7x + 4y > 4$
 $x + 2y > 12$



18) $13x - y > 8$
 $2x + y < 7$

