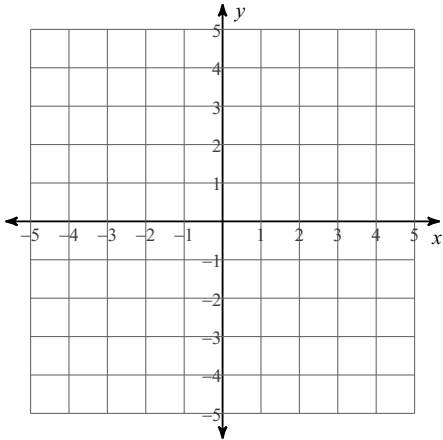


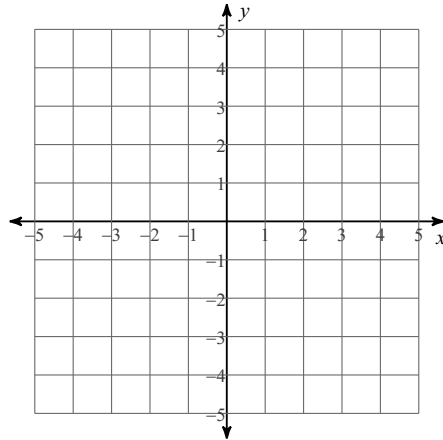
Systems of Equations - Mixed Review

Solve each system by graphing.

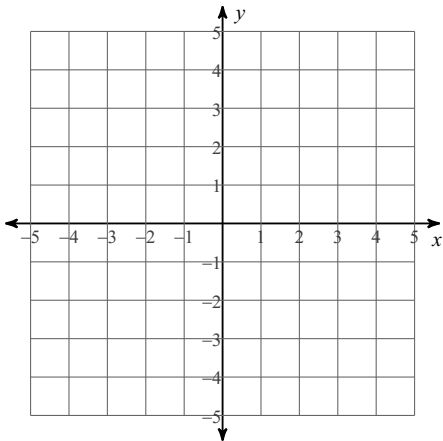
1) $y = -2x - 1$
 $y = 3x + 4$



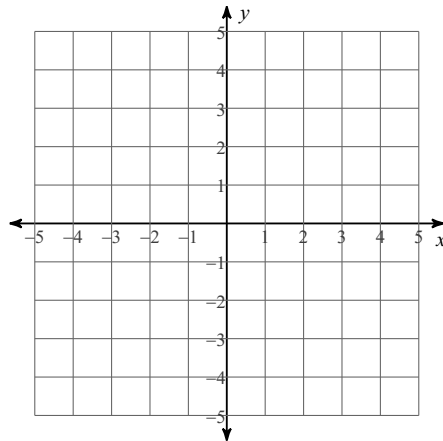
2) $y = 4x - 3$
 $y = 4x - 2$



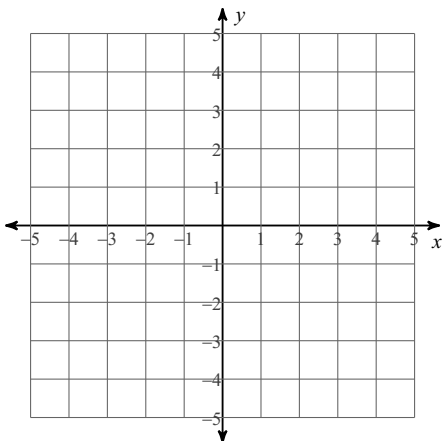
3) $x + y = -2$
 $5x - y = -4$



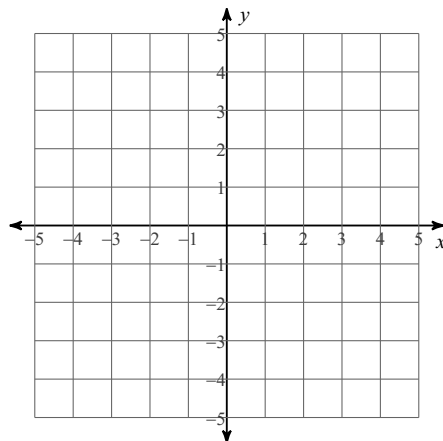
4) $x - y = 4$
 $4x + y = 1$



5) $y \leq -x - 2$
 $y \leq -6x + 3$



6) $x + 3y \geq -6$
 $4x - 3y > -9$



Solve each system by substitution. *Show your work on a separate sheet.

$$\begin{aligned} 7) \quad & y = 7x + 15 \\ & y = -2x + 6 \end{aligned}$$

$$\begin{aligned} 8) \quad & y = 4x + 7 \\ & y = -4x - 1 \end{aligned}$$

$$\begin{aligned} 9) \quad & -2x + 4y = -10 \\ & y = -6x - 9 \end{aligned}$$

$$\begin{aligned} 10) \quad & 4x - y = -5 \\ & y = 4x + 5 \end{aligned}$$

$$\begin{aligned} 11) \quad & x - 4y = -16 \\ & 3x + 8y = -8 \end{aligned}$$

$$\begin{aligned} 12) \quad & -2x + 4y = -10 \\ & -2x + y = 2 \end{aligned}$$

Solve each system by elimination. *Show your work on a separate sheet.

$$\begin{aligned} 13) \quad & 9x + 9y = 11 \\ & -9x - 9y = -9 \end{aligned}$$

$$\begin{aligned} 14) \quad & -9x - 9y = 0 \\ & 6x + 9y = -6 \end{aligned}$$

$$\begin{aligned} 15) \quad & -3x + y = 0 \\ & -8x + y = 10 \end{aligned}$$

$$\begin{aligned} 16) \quad & 4x + 2y = -22 \\ & 4x + 10y = -30 \end{aligned}$$

$$\begin{aligned} 17) \quad & -4x - 10y = -30 \\ & x + y = 6 \end{aligned}$$

$$\begin{aligned} 18) \quad & 2x + 2y = -6 \\ & -6x + 3y = 9 \end{aligned}$$

$$\begin{aligned} 19) \quad & 2x - 3y = 12 \\ & -3x + 4y = -16 \end{aligned}$$

$$\begin{aligned} 20) \quad & 4x + 5y = -1 \\ & 7x + 4y = -16 \end{aligned}$$

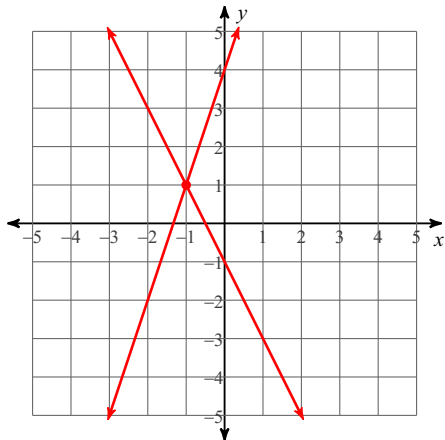
21) Norachai's school is selling tickets to a choral performance. On the first day of ticket sales the school sold 11 senior citizen tickets and 9 child tickets for a total of \$242. The school took in \$264 on the second day by selling 11 senior citizen tickets and 11 child tickets. What is the price each of one senior citizen ticket and one child ticket?

22) Scott's school is selling tickets to the annual talent show. On the first day of ticket sales the school sold 12 senior citizen tickets and 14 child tickets for a total of \$270. The school took in \$195 on the second day by selling 11 senior citizen tickets and 7 child tickets. Find the price of a senior citizen ticket and the price of a child ticket.

Systems of Equations - Mixed Review

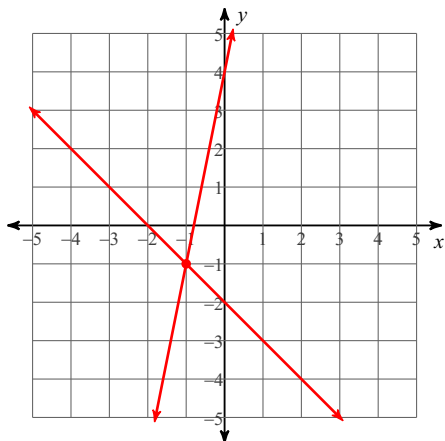
Solve each system by graphing.

1) $y = -2x - 1$
 $y = 3x + 4$



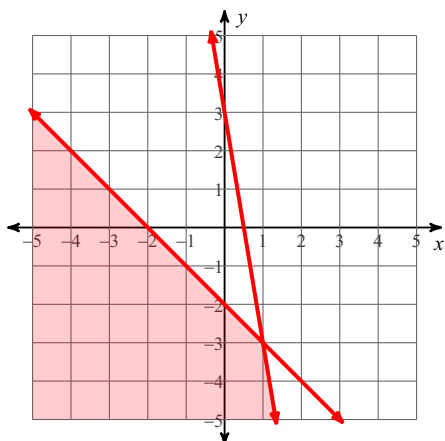
$(-1, 1)$

3) $x + y = -2$
 $5x - y = -4$

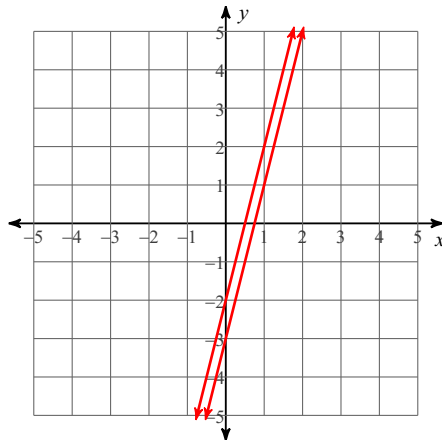


$(-1, -1)$

5) $y \leq -x - 2$
 $y \leq -6x + 3$

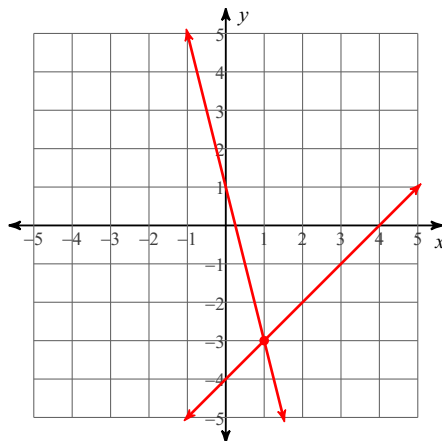


2) $y = 4x - 3$
 $y = 4x - 2$



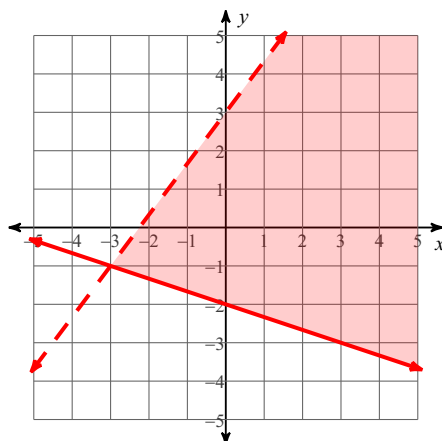
No solution

4) $x - y = 4$
 $4x + y = 1$



$(1, -3)$

6) $x + 3y \geq -6$
 $4x - 3y > -9$



Solve each system by substitution. *Show your work on a separate sheet.

$$\begin{aligned} 7) \quad & y = 7x + 15 \\ & y = -2x + 6 \\ & (-1, 8) \end{aligned}$$

$$\begin{aligned} 8) \quad & y = 4x + 7 \\ & y = -4x - 1 \\ & (-1, 3) \end{aligned}$$

$$\begin{aligned} 9) \quad & -2x + 4y = -10 \\ & y = -6x - 9 \\ & (-1, -3) \end{aligned}$$

$$\begin{aligned} 10) \quad & 4x - y = -5 \\ & y = 4x + 5 \\ & \text{Infinite number of solutions} \end{aligned}$$

$$\begin{aligned} 11) \quad & x - 4y = -16 \\ & 3x + 8y = -8 \\ & (-8, 2) \end{aligned}$$

$$\begin{aligned} 12) \quad & -2x + 4y = -10 \\ & -2x + y = 2 \\ & (-3, -4) \end{aligned}$$

Solve each system by elimination. *Show your work on a separate sheet.

$$\begin{aligned} 13) \quad & 9x + 9y = 11 \\ & -9x - 9y = -9 \end{aligned}$$

No solution

$$\begin{aligned} 14) \quad & -9x - 9y = 0 \\ & 6x + 9y = -6 \end{aligned}$$

(2, -2)

$$\begin{aligned} 15) \quad & -3x + y = 0 \\ & -8x + y = 10 \end{aligned}$$

(-2, -6)

$$\begin{aligned} 16) \quad & 4x + 2y = -22 \\ & 4x + 10y = -30 \end{aligned}$$

(-5, -1)

$$\begin{aligned} 17) \quad & -4x - 10y = -30 \\ & x + y = 6 \end{aligned}$$

(5, 1)

$$\begin{aligned} 18) \quad & 2x + 2y = -6 \\ & -6x + 3y = 9 \end{aligned}$$

(-2, -1)

$$\begin{aligned} 19) \quad & 2x - 3y = 12 \\ & -3x + 4y = -16 \end{aligned}$$

$$(0, -4)$$

$$\begin{aligned} 20) \quad & 4x + 5y = -1 \\ & 7x + 4y = -16 \end{aligned}$$

$$(-4, 3)$$

- 21) Norachai's school is selling tickets to a choral performance. On the first day of ticket sales the school sold 11 senior citizen tickets and 9 child tickets for a total of \$242. The school took in \$264 on the second day by selling 11 senior citizen tickets and 11 child tickets. What is the price each of one senior citizen ticket and one child ticket?

senior citizen ticket: \$13, child ticket: \$11

- 22) Scott's school is selling tickets to the annual talent show. On the first day of ticket sales the school sold 12 senior citizen tickets and 14 child tickets for a total of \$270. The school took in \$195 on the second day by selling 11 senior citizen tickets and 7 child tickets. Find the price of a senior citizen ticket and the price of a child ticket.

senior citizen ticket: \$12, child ticket: \$9