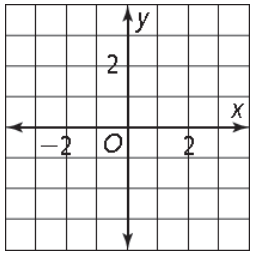
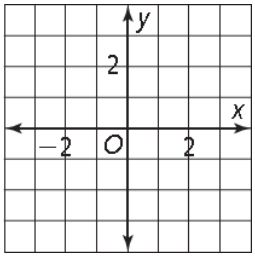
## 4-1 Solving Systems of Equations by Graphing

**Use a graph to solve each system of equations. List the solution.**

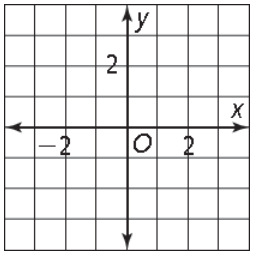
**1.** $\begin{cases} y = -2x - 1 \\ y = -4x - 7 \end{cases}$




**2.** $\begin{cases} 18x - 3y = 21 \\ y = 6x - 7 \end{cases}$




**3.** $\begin{cases} y = 6x + 4 \\ 6x - y = 1 \end{cases}$




## 4-2 Solving Systems of Equations by Substitution

**Use substitution to solve each system of equations.**

**4.** $\begin{cases} y = -x + 4 \\ y = 3x \end{cases}$

**5.** $\begin{cases} y = 2x - 10 \\ 2y = x - 8 \end{cases}$

**6.** $\begin{cases} x = 2y - 6 \\ y = 3x - 7 \end{cases}$

**7.** $\begin{cases} 6x - 4y = 18 \\ -x - 6y = 7 \end{cases}$

**8.** $\begin{cases} y = 4x + 5 \\ 12x - 3y = 9 \end{cases}$

**9.** A community theater sold a total of 400 full-price tickets for adults and children. The price was \$8.00 per adult ticket and\$5.00 per children's ticket. If the total revenue was \$2,750, how many adult tickets and how many children's tickets were sold?

## 4-3 Solving Systems of Equations by Elimination

**Use elimination to solve each system of equations.**

**10.** $\begin{cases} x + y = 7 \\ x - y = -3 \end{cases}$

**11.** $\begin{cases} x - 2y = 10 \\ 3x + y = -12 \end{cases}$

**12.** $\begin{cases} 6x + 2y = -12 \\ 4x + 3y = 7 \end{cases}$

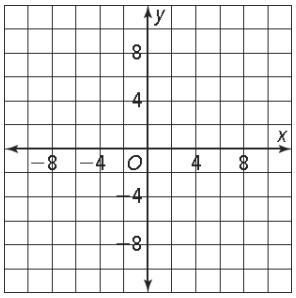
**13.** $\begin{cases} 4x - 6y = 26 \\ 5x - 4y = 8 \end{cases}$

**14.** The cost of 2 bottles of water and 4 apples is \$5.50. The cost of 3 bottles of water and 5 apples is \$7.50. Find the cost of one apple and the cost of one bottle of water.

## 4-5 Systems of Linear Inequalities

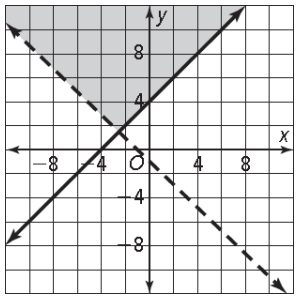
**Graph each system of inequalities. Shade the solution of each system.**

**15.** $\begin{cases} y \leq 2x - 1 \\ y > -x + 3 \end{cases}$




**The solution of what system of inequalities is shown by each graph?**

**16.**




**17.**