# T3-12 Review for Systems Test

**Solve each system of equations using the Elimination Method.**

**1)** $\begin{cases} x - 10y = 60 \\ x + 14y = 12 \end{cases}$

2) $\begin{cases} -5x + 7y = 11 \\ -5x + 3y = 19 \end{cases}$
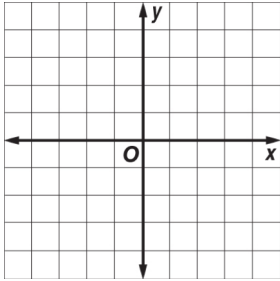
3) $\begin{cases} 2x + 3y = 12 \\ 5x - y = 13 \end{cases}$

4) $\begin{cases} -3x + 4y = 12 \\ 2x + y = -8 \end{cases}$

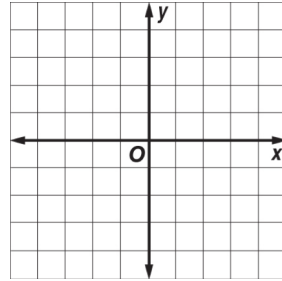5) $\begin{cases} 2x + 4y = -4 \\ 3x + 5y = -3 \end{cases}$

6) $\begin{cases} 5x + 2y = -1 \\ 3x + 7y = 11 \end{cases}$
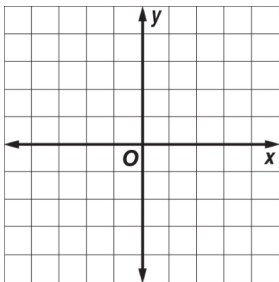
**Solve each system of equations by graphing.**
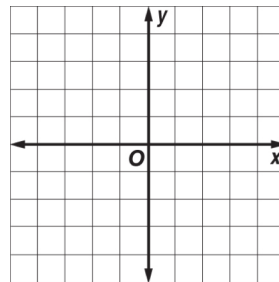
**7.** $y = x + 4$
   $y = -2x - 2$

**8.** $5x - y = 1$
   $y = 5x + 10$

**9.** $y = x - 1$
   $y - x = -1$

**10.** $6x - y = 3$
   $y = -3$

11) A movie theater sells tickets for $9.00 each. Senior citizens receive a discount of $3.00. One evening the movie theater sold 636 tickets and took in $4974 in revenue. How many tickets were sold to senior citizens? How many were sold to "moviegoers" who were not senior citizens?

12) How many ounces of 20% hydrochloric acid solution and 70% hydrochloric acid solution should be mixed to obtain 20 ounces of 50% hydrochloric acid solution?

13) George has a coin collection made entirely of dimes and quarters. George has a total of 35 coins totaling $6.05. How many dimes and quarters does George have?

14) A candy maker wants to mix peanuts and cashews to sell for a yummy treat. He normally sells peanuts at $2.20 per pound and sells the cashews at $5.40 per pound. He wants to make 120 lbs of this mixed-nut blend that he wants to sell for $3 per pound. What amount of each type of nut should be used?