

## Solving Systems

Solve each system by substitution.

1)  $y = 4x - 14$   
 $-6x + 3y = -12$

2)  $y = 3$   
 $3x + 4y = -6$

3)  $-3x + y = -14$   
 $-4x + 6y = -14$

4)  $x + 4y = 20$   
 $-4x - 4y = 4$

5)  $4x - 4y = 0$   
 $x + 6y = 7$

6)  $y = 8x + 6$   
 $y = -8x + 6$

Solve each system by elimination.

7)  $-8x - 6y = 18$   
 $6x + 6y = -12$

8)  $x + 2y = -5$   
 $-x - 6y = 9$

$$\begin{aligned} 9) \quad & -9x + y = -23 \\ & -9x - 8y = 22 \end{aligned}$$

$$\begin{aligned} 10) \quad & 3x + 3y = 15 \\ & 3x + y = 25 \end{aligned}$$

$$\begin{aligned} 11) \quad & x + 2y = -25 \\ & -x - 2y = 22 \end{aligned}$$

$$\begin{aligned} 12) \quad & -2x - 6y = -12 \\ & -5x - 12y = -21 \end{aligned}$$

$$\begin{aligned} 13) \quad & -5x - 3y = 16 \\ & 2x + 2y = 0 \end{aligned}$$

$$\begin{aligned} 14) \quad & 8x - 10y = 28 \\ & -4x + 5y = -14 \end{aligned}$$

- 15) Carlos and Beth are selling pies for a school fundraiser. Customers can buy blueberry pies and lemon meringue pies. Carlos sold 3 blueberry pies and 1 lemon meringue pie for a total of \$32. Beth sold 7 blueberry pies and 1 lemon meringue pie for a total of \$48. Find the cost each of one blueberry pie and one lemon meringue pie.
- 16) Jimmy'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 1 child ticket for a total of \$98. The school took in \$112 on the second day by selling 6 senior citizen tickets and 5 child tickets. What is the price each of one senior citizen ticket and one child ticket?