

## Solving Systems of Equations by Substitution

Name \_\_\_\_\_ Date \_\_\_\_\_

### Steps

1. One equation will have either  $x$  or  $y$  by itself, or can be solved easily for  $x$  or  $y$ .
2. Substitute the expression from Step 1 into the other equation and solve for the other variable.
3. Substitute the value from Step 2 into the equation from Step 1 and solve.
4. Your solution is the ordered pair formed by  $x$  and  $y$ .
5. Check the solution in each of the original equations.

Solve the following systems of equations by using the substitution method.

1.  $x = -4$   
 $3x + 2y = 20$

2.  $y = x - 1$   
 $x + y = 3$

3.  $3x + 2y = -12$   
 $y = x - 1$

4.  $x = \frac{1}{2}y - 3$   
 $4x - y = 10$

5.  $x = -5y + 4$   
 $3x + 15y = -1$

6.  $2x - 5y = 29$   
 $x = -4y + 8$

7.  $x = 5y + 10$   
 $2x - 10y = 20$

8.  $2x - 3y = -24$   
 $x + 6y = 18$