Topic 3.2 Name: _____
Solving Systems of Equations Algebraically Date: _____
Homework

Solve each system of equations by using substitution.

1. $y = 3x + 4$
   $4x + 2y = 18$

2. $2x + 3y = 2$
   $x - 3y = -17$

3. $5x + 6y = 18$
   $12y - 4x = 8$

4. $3x - 4y = -27$
   $2x + y = -7$

5. $x = 4y - 10$
   $5x + 3y = -4$

6. $\frac{3}{4}x - y = 0$
   $\frac{y}{3} + \frac{x}{2} = 6$

Use elimination to solve the systems of equations.

7. $x - 2y = 4$
   $y = x - 2$

8. $x + 3y = 18$
   $-x + 2y = 7$

9. $4x - 3y = 22$
   $2x + 8y = 30$

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

11. $y = \frac{x}{2}$
    $2y = x + 4$

12. $\frac{2}{7}x - \frac{4}{3}y = 16$
    $\frac{4}{7}x + \frac{8}{3}y = -16$