Systems of Equations: Substitution Method

$x - 5y = 10$	$x - 5(2x + 7) = 10$
$-2x + y = 7 \Rightarrow y = 2x + 7$	$x - 10x - 35 = 10$
Solution $(-5, -3)$	$-9x - 35 = 10$
	$-9x = 45$
	$x = -5$

1. $y = 5 - 4x$
   $3x - 2y = 12$

2. $3x + 2y = 8$
   $x = 3y + 10$

3. $3x - 4y = -15$
   $5x + y = -2$

4. $x + y = 2$
   $3x + 2y = 5$

5. $x = 3 - 3y$
   $4y = x + 11$

6. $x - y = -15$
   $x + y = -5$

7. $2x + y = -6$
   $3x + y = -10$

8. $y = -x + 6$
   $x - 2y = -6$

9. $2y - x = 6$
   $3y - x = 4$

10. $5x - 6y = 16$
    $5x + y = 2$

11. $y = 3x$
    $x + y = 8$

12. $x - 3y = -5$
    $2x + y = 11$

13. $-x + y = 5$
    $y = -3x + 1$

14. $2x = 3y$
    $x = 3y - 3$

Systems of Equations: Elimination Method

Application:

Bob purchased 4 shirts and 6 pairs of pants for $172. Chris bought 8 shirts and 7 pairs of pants for $234. How much did each shirt and each pair of pants cost?

1. $2x + y = -6$
   $3x + y = -10$

2. $8x - y = 20$
   $-5x + y = -8$

3. $2x + y = 0$
   $2x - 3y = -8$

4. $5x + 3y = 10$
   $2x - 3y = 4$

5. $9x - 3y = 9$
   $x + 3y = 11$

6. $x + 3y = 9$
   $x - 2y = -6$

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

8. $7y + 15 = 3x$
   $15 = 3x + 2y$

9. $25x = 91 - 16y$
   $16y = 64 - 16x$

10. $4x - 2y = -2$
    $4x + 3y = -12$

11. $2x + y = -7$
    $y = 3x + 3$

12. $3x = -2y + 10$
    $x = 2y + 6$

13. $x + 4y = 2$
    $x - 2y = 8$

14. $x + 5y + 11 = 0$
    $3x - 5y - 7 = 0$