

**Worksheet 3.8L: Solving Systems by Substitution****Solve each system of equations algebraically. Check your solution.**

1.  $y = 5x$

$2x + 5y = 34$

2.  $x = 4y$

$2x + 3y = 44$

3.  $x = 4y + 5$

$x = 3y - 2$

4.  $y = 2x + 3$

$y = 4x - 1$

5.  $4x = 3y + 3$

$x = y - 1$

6.  $4x + 5y = 11$

$y = 3x - 13$

7.  $2x - y = -4$

$-3x + y = -9$

8.  $3x - 5y = 11$

$x - 3y = 1$

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9.  $2x + 3y = 1$

$-3x + y = 15$

10.  $x - 5y = 2$

$2x + y = 4$

11.  $5x - y = 5$

$-4x + 5y = 17$

12.  $3x - 2y = 12$

$x + 2y = 6$

13. Captain America downloaded 34 more songs than Iron Man downloaded. Together they downloaded 220 songs. How many songs did each download?
14. The seventh and eighth grade bands held a joint concert together. Together there were 188 band members. If the eighth grade band is three times as big as the seventh grade band, how big is each band?
15. Gaston cut a 9 foot board into two pieces. The long piece is twice as long as the short piece. How long are both pieces?