

Name : _____

Score : _____ Date : _____

Solving Systems of Linear Equations by Substitution

Solve the following systems by substitution.

1 $4x - 2y = 2$
 $3x + 4y = -8$

2 $5x - 6y = -14$
 $-2x + 4y = 12$

3 $y = 2x$
 $-6x + 3y = 16$

4 $2x + y = 1$
 $-x - 2y = -5$

5 $y = 5x - 7$
 $-3x - 2y = -12$

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

7 $y = 2x - 10$
 $y = 4x - 8$

8 $y = -5$
 $5x + 4y = -20$

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Answers

1 $4x - 2y = 2$
 $3x + 4y = -8$

$$x = -\frac{4}{11}, y = \frac{19}{11}$$

2 $5x - 6y = -14$
 $-2x + 4y = 12$

$$x = 2, y = 4$$

3 $y = 2x$
 $-6x + 3y = 16$

No solution

4 $2x + y = 1$
 $-x - 2y = -5$

$$x = -1, y = 3$$

5 $y = 5x - 7$
 $-3x - 2y = -12$

$$x = 2, y = 3$$

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

No solution

7 $y = 2x - 10$
 $y = 4x - 8$

$$x = -1, y = -12$$

8 $y = -5$
 $5x + 4y = -20$

$$x = 0, y = -5$$