Complete the worksheet:

Handout #2: "Solve each system by substitution"

Name : _____   Score : _____

Teacher : _____   Date : _____

Solving Systems of Equations by Substitution

1) $9x + 8y = 6$ $(-2, 3)$

$-7x = 14$

$\frac{-7}{-7} = \frac{14}{-7}$ $\frac{8y}{8} = \frac{-9x}{8} + \frac{6}{8}$

$x = -2$

$y = \frac{-9}{8}x + \frac{3}{4}$

2) $6x + 4y = 6$

$3x = -15$

$y = \frac{-9(-2)}{8} \cdot \frac{1}{1} + \frac{3}{4}$

$y = \frac{18}{8} + \frac{3}{4}$

3) $3x + 2y = -13$

$3x + 4y = 1$

$y = \frac{9}{4} + \frac{3}{4}$

$y = \frac{12}{4}$ $y = 3$

6) $y = \frac{3}{2}x + 3$

$y = -3$

$x = -2$

7) $-x - 7y = 9$

$-x + 9y = -23$ $x = -2$

$(-2, 3)$

8) $3x + y = -21$

$x + y = -5$

7) $-x - 7y = 9$

$-x + 9y = -23$

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Solving Linear Systems by ELIMINATION METHOD

Calculate the point at which the two equations are equal. In this method we will eliminate one variable to solve for the other.

$2x^2 + 3x + 4$ **Sept. 15, 2015**

Steps:

1. Line up the coefficients and variables
2. Multiply if required
3. Add/subtract
4. Solve
5. Replace solved value into equation

Sept. 10, 2014

(x, y)

Example #1: $3x + y = 2$ AND $5y + 20x = 50$

$5x$
$-5x$

$3x + y = 2$ (5)

$20x + 5y = 50$

$15x + 5y = 10$

$-20x + 5y = 50$

$-5x + 0y = -40$

$-5x = -40$

$\frac{-5x}{-5} = \frac{-40}{-5}$ $x = 8$

$3x + y = 2$

$3(8) + y = 2 - 24$

$24 + y = 2 - 24$

$y = -22$

$(8, -22)$

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If we graph our 2 equations, we can check our answer....

$(8, -22)$
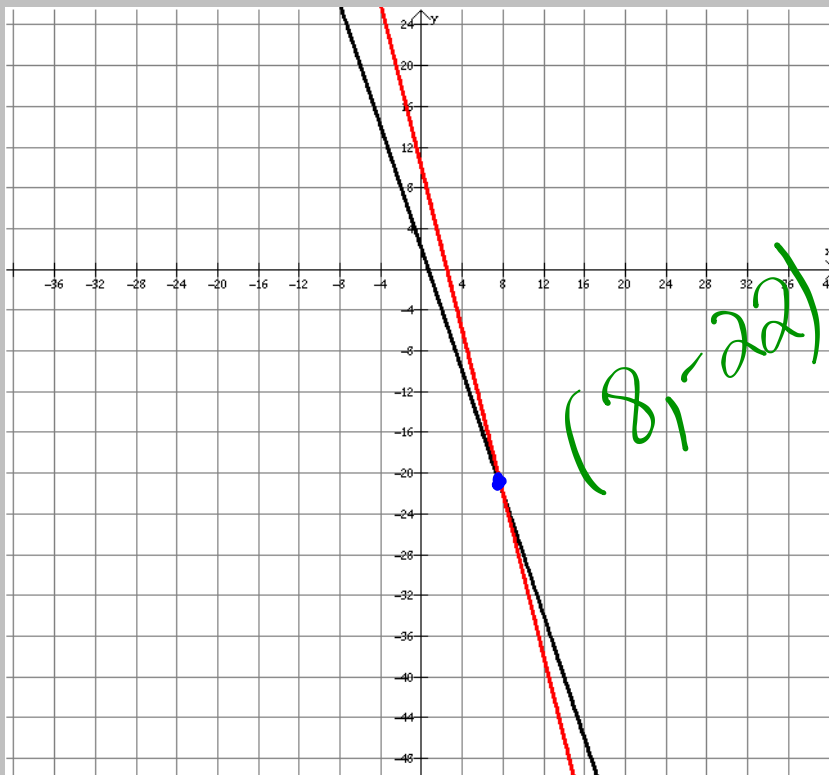
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Practice Question: Solve the system of equations by elimination method

$$+ \frac{\begin{array}{r} -2 \\ -2 \end{array}}{-4} \quad \begin{array}{r} -2 \\ +2 \end{array}$$

x - 2y = -6   AND   3x - y = 2

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

$$(2) - 2y = -6 \quad {}^{\circ}(2)$$
$$\frac{-2y}{-2} = \frac{-8}{-2}$$
$$\boxed{y = 4} \quad (2, 4)$$

$$1x - 2y = -6$$
$$-6x - 2y = 4$$
$$\overline{-5x + 0y = -10}$$
$$\frac{-5x}{-5} = \frac{-10}{-5} \quad \boxed{x = 2}$$

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Complete the worksheet:

Handout #3: "Solve each system by elimination"

Name : _____   Score : _____

Teacher : _____   Date : _____

Solving Systems of Equations by Elimination

1) $y = 5x - 7$

→ $y = 6x + 0$

6) $3x + 7y = 14$

$2x + 7y = 21$

2) $x + 3y = 18$

$-x - 4y = -25$

7) $x + 7y = 24$

$x - 9y = -24$

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