

Examples

Name: <u>Key</u>	Date:
Topic:	Class:

Main Ideas/Questions	Notes/Examples
Solve by Elimination	① LINE UP the equations.
	② MULTIPLY one or both equations by a number to result in a variable with the same coefficient.
	③ ADD or SUBTRACT the equations to eliminate this variable.
	④ SOLVE for the remaining variable.
	⑤ SUBSTITUTE your answer from step 4 into either original equation to find the other variable.
Directions: Solve each system of equations below by elimination. Identify the solution.	
1. $x+7y=17$ $-(x-y=-7)$ $8y=24$ $y=3$ $x-3=-7$ $x=-4$ (-4, 3)	2. $3x+2y=22$ $+ 5x-2y=42$ $8x=64$ $x=8$ $3(8)+2y=22$ $24+2y=22$ $2y=-2$ $y=-1$ (8, -1)
3. $4x-9y=-42$ $-4(x+5y=4)$ $4x-9y=-42$ $-4x-20y=-16$ $-29y=-58$ $y=2$ $x+5(2)=4$ $x+10=4$ $x=-6$ (-6, 2)	4. $7x-6y=-53$ $(2x-3y=-13) \cdot 2$ $7x-6y=-53$ $-4x+6y=26$ $3x=-27$ $x=-9$ $2(-9)-3y=-13$ $-18-3y=-13$ $-3y=5$ $y=-\frac{5}{3}$ (-9, -\frac{5}{3})
5. $(5x+3y=-7) \cdot 2$ $(2x+7y=3) \cdot 5$ $10x+6y=-14$ $-10x-35y=-15$ $-29y=-29$ $y=1$ $5x+3(1)=-7$ $5x+3=-7$ $5x=-10$ $x=-2$ (-2, 1)	6. $(3x-9y=9) \cdot 4$ $(4x-12y=36) \cdot 3$ $12x-36y=36$ $+12x+36y=-108$ $0 \neq -72$ No Solution

Practice

Name: _____

Unit 2: Linear Functions

Date: _____ Bell: _____

Homework 5: Solving Systems of Equations
by Elimination & Applications

**** This is a 2-page document! ****

Directions: Solve each system of equations by elimination. Clearly identify your solution.

1. $3x + y = 11$
 $5x - y = 21$

2. $2x - 9y = -51$
 $2x - 3y = -9$

3. $5x + 12y = -34$
 $2x + 4y = -12$

4. $-3x + 8y = 73$
 $x - 7y = -46$

5. $9x + 4y = -72$
 $2x - 3y = -16$

6. $4x - 11y = 68$
 $6x + 5y = -27$

7. $5x = 15 - 5y$
 $8y + 26 = 2x$

8. $14x + 7y = -7$
 $y = -2x - 1$