BECA / Huson / 10.3 Geometry Name:
5 December 2018

Classwork 3.4: Solving Systems of Equations Using Elimination

When equations are written in _____ form (Ax + By = C), _____ is the most efficient method to use to solve.

**Goal to <u>Eliminate</u> EITHER variable:* _____ *coefficients/variable (4x & 4x)*
_____ *signs (+/-)*

Solve the following systems of equations using the Elimination Method:

1) $-4x - 2y = -12$
$4x + 8y = -24$

2) $4x + 8y = 20$
$-4x + 2y = -30$

Solution: _____

Solution: _____

3) $x - y = 11$
$2x + y = 19$

4) $-6x + 5y = 1$
$6x + 4y = -10$

Solution: _____

Solution: _____

LEVEL 2 - EXAMPLE:

5) $-4x + 9y = 9 \rightarrow$
___ $(x - 3y = -6) \rightarrow$

6) ___ $(-7x + y = -19) \rightarrow$
$-2x + 3y = -19 \rightarrow$

Solution: _____

Solution: _____

7) ____ $(-3x + 7y = -16) \rightarrow$
$-9x + 5y = 16$

8) $16x - 10y = 10$
$-8x - 6y = 6$

Solution: _____

Solution: _____

***Challenge**: What would you have to manipulate in order to "eliminate" a variable in the following system?

$3x - 2y = 2$
$5x - 5y = 1$

Solution: _____

BECA / Huson / 10.3 Geometry Name:
5 December 2018

Homework 3.4: Solving Systems of Equations Using Elimination

Regents Exam Questions
A.REI.C.6: Solving Linear Systems 2a
www.jmap.org

9 What point is the intersection of the graphs of the lines $2x - y = 3$ and $x + y = 3$?
1) (2,1)
2) (1,2)
3) (3,0)
4) (3,3)

10 Which ordered pair satisfies the system of equations below?

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

1) (3,−1)
2) (2.5,−0.5)
3) (2.5,0.5)
4) (5,−3)

11 The equations $5x + 2y = 48$ and $3x + 2y = 32$ represent the money collected from school concert ticket sales during two class periods. If x represents the cost for each adult ticket and y represents the cost for each student ticket, what is the cost for each adult ticket?
1) $20
2) $10
3) $8
4) $4

12 Solve the following system of equations algebraically for y:

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