Name:_____Date:_____Period:___

3-2 Solving Systems Algebraically Part 2: Elimination

Standards

A2.A.REI.C.4 Write and solve a system of linear equations in context.

A2.A.REI.D.6 Explain why the *x*-coordinates of the points where the graphs of the equations $y = f(x)$ and $y = g(x)$ intersect are solutions of the equation $f(x) = g(x)$, find the appropriate solutions using technology.

Key Concepts

_____- using the Addition Property of Equality or using additive inverses to cancel a variable.

Steps for Solving Systems using Elimination:

1.
2.
3.
4.
5.
6.
7.

1. (I do) Solve the system by elimination. $\begin{cases} 3x + y = -9 \\ -3x - 2y = 12 \end{cases}$

2. (We do) Solve the system by elimination. $\begin{cases} 3x + 5y = 13 \\ y = -2x + 4 \end{cases}$

3. (They do) Solve the system by elimination. $\begin{cases} 2x + 4y = -4 \\ 3x + 5y = -3 \end{cases}$

Systems without unique solutions.

4. (We do) $\begin{cases} -3x + y = -5 \\ 3x - y = 5 \end{cases}$

5. (They do) $\begin{cases} 4x - 6y = 6 \\ -4x + 6y = 10 \end{cases}$

You do: Practice 3-2 Part 2: Complete your assignment on a separate sheet of paper. Show work!

1. $\begin{cases} x + y = 12 \\ x - y = 2 \end{cases}$

2. $\begin{cases} 4r + 2s = 4 \\ 6r + 2s = 8 \end{cases}$

3. $\begin{cases} 3x + 2y = 6 \\ 3x + 3 = y \end{cases}$

4. $\begin{cases} 5a - 2b = -19 \\ 2a + 3b = 0 \end{cases}$

5. $\begin{cases} -6 = 3x - 6y \\ 4x = 4 + 5y \end{cases}$

6. $\begin{cases} 7x + 2y = -8 \\ 4x = 8y \end{cases}$

7. A student has some $1 bills and $5 bills in his wallet. He has a total of 15 bills that are worth $47. How many of each type of bill does he have? Write and solve a system of equations using substitution.