Systems of Equations GNAW Activity

LEARNING OBJECTIVES:

★ Solve systems using substitution method
★ Solve systems by elimination method
★ Solve systems by graphical methods
★ Analyze functions using multiple representations

What is included in this resource?

- four Unique question sets
- Answer keys and instructions

Product Overview

This resource is designed to help your students gain proficiency in their ability to use the **Rule of Four** approach of connections among the multiple representations of functions. G.N.A.W. is a mnemonic for the four rules, *graphic, numeric, analytic, and verbal (words)*.

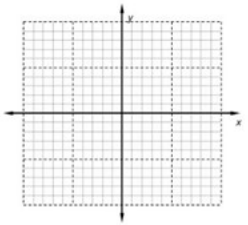
In this G.N.A.W. Activity your **Algebra 2** or **PreCalculus** students will explore problems that can be represented *graphically, numerically, analytically, and verbally*. There are four different versions.

STANDARDS ALIGNMENT:

CCSS: HSA.REI.C.5; HSA.REI.C.6; HSA.REI.C.7; HSA.REI.D.11
TEKS: A2.1(A), A2.1(C), A2.1(G), A2.3(A)

G.N.A.W. [Form A] on Systems of Equations

Name _____

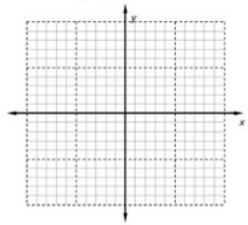
Graphically	Numerically
Graph the system of linear equations to find the solution: $\begin{cases} 5x+2y=-2 \\ y=x-8 \end{cases}$ 	Solve the system of linear equations by substitution. $\begin{cases} 5x+2y=-2 \\ y=x-8 \end{cases}$
Algebraically	**Verbally**
Solve the system of equations by elimination or linear combination. $\begin{cases} 5x+2y=-2 \\ y=x-8 \end{cases}$	**A.** What is the solution of this system? **B.** Explain what the solution means in a

find the easiest substitution? Why?

take before you can ar combination e?

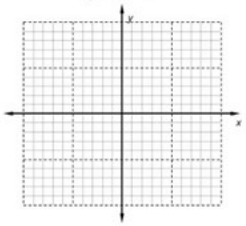
G.N.A.W. [Form B] on Systems of Equations

Name _____

Graphically	Numerically
Graph the system of linear equations to find the solution: $\begin{cases} 3x-8=y \\ x+y=4 \end{cases}$ 	Solve the system of linear equations by substitution. $\begin{cases} 3x-8=y \\ x+y=4 \end{cases}$
Algebraically	**Verbally**
Solve the system of equations by elimination or linear combination. $\begin{cases} 3x-8=y \\ x+y=4 \end{cases}$	**A.** What is the solution of this system? **B.** Explain what the solution means in a

G.N.A.W. [Form C] on Systems of Equations

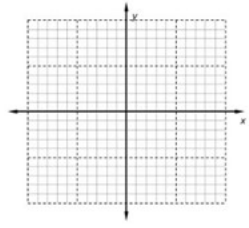
Name _____

Graphically	Numerically
Graph the system of linear equations to find the solution: $\begin{cases} 2y=x-10 \\ 3x+y=2 \end{cases}$ 	Solve the system of linear equations by substitution. $\begin{cases} 2y=x-10 \\ 3x+y=2 \end{cases}$
Algebraically	**Verbally**
Solve the system of equations by elimination or linear combination. $\begin{cases} 2y=x-10 \\ 3x+y=2 \end{cases}$	**A.** What is the solution of this system? **B.** Explain what the solution means in a sentence. **C.** Which method did you find the easiest between graphing and substitution? Why? **D.** What step(s) must you take before you can use the elimination/linear combination method for this example?

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G.N.A.W. [Form D] on Systems of Equations

Name _____

Graphically	Numerically
Graph the system of linear equations to find the solution: $\begin{cases} y=9-x \\ 2x-y=-3 \end{cases}$ 	Solve the system of linear equations by substitution. $\begin{cases} y=9-x \\ 2x-y=-3 \end{cases}$
Algebraically	**Verbally**
Solve the system of equations by elimination or linear combination. $\begin{cases} y=9-x \\ 2x-y=-3 \end{cases}$	**A.** What is the solution of this system? **B.** Explain what the solution means in a sentence. **C.** Which method did you find the easiest between graphing and substitution? Why? **D.** What step(s) must you take before you can use the elimination/linear combination method for this example?

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