**Bridge Math** Solving Systems of Equations by

Elimination & Substitution

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Class: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Solving Linear Systems by Substitution**



1. $\left\{\begin{array}{c}y=-3x+5\\y=4x-9\end{array}\right.$

2. $\left\{\begin{array}{c}y=2x-1\\3x+2y=26\end{array}\right.$

**DSPM 0800 – Elementary Algebra** Solving Systems of Equations by

Elimination & Substitution

Name:  **SOLUTIONS**  Class: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Solving Linear Systems by Substitution**



1. $\left\{\begin{array}{c}y=-3x+5\\y=4x-9\end{array}\right.$

2. $\left\{\begin{array}{c}y=2x-1\\3x+2y=26\end{array}\right.$

3. $\left\{\begin{array}{c}5x+6y=-9\\2x-2=-y\end{array}\right.$



4. $\left\{\begin{array}{c}-4y=x\\2x+6y=-3\end{array}\right.$



5. $\left\{\begin{array}{c}2x+y=1\\2x+y=5\end{array}\right.$

6. $\left\{\begin{array}{c}2x-y=4\\-2x+y=-4\end{array}\right.$

**Solving Linear Systems by Elimination**



7. $\left\{\begin{array}{c}x+5y=28\\-x-2y=-13\end{array}\right.$



8. $\left\{\begin{array}{c}\frac{3}{2}x+y=-\frac{5}{2}\\4x+y=-5\end{array}\right.$

9. $\left\{\begin{array}{c}7x-\frac{1}{3}y=-29\\2x-\frac{1}{3}y=-9\end{array}\right.$



10. $\left\{\begin{array}{c}-3x-y=-15\\8x+4y=48\end{array}\right.$



11. $\left\{\begin{array}{c}9x-4y=26\\18x+7y=22\end{array}\right.$



12. $\left\{\begin{array}{c}3x+2y=4\\-6x-4y=-8\end{array}\right.$



13. $\left\{\begin{array}{c}3x+y=4\\x+\frac{1}{3}y=2\end{array}\right.$



14. $\left\{\begin{array}{c}-3x+4y=2\\2y=\frac{3}{2}x+1\end{array}\right.$

15. $\left\{\begin{array}{c}-6x+6y=-4\\2x-2y=5\end{array}\right.$

Graph the linear system, then use the graph to tell whether the linear system has ***one solution***, ***no solution***, or ***infinitely many solutions***.

16. $\left\{\begin{array}{c}-6x+2y=-2\\-3x+y=2\end{array}\right.$ 17. $\left\{\begin{array}{c}-\frac{2}{3}x+y=2\\-6x+3y=6\end{array}\right.$ 18. $\left\{\begin{array}{c}y+3=4x\\3y=12x-9\end{array}\right.$

**Vocabulary**

Use the vocabulary terms listed below to complete each statement.

**system of linear equations solution of the system inconsistent system**

**solution set of the system consistent system independent equations**

**dependent equations**

1. Equations of a system that have different graphs are called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

2. A system of equations with at least one solution is a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

3. The set of all ordered pairs that are solutions of a system is the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

4. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of a linear equations includes all the ordered pairs that make all the equations of the system true at the same time.

5. Equations of a system that have the same graph (because they are different forms of the same equation) are called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

6. A system with no solution is called a(n) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

7. A(n) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ consist of two or more linear equations with the same variables.