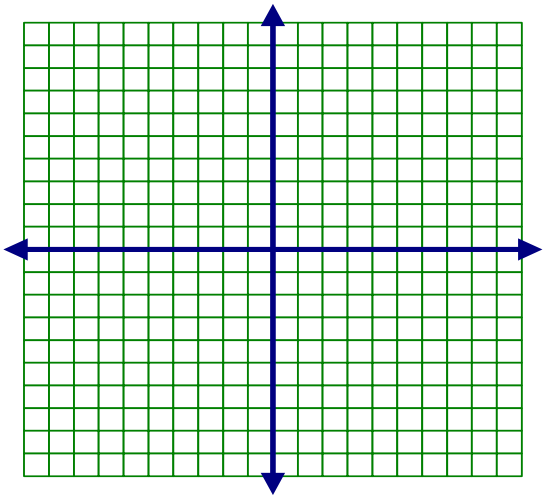
Name:_____ Date: _____

UNIT 3 **LESSON 8**

DO NOW

1. Solve the system of equations **graphically**

$$2x + y = 7$$
$$y = x + 4$$



AIM: Solving systems of equations with the substitution method

1. Solve the system of equations algebraically.

$$2x + y = 7$$
$$y = x + 4$$

Steps

1) One variable has to be alone (x = … or y = …)
2) Substitute (replace) that variable in the other equation using parenthesis so that we have one equation with one variable.
3) Solve for the variable
4) Plug in your answer to find the other variable.
5) Write your answer as a P.O.I.
6) Check the P.O.I. in both equations (2 checks)

2. Solve the system of equations algebraically.

$$y = 2x - 1$$
$$4x + 3y = 27$$

3. Solve the system of equations algebraically.

$$4x - 2y = 10$$
$$y = -2x - 1$$

4. Solve the system of equations algebraically.

$$y = 3x$$
$$y = 2x + 7$$

5. Solve the system of equations algebraically.

$$y = 8000 - 400x$$
$$y = 400x$$

6. Solve the system of equations algebraically.

$$y = -2x + 10$$
$$3x - y = 5$$

7. Solve the system of equations algebraically.

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

8. Solve the system of equations algebraically.

$$y = x$$
$$5x - 4y = -2$$

9. Solve the system of equations algebraically.

$$x = 4y$$
$$2x + 3y = 22$$