

## Solving Systems Using Substitution.

In the past, we have used graphing and intersecting lines to find solutions. We are going to continue finding solutions of two equations but today we will use a different strategy.

1. Let's look at an example. Write these two equations in your notes.

$$y = -4x + 8$$

$$y = x + 7$$

Instead of creating t-tables and graphs for these two equations, I will use substitution. What does this mean?

$$y = -4x + 8$$

to solve this, I will replace (substitute) the  $y$  in  $y = -4x + 8$  with what  $y$  equals above which is  $x + 7$

$y = -4x + 8$ . I cross out  $y$  and replace it with  $x + 7$ . This gives me.

$$x + 7 = -4x + 8$$

Now solve and get checked by your teacher.

2. Try this one on your own:

$$y = x + 1$$

$$y = 2x - 1$$

3. Solve

$$y = 6x - 4$$

$$y = -2x + 28$$

4. Solve

$$y = 4x - 8$$

$$y = 2x + 10$$

5. Solve

$$y = \frac{1}{2}x + 4$$

$$y = -x + 1$$