You can solve systems of equation by substitution.

$$-2x + 4y = 2$$
$$x + y = 8$$

Step 1	**Solve one of the equations for one of the variables.**
$x + y = 8$	← Write the second equation.
$y = -x + 8$	← Subtract x from both sides.

Step 2	**Substitute $-x + 8$ for y in the other equation.**
$-2x + 4y = 2$	← Write the first equation.
$-2x + 4(-x + 8) = 2$	← Substitute $-x + 8$ for y.
$-2x - 4x + 32 = 2$	← Use the Distributive Property.
$-6x + 32 = 2$	← Simplify.
$-6x = -30$	← Subtract 32 from each side.
$x = 5$	← Divide each side by -6.

Step 3	**Substitute 5 for x in either equation and solve for y.**
$x + y = 8$	← Write either equation.
$5 + y = 8$	← Substitute 5 for x.
$y = 3$	← Subtract 5 from both sides.
The solution is $(5, 3)$.	

1. $y = -x + 1$

$-2x - y = 2$

2. $2x + y = 6$

$6x - y = 2$

3. $4x - y = 2$

$2x + y = 10$

Keep this sheet with your notes as a guide.

You now have a practice worksheet (one problem). You can talk with your table partners about how you are going to set up the equations and solve for the soution.

Name: _____ Class Period : _____

Solve the system of equations by substitution. Check your answer.

$$-2x + y = 3$$
$$3x - 2y = 0$$

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