1.1

Yesterday, you learned how to solve a system of 2 equations by graphing. **Today**, you will learn how to solve same kind of system using only the equations themselves.

Let's say you want to solve a system made of the following 2 equations:

$x + 2y = 11$

$y = 3x + 2$

This equation means that "y" and "3x + 2" are INTERCHANGEABLE

Fill in the blank...

SINCE "y" and "3x + 2" are INTERCHANGEABLE,

you can RESTATE → "x + 2y = 11

as → "x + 2(_____) = 11"

1.2

Solving the linear system of...

$x + 2y = 11$ and $y = 3x + 2$

Since you can restate "x + 2y = 11" as....

"x + 2(3x + 2) = 11

simply solve the equation for x below...

1.3

Solving the linear system of...

$x + 2y = 11$ and $y = 3x + 2$

Since you found that x = 1, you can _____ to solve for *y*

Do so below to find what the solution is...

(Remember a solution of a system is an ordered pair.)

1.4

Solving the linear system of...

$x + 2y = 11$ and $y = 3x + 2$

You found that the solution is (1, 5). How would you check your answer?

Check your answer in the space below.

2.1

Solving the linear system of...

$x - 2y = -6$ and $4x + 6y = 4$

Problem!: You can't substitute right away, because you don't know what is INTERCHANGEABLE with one of the variables yet.

First, you have to figure that out by ISOLATING a variable.

Do so below by isolating x in $x - 2y = -6$

2.2

NOW you are solving the linear system of...

$x = 2y - 6$ and $4x + 6y = 4$

Solve this system the same way you solved 1.1-1.4 (Review those if you need to)

2.3

Solving the linear system of...

$x = 2y - 6$ and $4x + 6y = 4$

You found the solution to be (-2, 2). Check this solution by **graphing** on a separate piece of graph paper, using the same method you used yesterday (review your notes from yesterday if you need to)