Alg1

March 5, 2012

Get out WS6...

4) $x + 4y = 41$
$-4y \quad -4y$
$-3x - y = 11$

$x = -4y - 11$

$-3(-4y-11) - y = 11$

$12y + 33 - y = 11$

$11y + 33 = 11$
$-33 \quad -33$

$\frac{11y}{11} = \frac{-22}{11}$

$y = -2$

$x = -4(-2) - 11$

$x = 8 - 11$

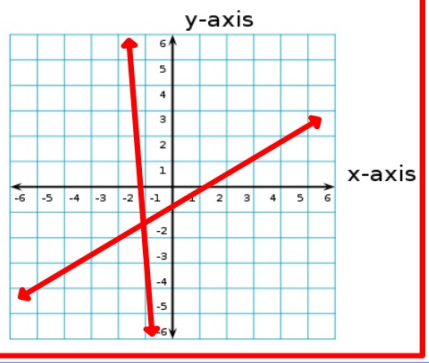
$x = -3$

$(-3, -2)$

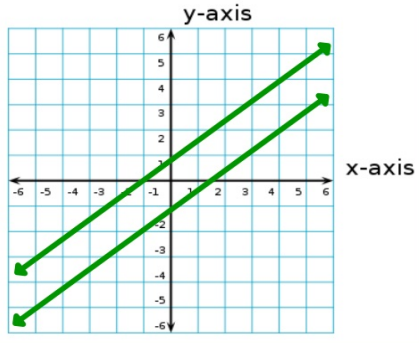
3/5 - Solving Inconsistent Systems using Substitution

1. Solve one equation for one variable
2. Substitute into the other equation
3. Solve for the variable
4. Substitute into an equation with both variables
5. Solve for the variable
6. What's the point?

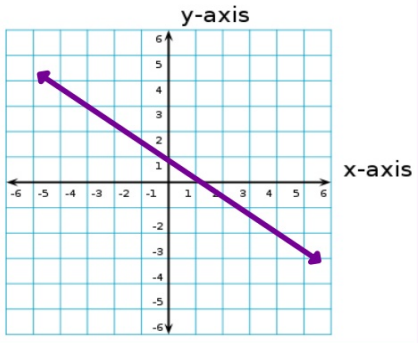
Intersecting



Parallel



Same Line



$-x - 4y = -15$

$x + 4y = 15$

$-4y \quad -4y$

$x = 15 - 4y$

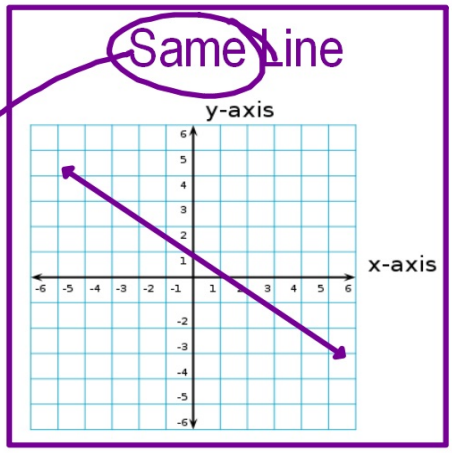
$-(15-4y) - 4y = -15$

$-15 + 4y - 4y = -15$

$-15 = -15$

all pts on $x + 4y = 15$

1. Solve one equation for one variable
2. Substitute into the other equation
3. Solve for the variable
4. Substitute into an equation with both variables
5. Solve for the variable
6. What's the point?



$8x + y = 1$

$-8x \quad -8x$

$16x + 2y = -7$

$y = 1 - 8x$

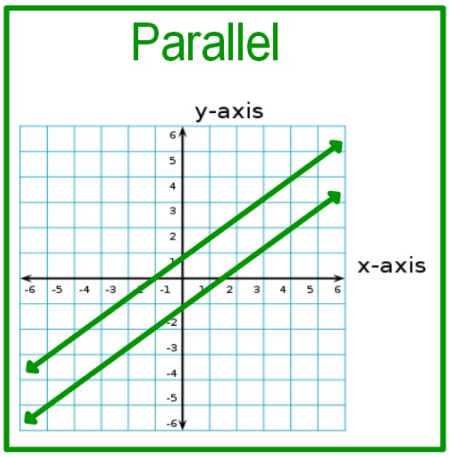
$16x + 2(1 - 8x) = -7$

$16x + 2 - 16x = -7$

$2 = -7$

$\emptyset$

different lines but they don't cross



$$3x - 24y = 0$$

$$x - 8y = 5$$

$$+8y \quad +8y$$

$$x = 5 + 8y$$

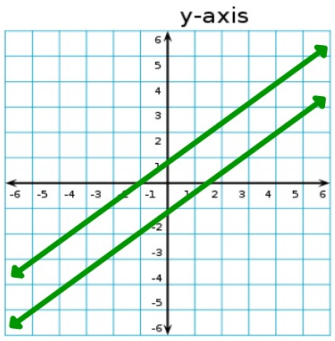
$$3(5+8y) - 24y = 0$$

$$15 + 24y - 24y = 0$$

$$15 = 0$$

$\emptyset$

Parallel



$x + 2y = -7$
$-2y \quad -2y$
$-2x - 4y = 14$

$x = -7 - 2y$

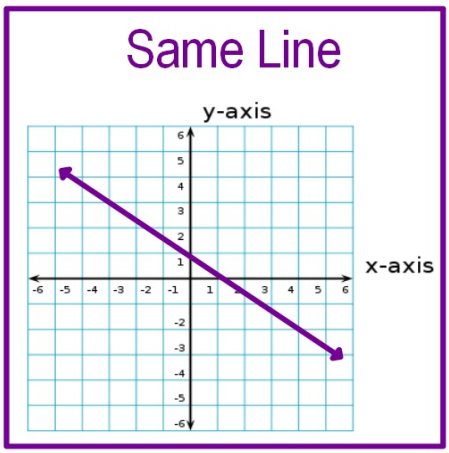
$-2(-7-2y) - 4y = 14$

$14 + 4y - 4y = 14$

$14 = 14$

all pts on

$x + 2y = -7$



Homework

Blue Systems WS7

Due Tuesday