

Warmup 12/(# of E's in "Tennessee Titans")

*****Make sure there is a whiteboard, marker, & eraser in your desk.*****

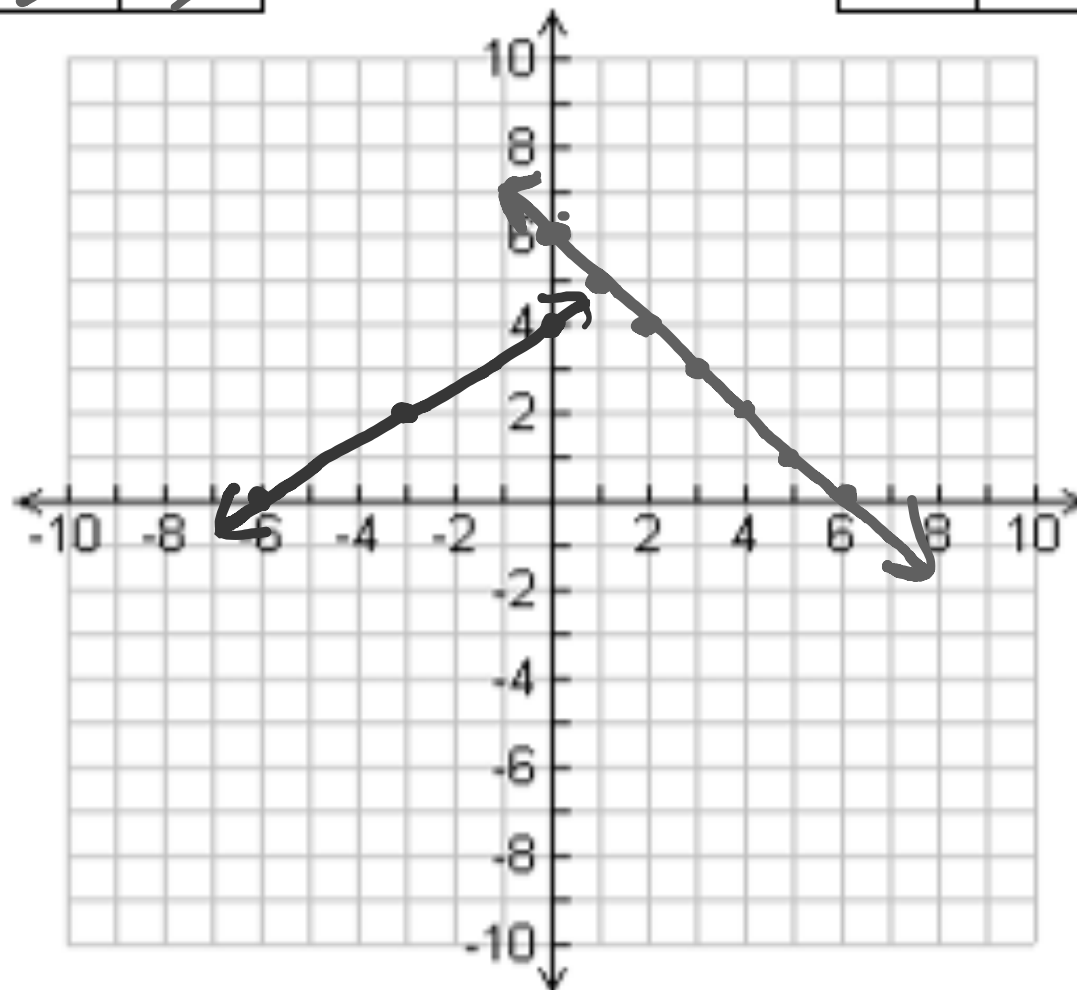
1. This warmup will be a Check for Understanding on a separate sheet of paper. On your warmup sheet, you can just write "CFU."

$$1) x + y = 6$$

x	y
0	6
2	4
3	3

$$2) -2x + 3y = 12$$

x	y
0	4
-6	0
-3	2



$$3) 6 + y = 2x$$

$$-6$$

$$-6$$

$$y = 2x - 6$$

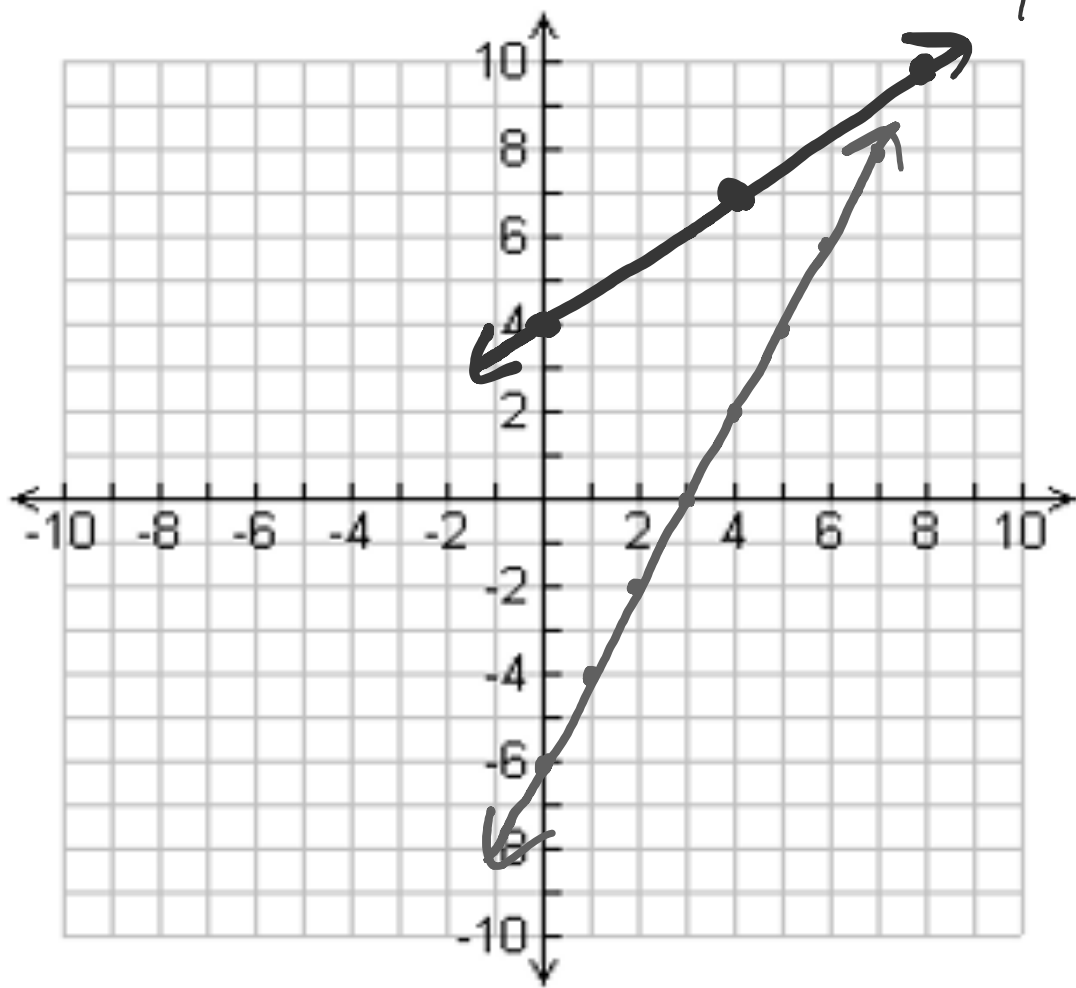
$$4) -3x + 4y = 16$$

$$+3x$$

$$+3x$$

$$\frac{4y}{4} = \frac{16 + 3x}{4}$$

$$y = 4 + \frac{3}{4}x$$



Check HW

Another way to solve systems...

- Look at #2 on your homework.

$$\begin{cases} y = 2x - 8 \\ y = -3x + 7 \end{cases}$$

Since $y =$ both, you
can set them equal
to each other

$$2x - 8 = -3x + 7$$

Then solve...

- $x = 3$ (Does this match your original answer?)
- How can we get y ?

Due on Friday, 12/13

- **Midterm Review Packet**
- **Worth a small summative grade! (0.5 or 0.25)**
- **39 problems total**
- **50% of the grade comes from completion (doing every problem)**
- **50% of the grade comes from me grading TEN of your problems for accuracy (same 10 problems for each student)**
- **IF YOU DON'T REMEMBER HOW TO DO ONE:**
 - **Look in your notes**
 - **Look up old lessons on the website**
 - **Have a friend help you**
 - **Find time to ask Mr. Lischwe**
 - **DO NOT JUST GUESS AND MOVE ON!!!**

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Solving Systems by Substitution

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Objective:

-Use a new strategy (substitution) to solve systems of equations. (No graphs, just pencil/paper)

WHITEBOARDS

Solve the System of Equations using Substitution

$$x + y = 10$$

$$y = 2$$

(8, 2)

Solve the System of Equations using Substitution

$$5x + 5y = 100$$

$$y = 5$$

$$5x + 5(5) = 100$$

$$5x + 25 = 100$$

$$5x = 75$$

$$x = 15$$

(15, 5)

Solve the System of Equations using Substitution

$$y = x + 100$$

$$y = 45$$

$$\begin{array}{r} 45 = x + 100 \\ -100 \quad -100 \\ \hline -55 = x \end{array}$$

$$(-55, 45)$$

Solve the System of Equations using Substitution

$$3x + 10y = 20$$

$$x = 6$$

$$3(6) + 10y = 20$$

$$18 + 10y = 20$$

$$10y = 2$$

$$y = \frac{2}{10}$$

$$(6, \frac{1}{5})$$

Solve the System of Equations using Substitution

$$4x + y = 24$$

$$y = 2x$$

Now find y:

$$4x + y = 24$$

$$4x + 2x = 24$$

$$6x = 24$$

$$x = 4$$

$$y = 2x$$

$$y = 2(4)$$

$$y = 8$$

$$(4, 8)$$

CHECK:

Solution: (4, 8)

$$4x + y = 24$$

$$4(4) + 8 = 24$$

$$16 + 8 = 24$$

$$24 = 24 \checkmark$$

Solve by Substitution:

$$2x - y = 15$$

$$x = 3y$$

$$2x - y = 15$$

$$2(3y) - y = 15$$

$$6y - y = 15$$

$$5y = 15$$

$$y = 3$$

Now find x:

$$x = 3y$$

$$x = 3(3)$$

$$x = 9$$

$$(9, 3)$$

CHECK:

Solution: (9, 3)

$$2x - y = 15$$

$$2(9) - 3 = 15$$

$$18 - 3 = 15$$

$$15 = 15 \checkmark$$

Substitution Strategy:

- If $y = (\text{stuff})$ you can **replace** the y from the other equation with the (stuff)
 - Same with $x = (\text{stuff})$

Homework (Due ~~Monday~~)

FRIDAY

- p.247 (1 – 10, 14, 15)