

Warmup 11 / (Sum of the first five positive whole numbers)

Created by Mr. Lischwe

1. Convert this equation into slope-intercept form:

$$8 + y = \frac{1}{3}x \quad y = \frac{1}{3}x - 8$$

2. What does the graph of $y = -4$ look like?

Horizontal line straight across through -4 on the y-axis

3. What is the slope of the line with the equation $y = 10 - x$?

-1

p.239 (1 – 3)

1. $y = x$
 $y = 2x - 4$ (4, 4)

Check
 $4 = 4$ ✓
 $4 = 2(4) - 4$
 $4 = 8 - 4$
 $4 = 4$ ✓

2. $y = -\frac{1}{2}x + 5$
 $y = 3x - 2$ (2, 4)

Check
 $4 = -\frac{1}{2}(2) + 5$
 $4 = -1 + 5$
 $4 = 4$ ✓
 $4 = 3(2) - 2$
 $4 = 6 - 2$
 $4 = 4$ ✓

3. $y - 2x = 4$
 $y = 2x$ no solution

Nothing to check

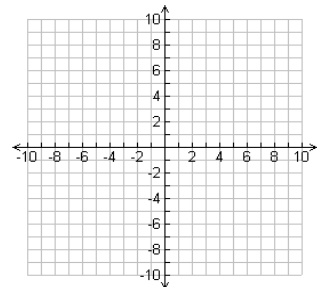
Story Problem: Solve by Graphing

- Bowl-o-Rama charges \$3 per game plus \$2 for shoe rental, and Bowling Pinz charges \$2 per game plus \$5 for shoe rental. For how many games will the cost to bowl be the same at both places? What is the cost?

How would you graph this?

$$x + y = 11$$

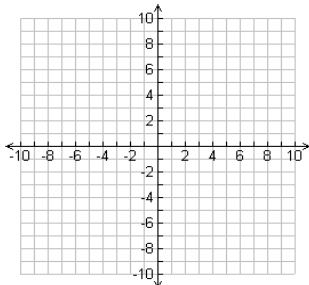
x	y



How would you graph this?

$$4x + 2y = 20$$

x	y



Standard Form:

$$Ax + By = C$$

(Basically, standard form is when x and y are on the same side)

Graphing Standard Form

- Graph standard form by figuring out (x, y) pairs that make the equation true

$$4x + 2y = 20$$

If $x = 3$, what is y ?

If $x = 1$, what is y ?

If $x = 0$, what is y ?

If $y = 0$, what is x ?

Graphing Standard Form

- Graph standard form by figuring out (x, y) pairs that make the equation true

$$4x + 2y = 20$$

STEP 1: Plug in 0 for x $(0, ?)$

$$\cancel{4(0)} + 2y = 20$$

$$y = 10 \quad (0, 10)$$

STEP 2: Plug in 0 for y $(?, 0)$

$$4x + \cancel{2(0)} = 20$$

$$x = 5 \quad (5, 0)$$

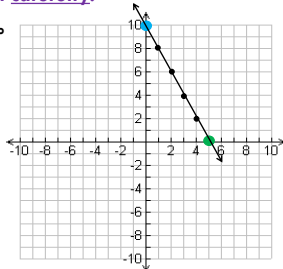
$$4x + 2y = 20$$

STEP 3: Graph the 2 points and connect them carefully!

$(0, 10)$ $(5, 0)$

You can use the slope to get a more precise line. Between the points is down 10, right 5.

$$\frac{-10}{5} \rightarrow \frac{-2}{1}$$



Classwork/Homework

- Solving Systems by Graphing Worksheet
- BE PRECISE
- LOOK OUT FOR POSITIVE/NEGATIVE SLOPES!