

Algebra I

Monday 11-19-12

Class Notes

Ch. 4-1 Identifying Linear Functions

Ch 4-2 Using Intercepts

Standard Form of a Linear
Equation - Pg 232

$$Ax + By = C$$

$A > 0$, A, B, C NOT fractions

Algebra 1 Monday 11-19-12 Class Notes

parabola

$$y = x^2 + 3$$

hyperbola

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

cubic

$$y = x^3 - 2$$

* $y = 2x - 1$, $y = \sqrt{x}$, $y = 2^x$

* Linear?

How to recognize:

if your function has only

x ' terms, y ' terms, and constants (numbers)
then it is linear

$$\underline{2x} + \underline{3y} + \underline{5x} - \underline{6y} + 4 + \underline{7x} = \underline{12y} + 6$$

"STANDARD FORM" for a LE

$$Ax + By = C$$

 $A > 0$ $A, B, C = \text{Integers}$

$$74x - 15y = 2$$

↑
A↑
B↑
C

(EX) $-12x + 6y = -3$

$$12x - 6y = 3 \quad \text{SF}$$

$$\begin{aligned}
 &Ax + By = C \\
 &14x - 15y = 2 \quad \text{Method of Intercepts}
 \end{aligned}$$

GRAPH USING

$$x_{\text{INT}} \Rightarrow y = 0$$

$$14x - 15(0) = 2$$

$$\frac{14x}{14} = \frac{2}{14}$$

$$x_{\text{INT}} = \frac{1}{7}$$

$$x_{\text{intercept}} \left(\frac{1}{7}, 0 \right)$$

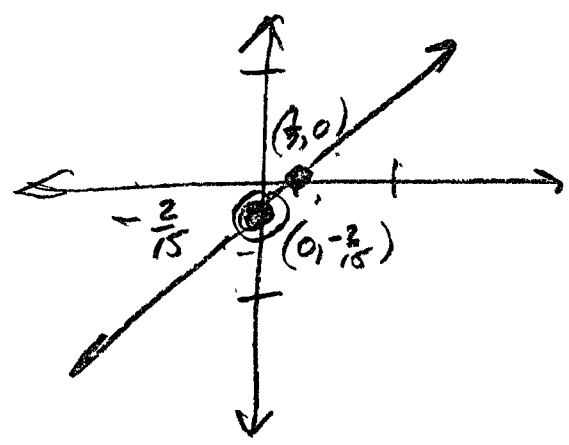
$$y_{\text{INT}} \Rightarrow x = 0$$

$$14(0) - 15y = 2$$

$$\frac{-15y}{-15} = \frac{2}{-15}$$

$$y_{\text{INT}} = -\frac{2}{15}$$

$$y\text{-intercept} \left(0, -\frac{2}{15} \right)$$



$$14x + 10x - 7y - 12x = 6 - x$$

$$x' = ? \quad y' = ? \quad \text{constants}$$

$$Ax + By = C \quad \text{SF}$$

$$12x - 7y = 6 - x$$

$$+ x$$

$$+ x$$

$$13x - 7y = 6$$

method
or
intercepts

$$x_{\text{int}} \Rightarrow y = 0$$

$$13x - 7(0) = 6$$

$$x_{\text{int}} = \frac{6}{13} \quad \left(\frac{6}{13}, 0\right)$$

$$y_{\text{int}} \Rightarrow x = 0$$

$$13(0) - 7y = 6$$

$$y_{\text{int}} = -\frac{6}{7} \quad \left(0, -\frac{6}{7}\right)$$

