

# Linear Equations

11/7/14  
Ch 3 Day 3  
(3.1)

HW: P159 #13-28  
all

## Linear Equation:

- An equation that forms a line
- An equation where the variables are "seperate" ~ Most of the time we use  $x$  and  $y$  but any two variables are ok!
- $x$  and  $y$  (or variables used) are to the power of **1**

1.  $3x + 4y = 7$  ★

2.  $x^2 + y = 8$  Not Linear

3.  $3x - 7x = y$  ★

4.  $xy + 5 = 8$  Not Linear

5.  $y = 8 + x$  ★

## Standard Form

$$\begin{array}{ccc} Ax + By = C \\ \downarrow \quad \downarrow \quad \downarrow \\ 3x + 2y = 18 \end{array}$$

★ homework asks for standard form, but you don't need to do this tonight.

## x and y Intercepts

X-intercept: where the graph crosses the x-axis.

~ the value of x when y is zero.

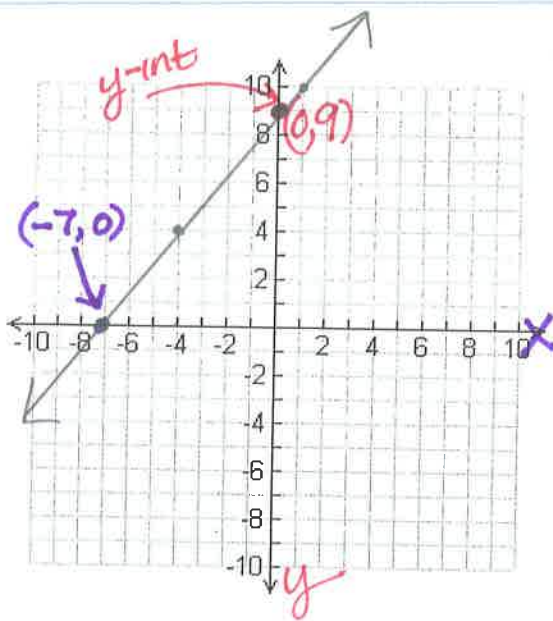
$$(x, 0)$$

y-intercept: where the graph crosses the y-axis.

~ the value of y when x is zero.

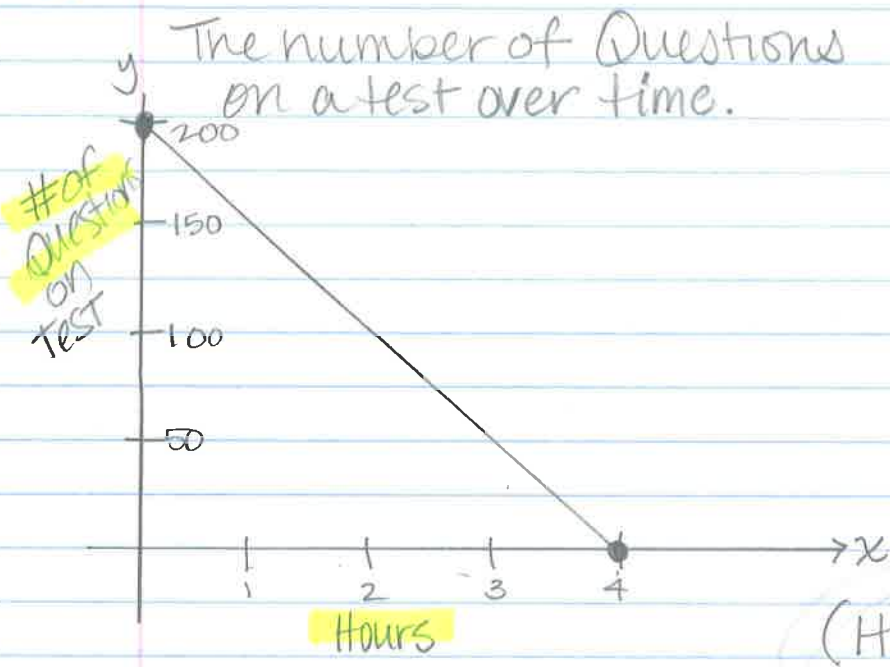
$$(0, y)$$

Graph



Table

x	y	
-7	0	x-int
-4	4	
0	9	y-int
1	10	



Y-intercept:  $(0, 200)$   $(\underline{0}, \underline{200})$

When they started the test there were 200 questions.

X-intercept:  $(4, 0)$   $(\underline{4}, \underline{0})$

After 4 hours there were no test questions left.

Homework: 3.1 pg 159 #13-28 all

#13-15 Yes or NO say why.  
 (You dont need to put in standard form)  
 # 23-28 graph w table!