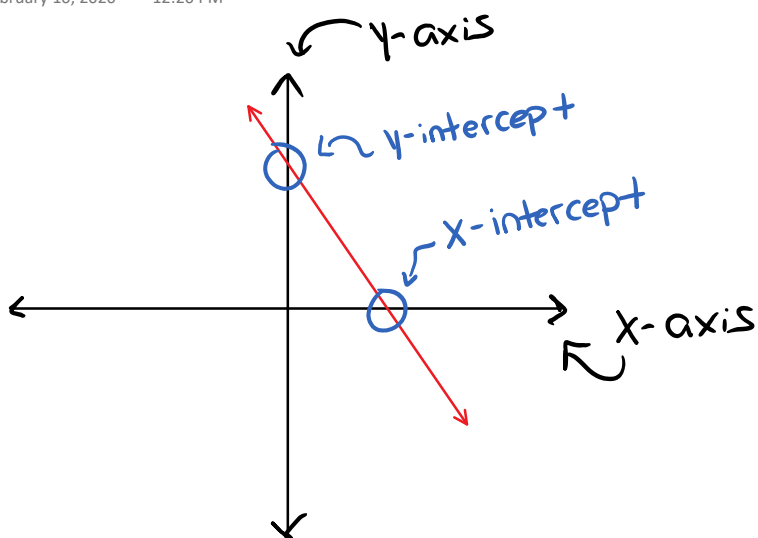


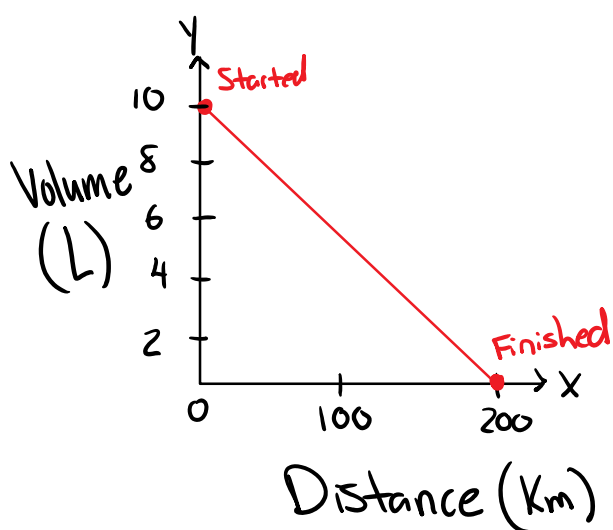
## 5.7 - Interpreting Graphs of Linear Functions

February 10, 2020 12:26 PM



- Where a graph crosses an axis is referred to as a "intercept".

Ex: Volume of gas in a scooter:



- ① Write the coordinates where the graph intersects an axis. What do they represent?

↳  $(0, 10)$ : A full tank is 10 L.  
 $(200, 0)$ : A full tank gets us 200 km.

- ② What are the domain and range?

$$D: 0 \leq d \leq 200$$

$$R: 0 \leq v \leq 10$$

★ X-intercepts always occur when  $y = 0$  ★  
Y-intercepts always occur when  $x = 0$

In an equation;

To find the x-int, substitute  $y$  or  $f(x)$  with 0

To find the y-int, substitute x with 0.

Ex: Determine the x and y intercepts of  $y = 3x + 2$

<u>x-int</u>	<u>y-int</u>
$y = 3x + 2$	$y = 3x + 2$
$(0) = 3x + 2$	$y = 3(0) + 2$
$-2 = 3x$	$y = 0 + 2$
$\frac{-2}{3} = x$	$y = 2$
$x = -\frac{2}{3}$	$\Rightarrow (0, 2)$
$\Rightarrow (-\frac{2}{3}, 0)$	

Ex: Graph  $f(x) = -2x + 7$

Graph the 2 intercepts and connect them:

x-int? substitute  $y = 0$ :

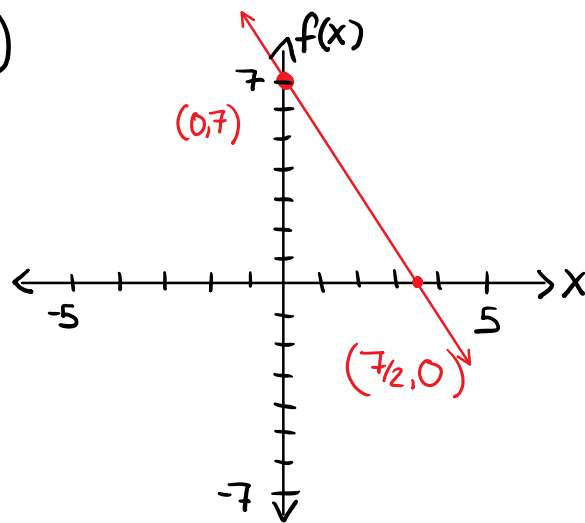
$$f(x) = -2x + 7$$
$$(0) = -2x + 7$$
$$-7 = -2x$$
$$x = \frac{7}{2}$$

y-int? Substitute  $x = 0$

$$f(x) = -2x + 7$$
$$f(0) = -2(0) + 7$$
$$f(0) = 0 + 7$$
$$f(0) = 7$$

$$\Rightarrow (0, 7)$$

$$\Rightarrow (7/2, 0)$$



HW: Pg. 319 # 4-6, 8, 13, 15, 18, 19