

**Graphing Linear Equations: By The Intercepts Method**

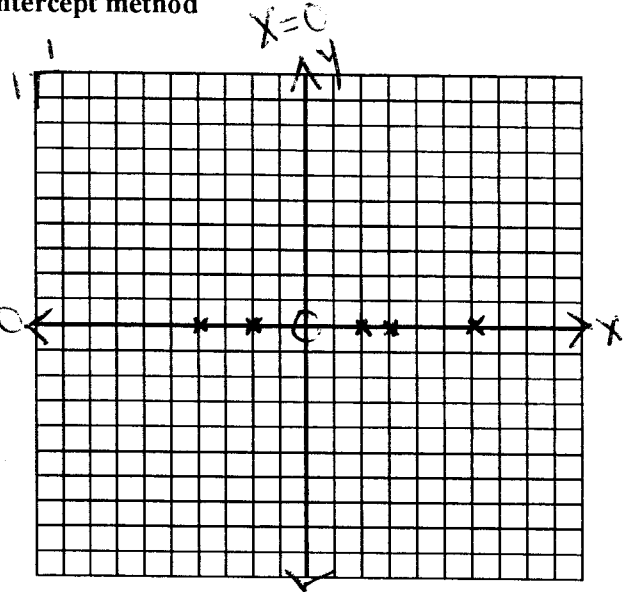
Quality – Accuracy – Transfer – 100%

**Section 1. Graphing Lines by the x-intercept and the y-intercept method**

1. Consider any Point on the x-axis. Let's name a few:

- (2,0)
- (3,0)
- (-2,0)
- (-4,0)
- (6,0)

$y = 0$   
No  $x$ -term  
// to  $x$ -axis

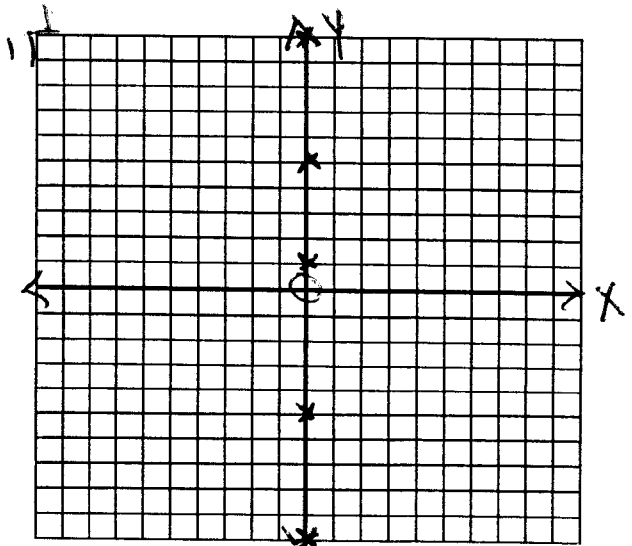


2. What are your observations and Conclusions about all these points?

The  $y$ -coordinate = 0. Any point that exist on  $x$  axis,  $y = 0$

3. Consider any Point on the y-axis. Let's name a few:

- (0,10)
- (0,-5)
- (0,-10)
- (0,5)
- (0,1)



4. What are your observations and Conclusions about all these points?

The  $x$ -coordinate = 0. Any point that exists on  $y$ -axis,  $x = 0$

5. Plot the following linear equations (the equations of a line), by the x and y intercepts method.

a.  $y = -2x + 6$

X-int @  $y = 0$

$$0 = -2x + 6$$

$$-6 = -2x$$

$$+3 = x$$

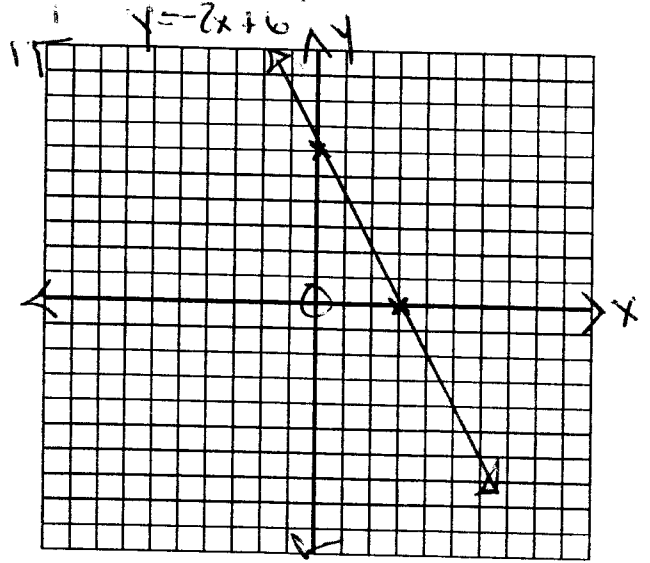
$(+3, 0)$

Y-int @  $x = 0$

$$y = -2(0) + 6$$

$$y = +6$$

$(0, +6)$



b.  $-3y - 2x = -6$

X-int @  $y = 0$

$$-3(0) - 2x = -6$$

$$-2x = -6$$

$$x = +3$$

$(3, 0)$

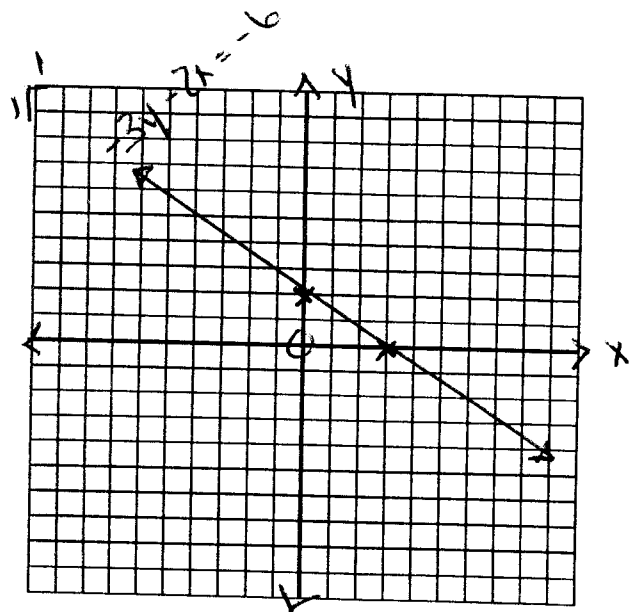
Y-int @  $x = 0$

$$-3y - 2(0) = -6$$

$$-3y = -6$$

$$y = +2$$

$(0, 2)$



c.  $\frac{1}{4}x + \frac{1}{3}y = 2$

$y$  int @  $x = 0$        $x$  int @  $y = 0$

~~$\frac{1}{4}(0) + \frac{1}{3}y = 2$~~        ~~$\frac{1}{4}x + \frac{1}{3}(0) = 2$~~

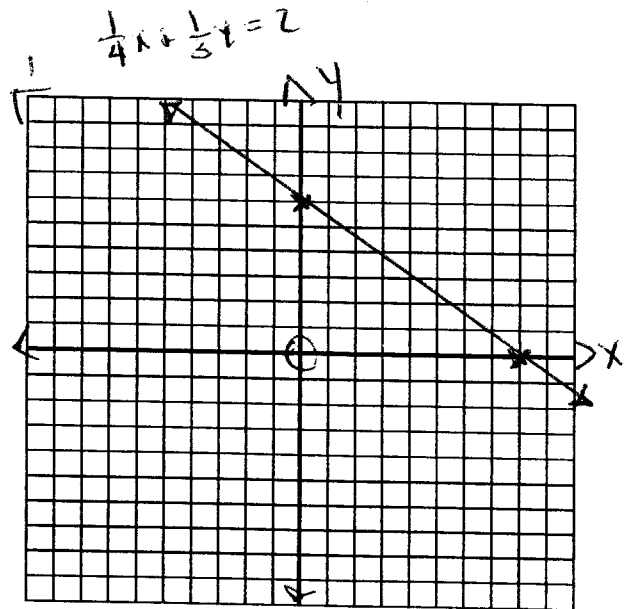
~~$\frac{1}{3}y = 2 \cdot 3$~~        ~~$\frac{1}{4}x = 2 \cdot 4$~~

$y = 6$

$x = 8$

$(0, 6)$

$(8, 0)$



**Homework Section**

Section(s)	Page(s)	Problem(s)
4.2	247 → 249	45, 51, 55, 61