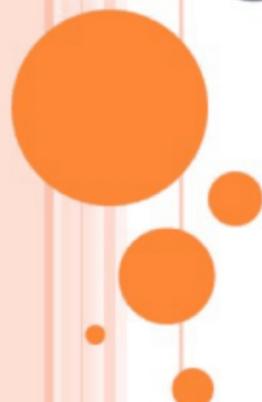


≥ 2
 $-6x$
 $x+2$
 $\frac{2}{5}$
 $\frac{-1}{2}$



BB pg 135 # 1-11 odd

QUICK GRAPHS USING INTERCEPTS

Chapter 4
Section 3

$$\begin{array}{r}
 3x - \boxed{y} = -10 \\
 + 5x \\
 \hline
 = 5x - 10 \\
 \hline
 = -5x + 10
 \end{array}$$

⑤ $6x + \boxed{y} = 6$

~~$- 6x$~~ $- 6x$

$$y = -6x + 6$$

⑦ ~~$-3x - \boxed{y} = -10$~~

~~$+ 3x$~~ $+ 3x$

$$\begin{array}{r}
 -y = 3x - 10 \\
 \hline
 y = -3x + 10
 \end{array}$$

$$+3\boxed{y} = 0$$

-2x

$$= -\frac{2}{3}x$$

$$\boxed{-\frac{2}{3}x}$$

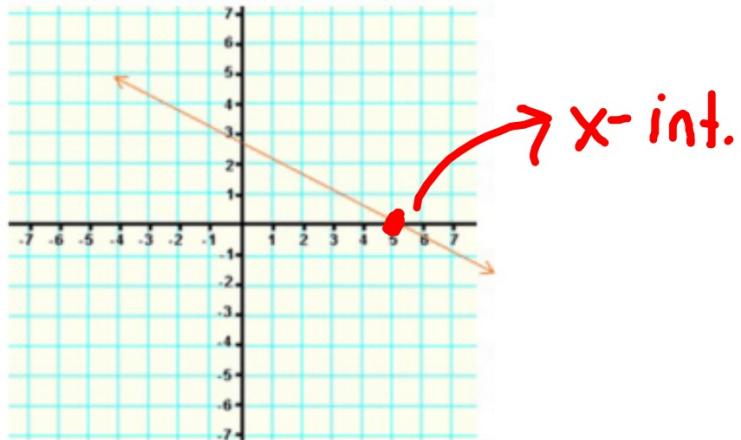
① ~~$2x + \boxed{y} = 3$~~

~~-2x~~ -2x

$$\boxed{y = -2x + 3}$$

FINDING THE X-INTERCEPT

- X-Intercept: the point where the line crosses the x-axis



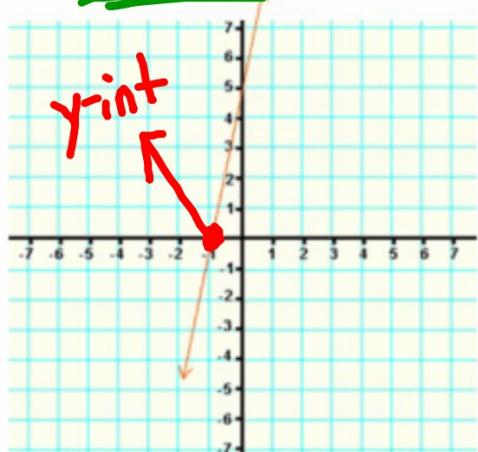
To find the **x-intercept**: $(x, 0)$

- Plug in $y=0$ and solve for x



FIND THE Y-INTERCEPT

- Y-Intercept: the point where the line crosses the y-axis



To find the **y-intercept**: $(0, y)$

- Plug in $x=0$ and solve for y



EXAMPLES: FIND INTERCEPTS

o 1. $2x + 4y = 8$

$y=0$	$x=0$
-int	y-int
$y(0) = 8$	$2(0) + 4y = 8$
$=8$	$\frac{4}{4}y = \frac{8}{4}$
$=2$	$y = 2$
, 0)	(0, 2)

o 2. $-5x - 2y = 16$

$y=0$	$x=0$
x-int	y-int
$-5x - 2(0) = 16$	$-5(0) - 2y = 16$
$\frac{-5x}{-5} = \frac{16}{-5}$	$\frac{-2y}{-2} = \frac{16}{-2}$
$x = -3.2$	$y = -8$
(-3.2, 0)	(0, -8)

FIND THE INTECEPTS

③ $y = 3x - 5$

$x=0$	$y = \text{int}$
-5 +5 \times 3)	$y = 3(0) - 5$ $y = -5$ $(0, -5)$

④ $y = -2x + 1$

$y=0$	$x=0$
$0 = -2x + 1$ $-1 = -2x$ $\frac{-1}{-2} = x$ $(\frac{1}{2}, 0)$	$y = \text{int}$ $y = -2(0) + 1$ $y = 1$ $(0, 1)$

MAKING A GRAPH FROM THE INTERCEPTS

- Steps:

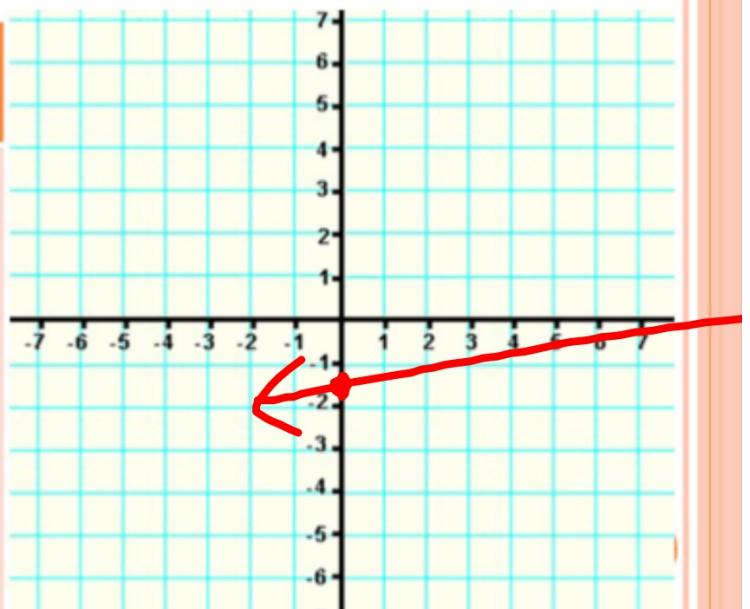
- Find x and y intercepts
- Write the intercepts as a point.
 - X-int $(x, 0)$
 - Y-int $(0, y)$
- Graph the two points
- Draw a line through the two points



EXAMPLE:

o 1. $x - 6y = 10$

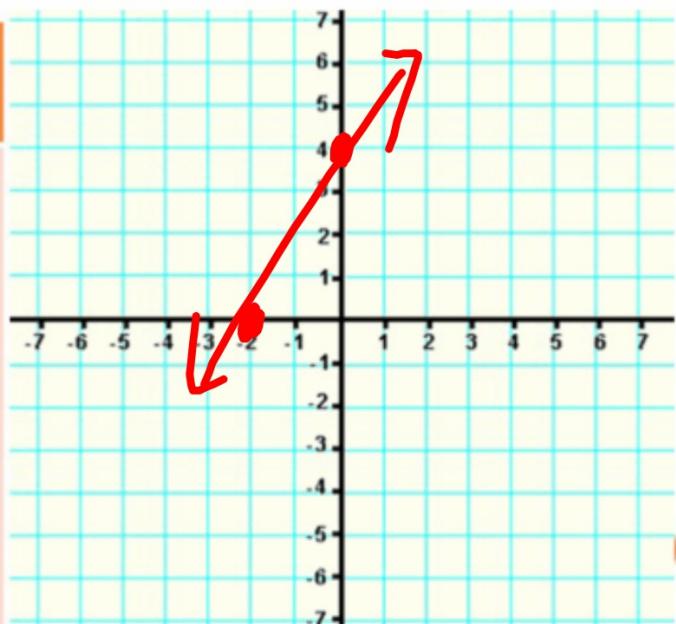
X-Intercept $y=0$	Y-Intercept $x=0$
$x - 6(0) = 10$ $x = 10$ $(10, 0)$	$0 - 6y = 10$ $\frac{-6y}{-6} = \frac{10}{-6}$ $y = -\frac{5}{3}$ $(0, -\frac{5}{3})$



EXAMPLE:

② $y = 2x + 4$

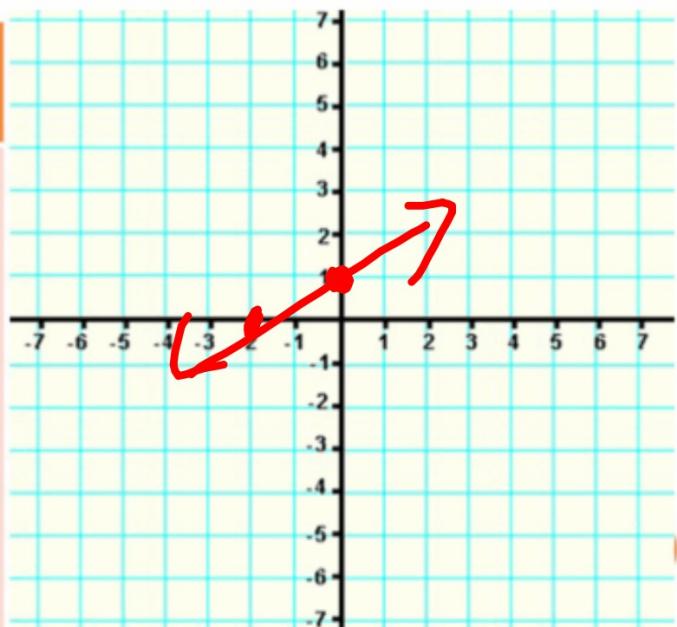
X-Intercept $y=0$	Y-Intercept $x=0$
$0 = 2x + 4$ -4 $\frac{-4}{2} = \frac{2x}{2}$ $-2 = x$ $(-2, 0)$	$y = 2(0) + 4$ $y = 4$ $(0, 4)$



EXAMPLE:

③ $y = \frac{1}{2}x + 1$

X-Intercept $y=0$	Y-Intercept $x=0$
$0 = \frac{1}{2}x + 1$ $-1 = \frac{1}{2}x$ $-2 = x$ $(-2, 0)$	$y = \frac{1}{2}(0) + 1$ $y = 1$ $(0, 1)$



CLASSWORK

- Blue book: Pg 129 # 1-11 odds
- Pg 221 # 35-40
- Closure: Pg 221 # 14-16



HOMEWORK

- Page 221 # 7-13

