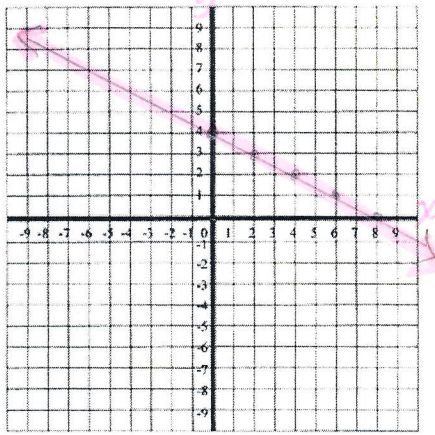


DIRECTIONS: Write the equation from standard form ($ax + by = c$) to slope-intercept form ($y = mx + b$). Then find the x- and y-intercepts of each equation and then graph the line.

1) $x + 2y = 8$

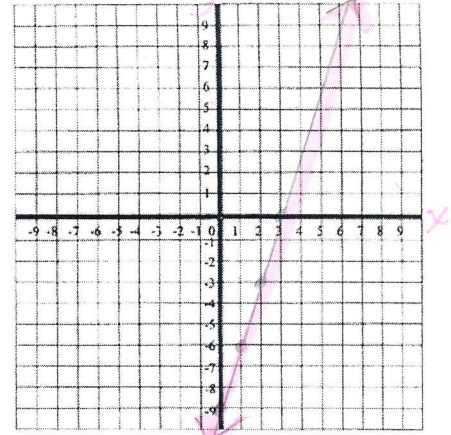
$$\begin{array}{r} -x \\ \hline 2y = -x + 8 \\ \frac{2y}{2} = \frac{-x + 8}{2} \\ y = -\frac{1}{2}x + 4 \\ m = \frac{-1}{2} \\ b = 4 \end{array}$$



x-int = $(8, 0)$ y-int = $(0, 4)$
 (x, y) (x, y)

2) $3x - y = 9$

$$\begin{array}{r} -3x \\ \hline -y = -3x + 9 \\ \frac{-y}{-1} = \frac{-3x + 9}{-1} \\ y = 3x - 9 \\ m = \frac{3}{1} \\ b = -9 \end{array}$$



x-int = $(3, 0)$ y-int = $(0, -9)$
 (x, y) (x, y)

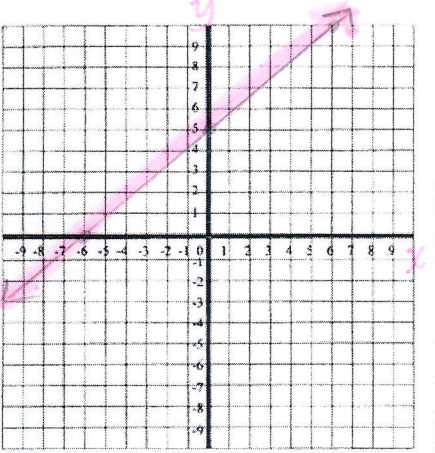
3) $-5x + 6y = 30$

$$\begin{array}{r} +5x \\ \hline 6y = 5x + 30 \\ \frac{6y}{6} = \frac{5x + 30}{6} \\ y = \frac{5}{6}x + 5 \end{array}$$

$m = \frac{5}{6}$ ↑
 6 →

x	y
-6	0
0	5
6	6

↑ 6
 from a table

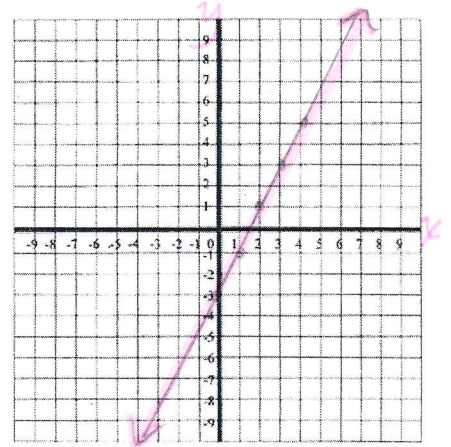


x-int = $(-6, 0)$ y-int = $(0, 5)$
 (x, y) (x, y)

4) $-6x + 3y = -9$

$$\begin{array}{r} +6x \\ \hline 3y = 6x - 9 \\ \frac{3y}{3} = \frac{6x - 9}{3} \\ y = 2x - 3 \end{array}$$

$m = \frac{2}{1}$ ↑
 1 →
 $b = -3$



x-int = $(1.5, 0)$ y-int = $(0, -3)$
 (x, y) (x, y)

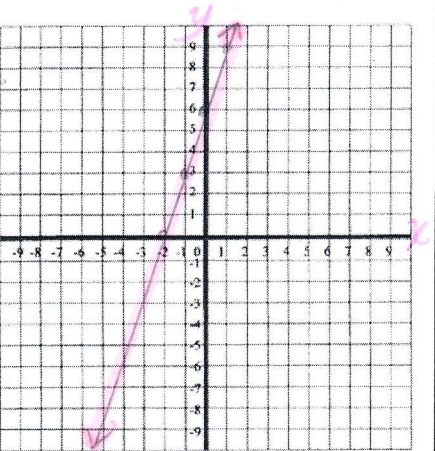
5) $-3x + y = 6$

$$\begin{array}{r} +3x \\ \hline y = 3x + 6 \end{array}$$

$m = \frac{3}{1}$ ↑
 1 →
 $b = 6$

x	y
-1	3
0	6
1	9

↑
 from a table

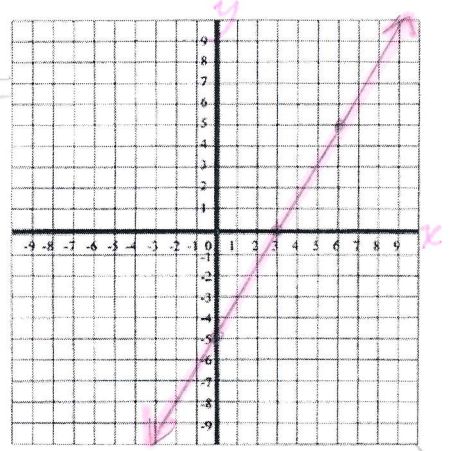


x-int = $(-2, 0)$ y-int = $(0, 6)$
 (x, y) (x, y)

6) $5x - 3y = 15$

$$\begin{array}{r} -5x \\ \hline -3y = -5x + 15 \\ \frac{-3y}{-3} = \frac{-5x + 15}{-3} \\ y = \frac{5}{3}x - 5 \end{array}$$

$m = \frac{5}{3}$
 $b = -5$



x-int = $(3, 0)$ y-int = $(0, -5)$
 (x, y) (x, y)