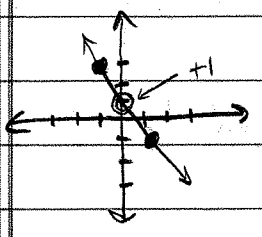


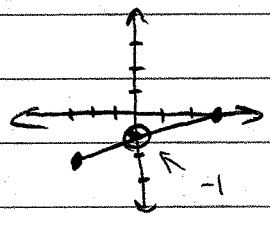
Warm-up Graph $y = -2x + 1$ $x = 1, -1$ $y = \frac{1}{3}x - 1$ $x = -3, 3$

4.5 Graph with Slope-Intercept Form

Look at $y = -2x + 1$ and $y = \frac{1}{3}x - 1$



+1 is y-intercept
 $-\frac{2}{1}$ is slope (direction)



-1 is y-intercept
 $\frac{1}{3}$ is slope

Slope-Intercept Form

$$y = mx + b \quad (\text{graphing form})$$

$m =$ slope

$b =$ y-intercept (where cross y-axis) ^(point on)

$y =$ y-coordinate (x, y)

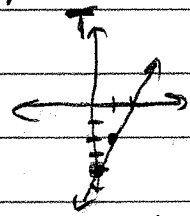
$x =$ x-coordinate (x, y)

Example - Name slope & intercept. Make sketch

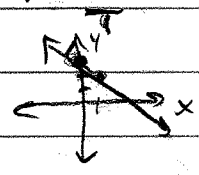
a) $y = \frac{1}{2}x + 2$
 $m = \frac{1}{2}$ $b = 2$



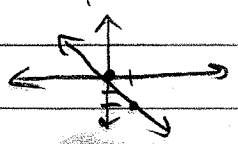
b) $y = 2x - 4$
 $m = 2$ $b = -4$



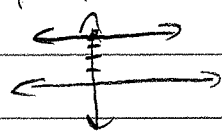
c) $y = -x + 3$
 $m = -1$ $b = 3$



d) $y = -2x$
 $m = -2$ $b = 0$



e) $y = 4$ ($y = 0x + 4$)
 $m = 0$ $b = 4$



f) $3x + 2y = 6$ (solve for y)
 $2y = 6 - 3x$
 $y = 3 - \frac{3}{2}x$
 $m = -\frac{3}{2}$ $b = 3$

p247: 3-11,
 13, 15, 17-20,
 22-30 even
 40

p25:
 2-10
 12-14
 16-18