

6.4 – WRITING THE EQUATION OF A LINE

Write an equation of a line in slope-intercept form of each line described.

Slope-intercept Form: $y = mx + b$

1. slope m 2 and y-intercept b of 15 $y = 2x + 15$

2. slope $\frac{-1}{2}$, and y - intercept of -7 $y = \frac{-1}{2}x - 7$

3. slope $\frac{9}{5}$ and y-intercept -6 $y = \frac{9}{5}x - 6$

Write an equation of a line in point-slope form of each line described.

Point-slope Form: $y - y_1 = m(x - x_1)$

3. slope m -3 and x-intercept of -3 $y = -3(x + 3)$

m slope 1 and through the point $(2, 5)$ $y - 5 = 1(x - 2)$
 $(-3, 0)$
 x_1, y_1
 x_1, y_1

5. slope $\frac{-2}{3}$ and through the point $(3, -6)$ $y + 6 = \frac{-2}{3}(x - 3)$

6. slope 0 and through the point $(-3, -5)$ $y + 5 = 0(x + 3)$
 $y = -5$