3-5 Notes

Thursday, February 8, 2024 2:23 PM

Slope/Intercept form of a Line:

$$y = mx + b$$

Write an equation in Slope/Intercept form of a line for the given information.

2. Point $(0, 3)$, $m = 1$

$y = mx + b$

$y = 1x + b$

$y = x + 3$

Need b: use $(0,3)$

$3 = 1(0) + b$

$3 = b$

8. Point $(-2, 0)$, $m = \frac{3}{2}$

$y = mx + b$

$y = \frac{3}{2}x + b$

$y = \frac{3}{2}x + 3$

Need b: use $(-2,0)$

$0 = \frac{3}{2}(-2) + b$

$0 = -3 + b$

$3 = b$

28. Point $(-2, 5)$, slope is undefined

vertical, no slope, $x =$ (no y)

$x = -2$

38. $P_1(0, 4)$, $P_2(1, 5)$

Need slope $m = \frac{y_2 - y_1}{x_2 - x_1}$

$= \frac{5-4}{1-0} = 1$

$y = mx + b$

$y = 1x + b$

Need b: Pick $(0,4)$ or $(1,5)$

$4 = 1(0) + b$

$4 = b$

$y = x + 4$