3-3 D1 Notes

Friday, January 26, 2024 10:17 AM

Slope/Intercept form of a line:

$y = mx + b$ — must be by itself. Slope → Rise/Run. y-intercept, always (0, b). output. input.

Slope/Intercept form of a linear function:

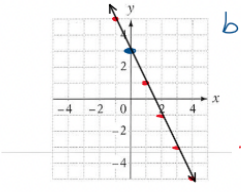
$f(x) = mx + b$ — name of function

Implied Domain:

All real numbers; $\mathbb{R}$

Graph.

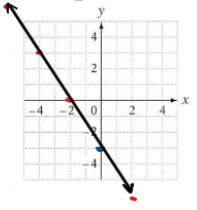
2. $y = -2x + 3$



$m = -2 = \frac{-2}{1}$ rise/run

$b = 3$ (0,3)

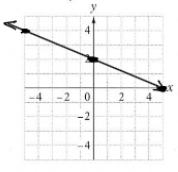
8. $y = -\frac{3}{2}x - 3$



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

$b = -3$; (0, -3)

12. $2x + 5y = 10$



$2x + 5y = 10$

$-2x \quad -2x$

$\frac{5y}{5} = \frac{-2x}{5} + \frac{10}{5}$

$y = -\frac{2}{5}x + 2$

$m = -\frac{2}{5}$

$b = 2$; (0, 2)

x-intercept - where it crosses the x-axis

(, 0)

put 0 in for y

y-intercept - where it crosses the y-axis

(0, b)

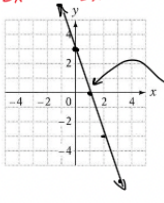
put 0 in for x

Find the *x*- and *y*-intercepts and graph.

20. $3x + y = 3$

$-3x \quad -3x$

$y = -3x + 3$



y-int: (0, 3)

x-int: (1, 0)