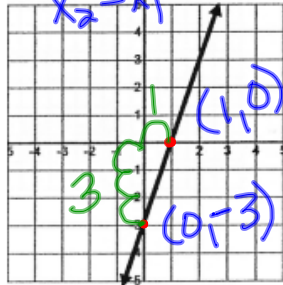


Starter

$m = \frac{y_2 - y_1}{x_2 - x_1}$ 1 NOV 2018

1) Identify the point in which the line crosses the x-axis.



2) Identify the point in which the line crosses the y-axis.

3) State the slope of the line. $\frac{3}{1} = 3$

x	-4	3	6
f(x)	4	-6	7

1) $f(x) = 7; x = 6$

2) $f(-4) = 4$

2) $(-3,4) \& (2,-5)$

$m = -\frac{9}{5}$ Pt. Used $(-3,4)$

Equation: $y - 4 = -\frac{9}{5}(x + 3)$

Slope-intercept $y = -\frac{9}{5}x - \frac{7}{5}$

3) $(-2,3) \& m = -\frac{4}{5}$ ~~(-2)~~

$m = -\frac{4}{5}$ Pt. Used $(-2,3)$

Equation: $y - 3 = -\frac{4}{5}(x + 2)$

Slope-intercept $y = -\frac{4}{5}x - \frac{7}{5}$

4) $(5, -6)$ & $m = 2.7$ $y - (-6)$

$m = 2.7$ Pt. Used $(5, -6)$

Equation: $y + 6 = 2.7(x - 5)$

Slope-intercept $y = 2.7x - 19.5$

$y + 6 = 2.7x - 13.5$

-6 -6

5) *

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

Pt. Used $(0, 4)$

Equation: $y - 4 = -\frac{4}{5}x$

Slope-intercept $y = -\frac{4}{5}x + 4$

$x - 0 = x$

6) *

$y = -2$

$m = \frac{-2 - (-2)}{-2 - 0} = 0$

Pt. Used $(-2, -2)$

Equation: $y + 2 = 0$

Slope-intercept $y = -2$

Eq. of a horizontal Line

x intercept and y intercept

x-intercept - the place where a line crosses the x-axis
 at the x-intercept $y = 0$. The coordinates are in the form $(x, 0)$.

y-intercept - the place where a line crosses the y-axis
 at the y-intercept $x = 0$. The coordinates are in the form $(0, y)$.

Example 1: I DO

a. Find the coordinates of the x-intercept and the y-intercept.

Coordinates of x-intercept $(3, 0)$

Coordinates of y-intercept $(0, 6)$

Slope of the line 2

Equation of the line:

Point slope $y = 2(x + 3)$

Slope intercept $y = 2x + 6$

Handwritten notes: $m = \frac{y_2 - y_1}{x_2 - x_1}$, $\frac{6-0}{0-3} = 2$, $y - y_1 = m(x - x_1)$, $y - 0 = 2(x + 3)$

Example 2: I DO

Find the x-intercept and the y-intercept of the line with equation: $3x - 4y = 12$

x-intercept: $(4, 0)$

y-intercept: $(0, -3)$

X-int., Let $y = 0$

$$3x - 4(0) = 12$$

$$3x - 0 = 12$$

$$3x = 12$$

$$\frac{3x}{3} = \frac{12}{3}$$

$$x = 4$$

y-int., Let $x = 0$

$$3(0) - 4y = 12$$

$$0 - 4y = 12$$

$$-4y = 12$$

$$\frac{-4y}{-4} = \frac{12}{-4}$$

$$y = -3$$

Example 3: WE DO:

a. Find the coordinates of the x-intercept and the y-intercept.

Coordinates of x-intercept $(7, 0)$

Coordinates of y-intercept $(0, 3)$

Slope of the line $-\frac{3}{7}$

Equation of the line:

Point slope $y = -\frac{3}{7}(x - 7)$

Slope intercept: $y = mx + b$

Handwritten notes: $y - y_1 = m(x - x_1)$, $y - 0 = -\frac{3}{7}(x - 7)$

$$y = -\frac{3}{7}(x - 7)$$

$$y = -\frac{3}{7}x + 3$$

slope-intercept

$$-\frac{3}{7} \cdot -7$$

1) $4x + 5y = 20$

X intercept: $(5, 0)$ y intercept: $(0, 4)$

