Unit 3

Lesson 11 Summary

Horizontal lines in the xy-plane represent situations where the y value doesn't change at all while the x value changes. For example, the horizontal line that goes through the point $(0, 13)$ can be described in words as "for all points on the line, the y value is always 13." An equation that says the same thing is $y = 13$.

horizontal line equation $y = \#$ number where the line crosses y-axis

Vertical lines represent situations where the x value doesn't change at all while the y value changes. The equation $x = -4$ describes a vertical line through the point $(-4, 0)$.

* vertical lines cannot be described with the equation $y = mx + b$
* Vertical line equations are $x = \#$ number where the line crosses x-axis
* ~~x~~ half of "x" is a "v" for vertical line
* $y \rightarrow h$ "h" for horizontal line

ex: $y = 3$ horizontal equation with line crossing y-axis at 3

* horizontal lines can be described with the equation $y = mx + b$, but remember slope of a horizontal line is zero, so

$y = 0x + b$

$y = b$ y-intercept, where line crosses y-axis