$y = mx + B$

Algebra 1 4.3

Write equations of lines in point-slope form

Write linear equations in different forms

$y - y_1 = m(x - x_1)$

slope-intercept form

point-slope form

standard form

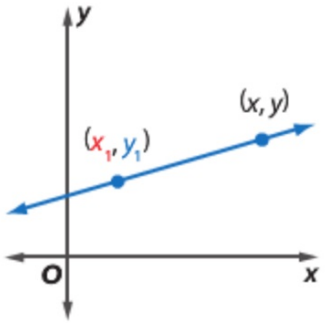
Quiz 4.1-4.2

activity: cut & paste

KeyConcept Point-Slope Form

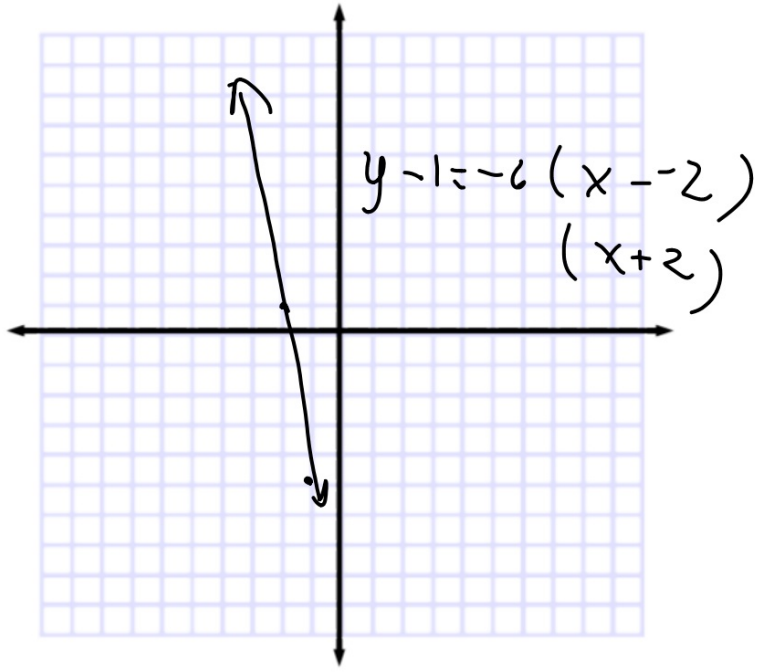
Words The linear equation $y - y_1 = m(x - x_1)$ is written in point-slope form, where (x_1, y_1) is a given point on a nonvertical line and m is the slope of the line.

Symbols $y - y_1 = m(x - x_1)$

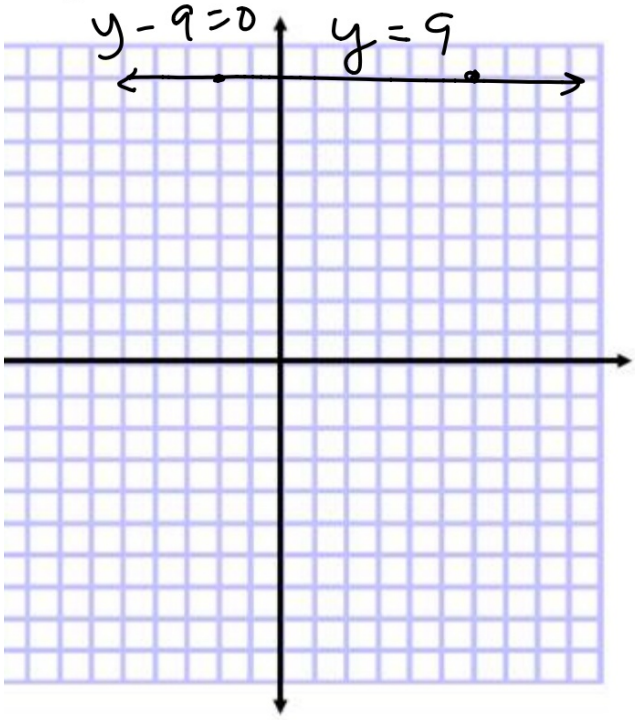


GuidedPractice

1. Write an equation in point-slope form for the line that passes through $(-2, 1)$ with a slope of $\frac{-6}{1}$. Then graph the equation.



$y - 9 = 0(x - 6)$



$(2, 1)\ (3, 8)$

$m = 7$

$y - 1 = 7(x - 2)$

$y - 8 = 7(x - 3)$

$(6, 9)\ (-2, 9)$

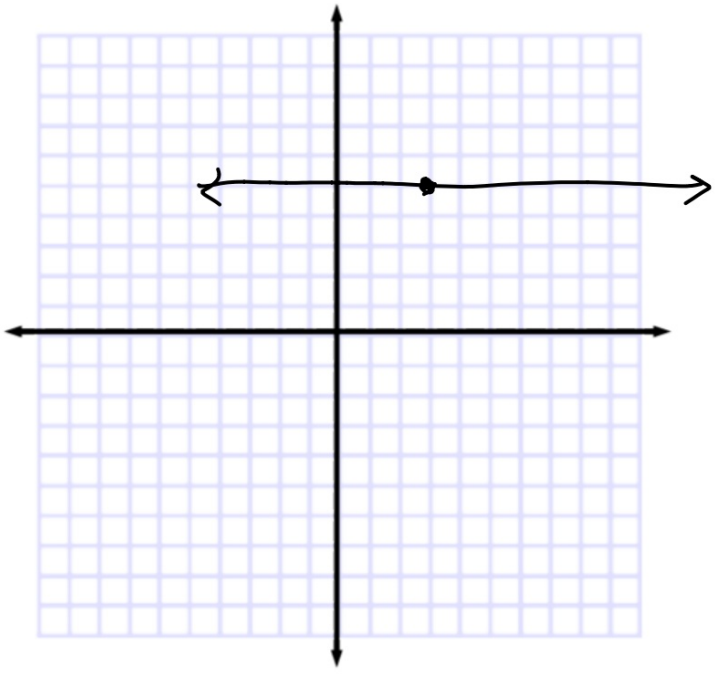
(2, 1) (3, 8

Slope is 0 passing through (3,5)
What kind of line is it?
Graph first, then write equation (easier)

$y - 5 = 0(x - 3)$

$y - 5 = 0$

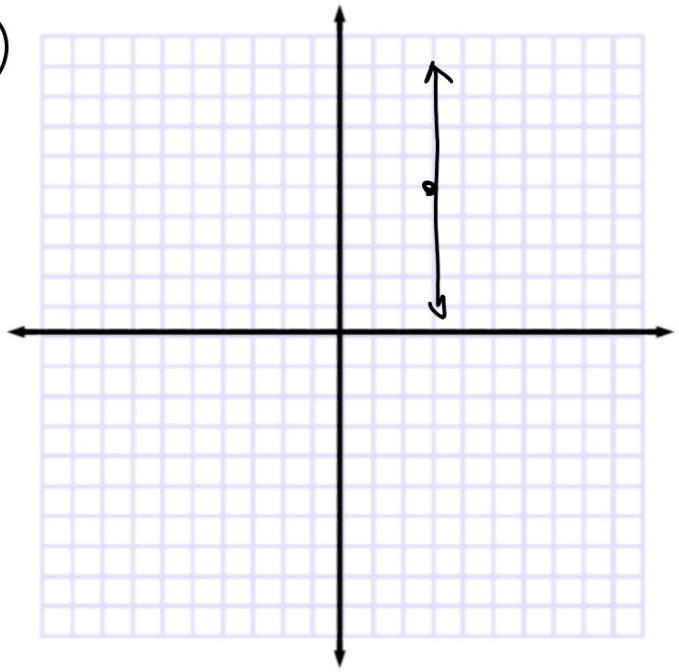
$y = 5$



Slope is undefined passing through (3,5)
What kind of line is it?

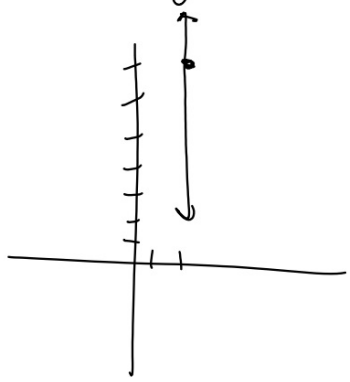
$y - 5 = m(x - 3)$

$x = 3$



WB odds + 22

$m = \text{undef}$ $(2, 7)$



$x = 2$

if $m = 0 \rightarrow y = \text{number}$

$m = \text{undef} \rightarrow x = \text{number}$

WB 4.3

1-6

16-23