

Algebra 1 4.3

Write equations of lines in point-slope form

Write linear equations in different forms

slope-intercept form

point-slope form

standard form

$$Ax + By = C$$

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$$y = mx + b$$

$$y - ? = m(x - ?)$$

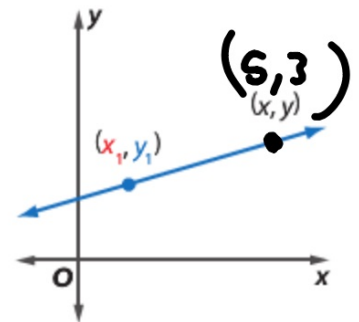
Key Concept Point-Slope Form

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

$$y - y_1 = m(x - x_1)$$
$$(y - 3) = 0(x - 5)$$



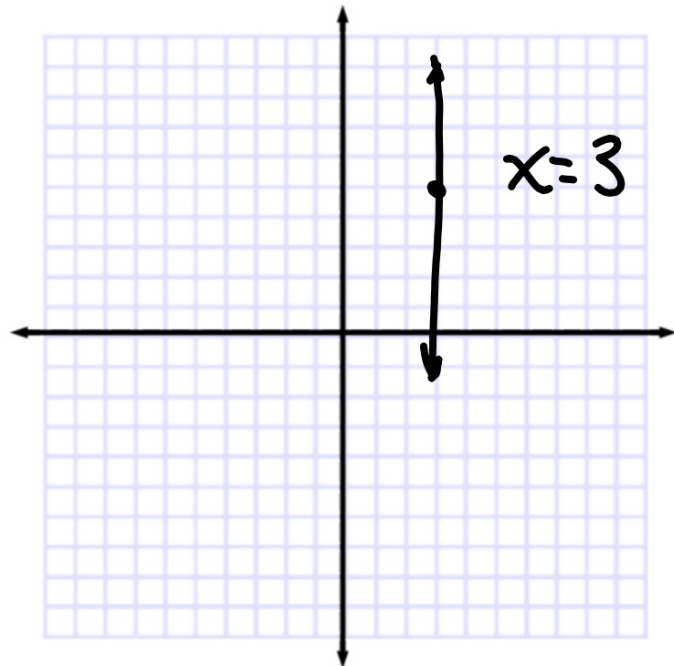
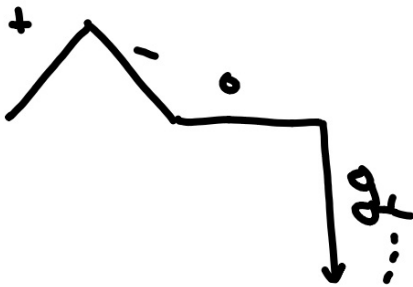
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not
defined

Slope is $\bullet$ passing through $(3,5)$

What kind of line is it?

Graph first, then write equation (easier)



Slope is undefined passing through ~~5, 6~~ $(-1, 6)$
What kind of line is it?

