

Coordinate Plane / Slope

The Coordinate Plane

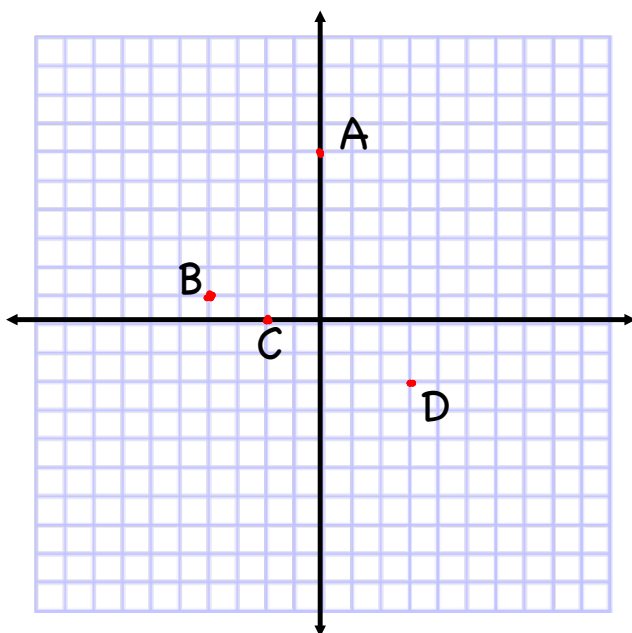
A coordinate plane is formed by two number lines that intersect at the origin.

The horizontal number line is the x-axis, and the vertical number line is the y-axis.

Each point in a coordinate plane corresponds to an ordered pair of real numbers.

The ordered pair for the origin is $(0, 0)$.

Example 1: Use the graph to name the coordinates of the given point.

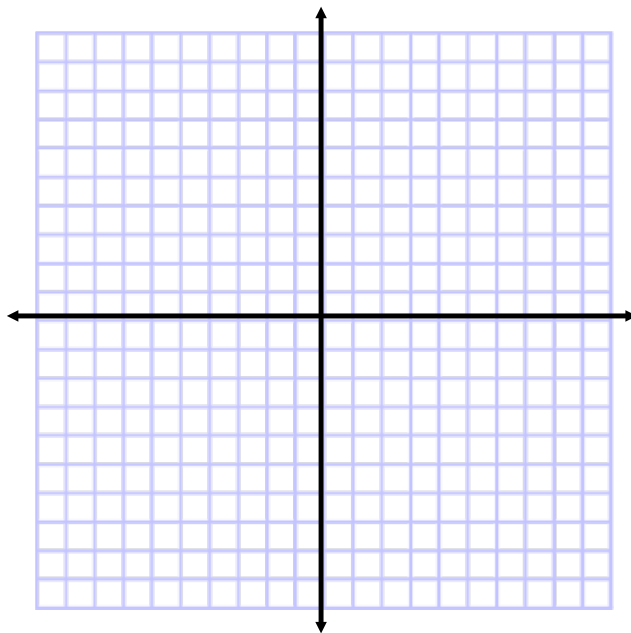


Example 2: Plot each point in a coordinate plane.

$P(-5, 2)$

$Q(3, 0)$

$R(-2, -6)$



Slope of a Line

The slope of a line is the ratio of the vertical rise to the horizontal run between any two points on the line.

You subtract coordinates to find the rise and the run. If a line passes through the points (x_1, y_1) and (x_2, y_2) , then:

Example 3: Find the slope of the line that passes through the points $(-2, 1)$ and $(5, 4)$.

The slope of a line can be positive, negative, zero, or undefined.

Positive	Negative	Zero	Undefined
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Graph:

Values: