GRAPHING

PRAXIS FLASHCARD #193

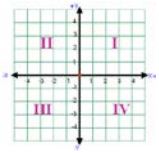
Number Line

A **number line** is a straight line where each point of that line corresponds to a real number. A line is made up of an infinite number of points and there are an infinite amount of real numbers. Usually the line is marked off to show the integers, including zero. A number line is generally written as a horizontal line.

PRAXIS FLASHCARD #258

Coordinate Grid

A **coordinate grid (coordinate plane)** is a two-dimensional grid for locating points. There is an **x-axis** and a **y-axis** at 90-degree angles, which divide the grid into four **quadrants** that are numbered counter-clockwise using Roman numerals. The **origin** is where the two axes cross (0, 0). A **coordinate pair** is a pair of numbers indicating the location of a point (x, y). Sometimes called a Cartesian grid after the mathematician René Descartes (1596-1650).



PRAXIS FLASHCARD #135

Ordered Pair

An **ordered pair** is a pair of numbers indicating the location of a point. The first number, called the first coordinate, tells how far the point is right or left on the horizontal x-axis. The second number, called the second coordinate, tells how far the point is up or down on the vertical y-axis. The actual point is the intersection of those two coordinates.

PRAXIS FLASHCARD #70

Plotting a Point on a Coordinate Grid

To **plot a point** with the coordinates of (x, y), we follow along the x-axis until we get to the first coordinate, and then we follow along the y-axis until we reach the second coordinate. We mark a small dot at the location where these two coordinates intersect.

PRAXIS FLASHCARD #183

Slope of a Line

The **slope of a line** is an algebraic concept used to graph linear equations. In the equation ***y = mx + b***, the variable *m* represents the slope of the line. Slope is calculated by dividing the change in the y-coordinate (the rise) by the change in the x-coordinate (the run). Parallel lines have equivalent slopes. Perpendicular lines have slopes that are negative *and* reciprocal of each other. To graph a line when the slope and the y-intercept are known, plot the y-intercept and then use the slope to count UP and OVER to find another point on the line.

PRAXIS FLASHCARD #356

Vertex of a Parabola

The **vertex of a parabola** is a single point where the parabola changes direction from upward to downward (or downward to upward). The x-coordinate of a parabola's vertex is found by $-\frac{b}{2a}$