

# 01 Graphing

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## 1 Introduction

When a graph is plotted, there is usually a way to translate the relationship between the  $x$  axis and the  $y$  axis. For example, if  $x$  represents time and  $y$  represents distance, then:  $\frac{x}{y}$  represents *velocity*.

## 2 Cartersian Coordinate System

The (textitreference) point where the  $x$  axis and  $y$  axis meet is called the textitorigin.

Points on a graph are represented as textitordered pairs in the form  $(x, y)$ . This will show the location of the point on the graph. This means that all locations on the graph will have a name - textbfthe ordered pair. There is exactly one ordered pair that is going to name that location. The sign (+ or -) gives direction to the name.

Every single point on the plane has exactly one name and every ordered pair has exactly on location.

This system - textitthe cartesian coordinate system was named after Rene Descartes - a philosopher and scientist from France.