

## Chapter 11 Motion

**WordWise**

Complete the sentences by using one of the vocabulary words below.

speed	acceleration	linear
vector	relative motion	nonlinear
free fall	frame of reference	velocity
distance	average speed	resultant vector

An expression for \_\_\_\_\_ **acceleration** \_\_\_\_\_ is  $(v_f - v_i)/t$ .

A quantity that has both magnitude and direction is called a(n) \_\_\_\_\_ **vector** \_\_\_\_\_.

The total distance traveled divided by the total time is \_\_\_\_\_ **average speed** \_\_\_\_\_.

A speed-time graph in which data points form a straight line is an example of a(n) \_\_\_\_\_ **linear** \_\_\_\_\_ graph.

Common units for \_\_\_\_\_ **speed** \_\_\_\_\_ include meters per second (m/s).

In order to accurately and completely describe the motion of an object, a(n) \_\_\_\_\_ **frame of reference** \_\_\_\_\_ is necessary.

You can determine \_\_\_\_\_ **distance** \_\_\_\_\_ by measuring the length of the actual path between two points in space.

Two or more vectors combine to form a(n) \_\_\_\_\_ **resultant vector** \_\_\_\_\_.

Objects in \_\_\_\_\_ **free fall** \_\_\_\_\_ accelerate at  $9.8 \text{ m/s}^2$ .

A curve often connects data points on a(n) \_\_\_\_\_ **nonlinear** \_\_\_\_\_ graph.

Together, the speed and direction in which an object is moving are called \_\_\_\_\_ **velocity** \_\_\_\_\_.

Movement in relation to a frame of reference is \_\_\_\_\_ **relative motion** \_\_\_\_\_.