### Key Terms

acceleration due to gravity

acceleration of an object as a result of gravity

average acceleration

the rate of change in velocity; the change in velocity over time

average speed

the total distance traveled divided by elapsed time

average velocity

the displacement divided by the time over which displacement occurs under constant acceleration

displacement

the change in position of an object

distance traveled

the total length of the path traveled between two positions

elapsed time

the difference between the ending time and the beginning time

free fall

the state of movement that results from gravitational force only

instantaneous acceleration

acceleration at a specific point in time

instantaneous speed

the absolute value of the instantaneous velocity

instantaneous velocity

the velocity at a specific instant or time point

kinematics

the description of motion through properties such as position, time, velocity, and acceleration

position

the location of an object at a particular time

total displacement

the sum of individual displacements over a given time period

two-body pursuit problem

a kinematics problem in which the unknowns are calculated by solving the kinematic equations simultaneously for two moving objects