



Directed Reading for  
Content Mastery

Section 2 ■ Acceleration  
Section 3 ■ Motion and Forces

**Directions:** Complete the paragraph by filling in the blanks using the terms listed below.

acceleration  
negative

velocity  
positive

direction  
time

Acceleration occurs when an object's 1. velocity changes.

When an object speeds up, it has 2. positive acceleration. When an object's final velocity is less than its initial velocity, however, it

has 3. negative acceleration. An object that is changing

4. direction is accelerating, even if its speed remains the same.

Acceleration can be calculated by dividing the change in velocity by the

5. time interval in which the change occurred. The SI unit of 6. acceleration is  $m/s^2$ .

**Directions:** Match the terms in Column II with the descriptions in Column I. Write the letter of the correct term in the blank at the left.

Column I

- D 7. result in a net force of zero  
F 8. force that prevents two forces in contact from sliding past each other  
C 9. cause an object's velocity to change  
A 10. a push or pull that can change an object's motion  
E 11. force that acts in the opposite direction to the motion of a surface sliding on another surface  
B 12. the combined force on an object

Column II

- a. force  
b. net force  
c. unbalanced forces  
d. balanced forces  
e. sliding friction  
f. static friction