

## REVIEW

**8 SECTION 8.2****Acceleration and Force**

1. **Calculate** the average acceleration of a car that changes speed from 0 m/s to 15 m/s in 5 s.

\_\_\_\_\_

2. **Interpret** the following situations to determine if an object's velocity is being altered by an applied force (answer *Yes* or *No*).

\_\_\_\_\_ a. a batter hits a baseball upward into right field

\_\_\_\_\_ b. a satellite orbits Earth at a constant speed of 7000 m/s

\_\_\_\_\_ c. a submarine moves due east at a constant speed of 45 m/s

\_\_\_\_\_ d. a falling book lands on the floor with a precollision speed of 9 m/s

3. **Suggest** why placing wheels under a heavy box reduces the necessary force required to push it along at a constant speed.

\_\_\_\_\_

\_\_\_\_\_

4. **Analyze** the following situations, and indicate whether the forces are balanced or unbalanced.

\_\_\_\_\_ a. a skydiver falling from an altitude of 1.5 km

\_\_\_\_\_ b. a cannonball fired parallel to the ground

\_\_\_\_\_ c. a motorboat coasting after its engine is shut off

\_\_\_\_\_ d. a bike leaning against a tree

5. **Evaluate** the change of motion in the following cases in which the forces on an object change from balanced to unbalanced.

a. The brake of a car parked on a hill is released.

\_\_\_\_\_

\_\_\_\_\_

b. A skydiver falling at a constant speed opens her parachute.

\_\_\_\_\_

\_\_\_\_\_

c. A boat moving at a constant speed of 44 km/h enters a crosswind.

\_\_\_\_\_

\_\_\_\_\_