

SECTION

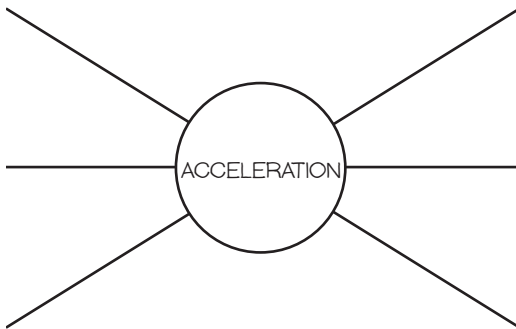
ACCELERATION MEASURES HOW FAST VELOCITY CHANGES.

1.3 Reading Study Guide B**BIG IDEA** The motion of an object can be described and predicted.**KEY CONCEPT** Acceleration measures how fast velocity changes.**Review**

Velocity is a measure of the speed and direction of motion.

Take Notes**I. Speed and direction can change with time. (p. 25)**

1. Fill in the description wheel for *acceleration*.



2. Complete the three-column chart. Describe how each type of acceleration affects motion.

In the same direction as motion	In the opposite direction of motion	At a right angle to motion

II. Acceleration can be calculated from velocity and time. (p. 27)

3. What information is needed to measure acceleration?

A. Calculating Acceleration (p. 28)

4. What is the formula for acceleration? What units are used for each of the values?

5. A skater begins skating at a velocity of 1 m/s. After 4 seconds, her velocity is 3 m/s. What is the skater's acceleration? Show your work.

B. Acceleration over Time (p. 29)

6. A car has an acceleration of 4 m/s^2 . What will the increase in its velocity be after 2 seconds? If it started with a velocity of 30 m/s, what is its final velocity?

C. Velocity-Time Graphs (p. 31)

7. Fill in the velocity-time graph below to show the velocity of a ball rolling at a constant speed of 7 m/s for 5 seconds.

