

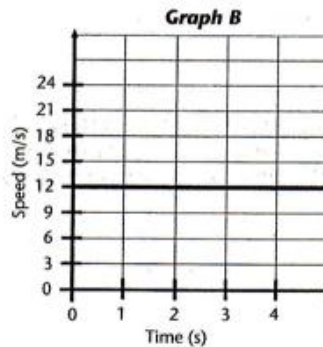
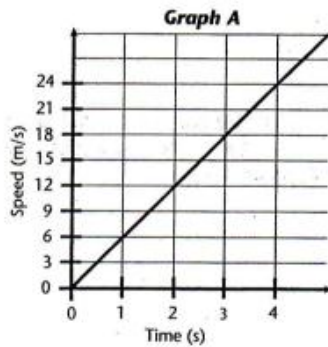
Motion • Review and Reinforce

Acceleration

Understanding Main Ideas

If the statement is true, write true. If it is false, change the underlined word or words to make the statement true.

- _____ 1. If a train is slowing down, it is accelerating.
- _____ 2. To find the acceleration of an object moving in a straight line, you must calculate the change in distance during each unit of time.
- _____ 3. A Ferris wheel turning at a constant speed of 5 m/s is not accelerating.
- _____ 4. An airplane is flying west at 200 km/h. Two hours later, it is flying west at 300 km/h. Its average acceleration is 100 km/h².
- _____ 5. Graph A below plots a race car's speed for 5 seconds. The car's rate of acceleration is 6 m/s².
- _____ 6. Graph B below plots the same car's speed for a different 5-second interval. The car's acceleration during this interval is 12 m/s².



Building Vocabulary

From the list below, choose the term that best completes each sentence. Write your answers on the lines provided.

acceleration velocity speed distance

7. _____ occurs when the velocity of an object changes.
8. When you say that a race car travels northward at 100 km/h, you are describing its _____.



ACCELERATION LESSON CHECK

1. Define acceleration. _____

2. Is the following sentence True or False? "An object can be accelerating even if its speed is constant."

3. Circle the letter of each sentence below that describes an example of acceleration.

- A) A car follows a gentle curve in the road.
- B) A batter swings a bat to hit a ball.
- C) A truck parked on a hill doesn't move all day.
- D) A runner slows down after finishing a race.
- E) A child goes up and down on a merry-go-round horse as the merry-go-round slowly moves in a circle.

4. The Earth revolves around the Sun at a fairly constant speed. Is the Earth accelerating? Explain.

5. What is the formula for calculating acceleration? (Write it in the space below.)

6. A car passes another car on the highway. The original speed of the car was 65 miles per hour. The maximum speed of the car as it passed was 73 miles per hour. It took the car 2.2 seconds to change speeds. What was the car's acceleration? (Show the 5-Steps below.)

1.

2.

3.

4.

5.