

Name:

Date:

PSC2122 Test 1 MP3 Motion: Speed and Velocity

Modified True/False

Indicate whether the sentence or statement is true or false. If false, change the underlined word or phrase to make the sentence or statement true.

- ____ 1. Motion is measured relative to a reference point. _____
- ____ 2. A cyclist travels 20 km in half an hour. Her average speed is 10 km/h. _____
- ____ 3. If one toy car is traveling at 10 cm/s and another toy car is moving at 10 cm/s in the opposite direction, both cars have the same velocity. _____

Multiple Choice

Identify the letter of the choice that best completes the statement or answers the question.

- ____ 4. When an object's distance from another object is changing,
 - a. it is in motion.
 - b. it is speeding.
 - c. it has a high velocity.
 - d. it is accelerating.
- ____ 5. A place or object used for comparison to determine if something is in motion is called
 - a. a position.
 - b. a reference point.
 - c. a constant.
 - d. velocity.
- ____ 6. If you know the distance an object has traveled in a certain amount of time, you can determine
 - a. the size of the object.
 - b. the speed of the object.
 - c. the location of the object.
 - d. the velocity of the object.
- ____ 7. Speed equals distance divided by
 - a. time.
 - b. velocity.
 - c. size.
 - d. motion.
- ____ 8. If the speed of an object does NOT change, the object is traveling at a(n)
 - a. constant speed.
 - b. average speed.
 - c. increasing speed.
 - d. decreasing speed.
- ____ 9. If a bicyclist travels 30 kilometers in two hours, her average speed is
 - a. 30 km/h.
 - b. 60 km/h.
 - c. 15 km/h.
 - d. 2 km/h.

10. If an object moves in the same direction and at a constant speed for 4 hours, which of the following is true?

- The object's speed changed during the 4 hours.
- The object's velocity did not change.
- The object accelerated during the 4 hours.
- The object decelerated during the 4 hours.

11. If you know a car traveled 300 kilometers in 3 hours, you can find its

- acceleration.
- direction.
- average speed.
- velocity.

12. A train that travels 100 kilometers in 4 hours is traveling at what average speed?

- 50 km/h
- 100 km/h
- 2 km/h
- 25 km/h

13. When you know both the speed and the direction of an object's motion, you know the

- average speed of the object.
- acceleration of the object.
- distance the object has traveled.
- velocity of the object.

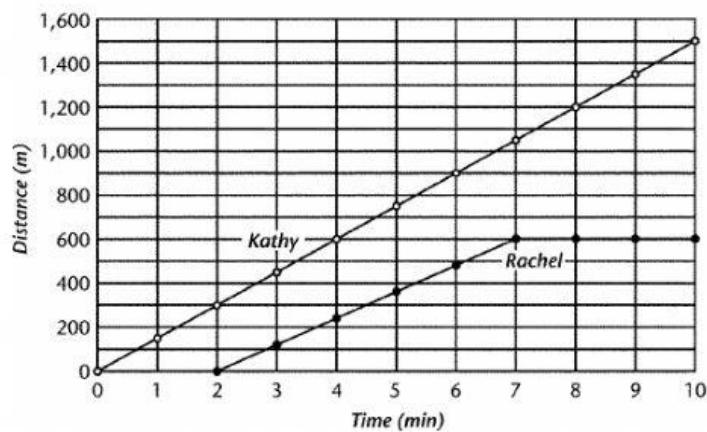
Completion

Complete each sentence or statement.

- A reference point is assumed to be _____, or not moving.
- A change in an object's position relative to a reference point is called _____.
- The distance traveled by a moving object per unit of time is called _____.
- Speed that does not change is referred to as _____ speed.
- The statement that the motion of a hurricane is 20 kilometers per hour in an easterly direction is a description of the hurricane's _____.

Short Answer

Motion of Two Joggers



19. How far did Kathy jog in the first 4 minutes?

Essay

20. Explain how to find the average speed of a car that travels 300 kilometers in 6 hours. Then find the average speed.