

Motion

I. Match the terms in Column A with its description in Column B. Type the letter of your answer in the box.

Column A

- _____ 1. It refers to the quantity that only has size and units, but no direction.
- _____ 2. It is the total movement of an object without direction.
- _____ 3. It is the change in velocity.
- _____ 4. It is the quantity with size, units, and direction.
- _____ 5. It is a measure of how fast or slow an object moves.
- _____ 6. It is the change of position of an object.
- _____ 7. It measures how fast or slow an object moves with direction.

Column B

- a. motion
- b. distance
- c. displacement
- d. scalar
- e. vector
- f. speed
- g. velocity
- h. acceleration

II. Choose **true** or **false**.

- _____ 1. When you are riding a swing, it means the swing is at rest.
- _____ 2. 52 km north is a vector quantity.

_____ 3. It is also considered acceleration when a moving car suddenly stops.

III. Read and solve the problems.

1. The train traveled from the station to the mall, a distance of 576 km in 6 hours. The train is only allowed to travel at a maximum speed of 90 km/h. Did the train break the speed limit?

2. A swimmer speeds up from 1.1 m/s to 3.2 m/s during the last 13 seconds of the race. What is the acceleration of the swimmer?

3. A roller coaster is moving at 25 m/s at the bottom of the hill. Three seconds later it reaches the top of the hill at 10 m/s. What was the acceleration of the roller coaster?