

Name : \_\_\_\_\_ Block: \_\_\_\_\_

## Motion Unit

### Distance, Speed and Velocity Study Guide

**You have the following objective(s) for this study guide:**

1. Define distance, speed and velocity.

I have prepared this Study Guide to help you learn these objectives. The following break the objectives into smaller questions or tasks. As you do the following, please:

- Put the page number where you found the answer in the left margin. This will help you when you go back to study.

**THANK YOU**

Page:

1. How can the motion of an object be described?
2. How do you know if an object has changed position?
3. What is distance?
4. What is displacement?
5. Complete *the equation for calculating speed*.

**speed** (in meters/second) = \_\_\_\_\_

S = \_\_\_\_\_

5. A runner completes a 400-m race in 43.9 s. In a 100-m race, he finishes in 10.4 s. In which race was his speed faster? How do you know?

Page:

6. A passenger train travels from Boston to New York, a distance of 350 km, in 3.5 h. What is the train's speed? SHOW YOUR WORK
  
7. Compare and contrast *average speed and instantaneous speed*.
  
8. How is average speed calculated?
  
9. What is velocity?
  
10. How is velocity different from speed?
  
11. A dancer moves 5 m toward the left of the stage over the course of 15 s. What is her average velocity for this time? SHOW YOUR WORK
  
12. If you know an object's velocity do you know its speed? Explain.
  
13. An airplane flies a distance of 650 km at an average speed of 300 km/h. How much time did the flight take? SHOW YOUR WORK