

8th Grade Study Guide

Motion, Speed, Velocity, and Acceleration Test

Test date: Wednesday, November 16, 2016

The test will consist of a mixture of questions including

- Multiple choice
- Fill in the blanks
- True/False – IF A STATEMENT IS FALSE Students will need to replace an underlined word with the word or words that would make the statement true.
- Short answer questions – STUDENTS NEED TO PRACTICE WRITING SKILLS BY USING COMPLETE SENTENCES AND USING THE QUESTION IN THEIR ANSWER (EXAMPLE: if the question ask “What is the name of the diagram shown above?” the student would want to answer like so “The name of the diagram shown above is...”)
- Word problems related to speed, velocity, and acceleration. Students should know the formula for speed and understand what velocity is speed + direction and acceleration being any change in speed or direction.
- If we complete studies on how to graph motions students should be prepared to answer questions on graphing motion and will need to be able to complete a graph as well as analyze it for patterns and trends.
- Short Essay questions to practice science writing skills and show application of critical thinking skills.

Students should prepare for the test by studying the following vocabulary terms, ideas, and concepts that we studied throughout the past three and a half weeks. Students should study from notes taken, homework completed, text book readings from Chapter 1, Sections 1 and 3 found on pages 6-27. Students can also use the Chapter 1 Study Guide and Review and Assessment found on pages 30 to 32 to assist in preparing for their test

Use the following guide to assist you in your studies.

Describing and Measuring Motion – students should study using the notes sheet handout we used in class while discussing the concepts on motion, speed and velocity, and notes take in our interactive notebook on vocabulary, and conversions. Students can use practice from “Speed Machine’s” homework handout, as well as our “Speed and Distance Practice A” homework worksheet. Students can also study Chapter 1, Section 1 found in our text on pages 6 -15

- Understand how we know when an object is in motion.
- Know how we know an objects speed and velocity.

- If we get to this part, you will need to know how we can graph motion. (I will announce by Monday, November 14)
- Know the following Key Terms
- Know how we calculate speed and how to use the “Speed, Distance, and Time Triangle” and how it can be used to assist on in calculating, not only speed, but also distance and time. → speed = distance/time
- Know how to describe velocity
 - Motion
 - Reference point
 - International System of Units
 - Meter
 - Speed
 - Average speed
 - Instantaneous speed
 - Velocity
 - Direction
 - Slope (if we complete our graphing motion section) → slope = rise/run

Acceleration – Study Review and Reinforce “Acceleration” worksheet. Study from our notes sheet hand out and our text Chapter 1, Section 3 pages 22-27. Study page 25 in text to help review calculating acceleration and do the practice problems on this page.

- Know what kind of motion acceleration refers to.
- Know how acceleration is calculated → Acceleration = Final speed – initial speed / time
- If we get to graphing motion Know what graphs can be used to analyze the motion of an accelerating object. → speed vs. time graphs and distance vs. time graph.
- Key term to know – acceleration.

Review the following information

- On page 31 under Organizing Information know how to fill in the concept map.
- On page 31 under reviewing key terms study and know numbers 1, 2, 3, 5, 6, 7, 9, 10.
- On page 32 study under Checking Concepts number 15
- On page 32 under Math practice be able to do problems like 19,20, and 21 and under Applying Skills try to do 22, 23, and 24
- Use the Key term and Math Skills review sheets and Connecting Concepts sheets to help with your studies as well.

