

Chapter 1 Reading Guide

AP Physics B

1-1 Science and Creativity

Define the following terms:

Observation:

Theory:

What is the main function of a theory?

How are theories used in science?

1-2 Physics and its Relation to Other Fields

Summarize your understanding of how Physics relates to other areas of study.

1-4 Measurement and Uncertainty

How do you define uncertainty?

What is the difference between accuracy and precision?

What is estimated uncertainty? Give an example.

What is percent uncertainty and how is it calculated?

What are significant figures?

What are the rules for finding significant figures?

What is the rule for finding significant figures when you multiply or divide numbers?

What is the rule for finding significant figures when you add or subtract numbers?

What do you do with significant figures when rounding in calculations?

How do you calculate percent error?

1-5 Units, Standards, and the SI System

What are the standard units for length, time, and mass in the SI System?

What are unit prefixes used for?

What is the difference between a base and a derived unit?

1-6 Converting Units

What is a conversion factor?

Show some example conversion problems.

1-7 Orders of Magnitude

What is “orders of magnitude”?

How do you estimate using orders of magnitude?

What is triangulation and how is it used to estimate?