

Academic Year: 2021 – 2022
AP Physics 1
Grade 12
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SUMMER ASSIGNMENT

In order to be prepared for AP Physics 1, students will need to have certain prerequisite skills in science. To help ensure this, you should complete the following. This assignment is due on the second full day of school.

- (1.) Summarize the rules for significant digits and write an example of each rule.
- (2.) Explain the difference between a hypothesis, theory, and law. Provide an example of each.
- (3.) Read about System International (SI) units and measurement. Write a summary that demonstrates your understanding of the SI system. Be sure to include some examples with prefixes (such as milli-, kilo-, nano-, etc.) used with metric units.
- (4.) Write a brief summary that reflects your knowledge of coordinate systems and reference frames (as they relate to physics).
- (5.) Explain the difference between a motion diagram and a free body diagram. Provide an example of each. Make sure that both diagrams are well drawn and fully labeled.
- (6.) Summarize what is meant by “order of magnitude” and give three examples.
- (7.) Explain the difference between a vector quantity and a scalar quantity. Provide four examples of each.
- (8.) Rewrite each of the following quantities in scientific notation...
 - (a.) 3,840,000m
 - (b.) 0.0000359s
 - (c.) 4500J
 - (d.) 2,800,000,000m
 - (e.) 0.045Volts
 - (f.) 32.5Amps
 - (g.) 502Watts
 - (h.) 0.00000561kPa