

AP Physics C

Use this textbook for the summer work:

OpenStax College Physics 2e.

<https://openstax.org/details/books/college-physics-2e>

It is free! No need to buy anything!

This summer work is on a variety of Mechanics topics, all done **without** calculus.

All of these are in the “Problems and Exercises” section of their respective chapters:

Chapter 2, Kinematics: 6, 13, 23, 29, 41, 57, 65, 66

Chapter 3, 2-Dimensional Kinematics: 5, 25, 27, 34, 65

Chapter 4, Forces and Newton’s Laws: 3, 5, 9, 20, 22, 29, 42, 49

Chapter 5, Further Application of Newton’s Laws (only friction — skip 5.2 and 5.3): 4, 6, 8, 9, 11, 17

Chapter 6, Circular Motion and Gravitation (6.1, 6.2, 6.3, 6.5): 2, 4, 6, 10, 13, 19, 21, 23, 26, 31

Chapter 7, Work and Energy: 3, 6, 8, 13, 21, 22, 24, 27, 32, 33, 42

Chapter 8, Linear Momentum and Collisions: 4, 5, 11, 13, 23, 28, 31, 44, 45, 50

Chapter 9, Statics and Torque (9.1 and 9.2 only): 3, 7, 11, 17

Chapter 10, Rotational Motion and Angular Momentum (10.1 and 10.2 only): 2, 5, 7, 9

If you have taken a physics class before, most of this will look familiar. If not, you will have to learn these concepts. **You must turn in your work on these problems** in the fall. We will begin the year by going over these topics again, but **with calculus**, and we will switch to the “University” textbook from OpenStax. The goal will be to finish the Mechanics portion of AP Physics C before Christmas, leaving more time for Electricity and Magnetism.