

Physics 161, spring 2015

HW # 1

(Due Wednesday 21 January by the end of the day.)

I will have office hours after 2 pm every Tuesday afternoon

The problems in Physics 161 will either come from Purcell and Morin's *Electricity and Magnetism*, or from Schey's book on vector calculus.

Electricity and Magnetism provides both Problems and Exercises at the end of each chapter. The solutions to the Problems are found in Chapter 12; there are no solutions provided for the Exercises.

Problems: for practice, but not to be handed in

- ~~1. 1.3. Force from a cone~~
- ~~2. 1.17. Zero field in a spherical shell~~
- ~~3. 1.24. Potential energy of a cylinder~~
- ~~4. 1.27. Uniform field in a cavity~~
- ~~5. 1.29. Pulling two sheets apart.~~

Exercises: to be handed in.

- ~~6. 1. 54. Semicircle and wires~~
- ~~7. 1.59. Zero field in a cylindrical shell~~
- ~~8. 1.66. Force between two strips~~
- ~~9. 1.73. A plane and a slab~~
- ~~10. 1.83. Potential energy of a cylinder~~