

Physics 3221
Fall Term 2018
Homework Problem Set 6

Due Monday October 15, 12:50 pm.

Reading: Sections 4.5-4.10 from Chapter 4. This homework has a total of 11 ★s.

Problem 1. A classic harmonic oscillator. Problem 4.28★★ from the textbook.

Problem 2. A tipping toy. Problem 4.30★ from the textbook. Hint: review example 4.7.

Problem 3. A classic pendulum. Problem 4.34★★ from the textbook.

Problem 4. A one-dimensional contraption. Problem 4.36★★ from the textbook.

Problem 5. The virial theorem. Problem 4.41★ from the textbook.

Problem 6. Inelastic collisions. Problem 4.48★ from the textbook.

Problem 7. Hydrogen atom. Problem 4.53★★ from the textbook.