

Reading and HW #5 PHY360 Fall 2016 Due TUESDAY 10/11/2016

Reading

Please read Chapter 5 of the textbook (A.P. French, "Vibrations and Waves").

Problem #1 Coupled Pendulums

Problem 5-2 in the textbook. Review the two pendulums + coupling spring solution we worked out in lecture.

Problem #2 Coupled Masses

Problem 5-6 in the textbook. Apply what you know about coupled systems to two masses connected to walls and each other by 3 springs.

Problem #3 CO₂

Problem 5-9 in the textbook. Real world application - vibrational modes of CO₂ molecule.

Problem #4 2 Hanging Springs

Problem 5-10 in the textbook. More general coupled systems with 2 degrees of freedom - normal modes.

Problem #5 Driving coupled systems

Problem 5-12 in the textbook. Study driven coupled oscillators - set up equations of motion.