# Homework 6

**Due** Monday, October 21, 12:50 pm in class.
**Reading**: Chapter 5 from the textbook.
**Note:** Make your solutions neat, concise, and intelligible. It is not sufficient just to state the answer. Points may be deducted, if it is difficult to find and/or understand the solutions.


**Problem 1.** A pendulum. Problem 5.3★ from the textbook.

**Problem 2.** A simple harmonic oscillator. Problem 5.8★ from the textbook.
**Problem 3.** Frequency of small oscillations. Problem 5.13★★ from the textbook.

**Problem 4.** A two-dimensional contraption with 2 springs. Problem 5.18★★★ from the textbook.

**Problem 5.** A two-dimensional contraption with 4 springs. Problem 5.19★★★ from the textbook.

**Problem 6.** Q factor. Problem 5.44★★ from the textbook.