

Homework 2

Complete Part I first, by taking notes that you will keep for yourself. (*Do not turn these in.*) Type up your answers to each of the questions in Part II and submit it in one double-spaced, Word document with your name on the top under the title. Use 12-point Times New Roman Font with 1" margins on all sides. If you have to do a calculation, solve the problem by hand on a separate sheet of paper. Then take a picture of your work and paste it into your word document in an appropriate place. When you are done upload this into the [Dropbox on Blazeview](#). If you are unable to use Word for the assignment, you may use another software package and upload a pdf instead.

PART I: Notes

1. Read and take notes on the video "What is Energy".

PART II: Assignment (25 points total)

1. Define the following terms in your **own words**: (1 *points each*)
 - a. Work
 - b. Energy
 - c. Conservation of Energy
 - d. Mechanical Energy
2. Suppose you wish to lift a 300 N object to a height of 2 m.
 - a. How much work is done? (4 *points*)
 - b. Neglecting friction, how much work is done if you push the object up a 3 m long ramp? (4 *points*)
 - c. How much power is used to get it up the ramp in 30 s? (4 *points*)
3. Explain what happens to the energy in a bouncing ball since each succeeding bounce is lower in height. (5 *points*)
4. Complete the following diagram for a swinging ball. Position (1) is highest point. (1 *point each*)

