

Homework 4

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 "Thermal Energy".

PART II: Assignment (25 points total)

1. Convert each of the following into the indicated temperature: (1 point each)
 - a. 26 K = _____ °C
 - b. 450 °C = _____ °F
 - c. 350 °F = _____ K
2. Describe the zeroth, first, and second law of thermodynamics in **your own words**. (6 points)
3. What is heat and how is different from thermal energy? (3 points)
4. What is meant by the term "Triple Point"? (3 points)
5. A 650 g block of brass is being heated from 60 °C to 130 °C. If the specific heat of brass is 0.092 cal/g·K, what is the how much heat is required to change the temperature of the block? (5 points)
6. A 50 kg block of silver is being vaporized in an oven. At what temperature do you need to set the oven to and how much heat is required to vaporize the block? (5 points)