Homework 1

Due Date: February 7

All written homeworks are due at the **beginning of class** on the due date. Note that there is no provision for homework turned in late. Points are scaled relative to the "time" value given in the book (the number in square brackets next to the problem), unless indicated differently below. Be careful of units (seconds/nanoseconds, MHz/GHz, MB/GB, etc.), use the **most appropriate units for the solution**, and be sure to answer all parts of a problem. If your homework is longer than one page, please staple or paper-clip the pages together. Show your work for maximum (partial) credit. Be as neat as possible; if I can't read it, it's wrong.

It is not guaranteed that all problems will be graded. We will either cover all answers in class and/or a solution sheet will be posted.

At the end of your homework, please write and **sign** the Honor Code pledge:

I have abided by the Wheaton College Honor Code in this work.

Do the following problems.

1. A process takes 9.1792μs to run. What is the equivalent time in seconds? In nanoseconds? Use (proper) scientific notation where appropriate. [3]

2. A student's laptop has a screen resolution of 1536×864. What is its aspect ratio? Be sure to answer in ratio form (i.e., $x : y$) commonly used in monitor specifications. [3]

3. In the hardware diagram created in class, there was a line called "address." What does "address" generally refer to? Briefly explain. [3]

4. Text problems:

   1.2, 1.4 [4], 1.5[9], 1.7[10][1], 1.8 (part c only)[5], 1.10.1, 1.12.1–1.12.3, 1.13.1, 1.13.4.

[1] Change the GHz ratings from 2.5 and 3 to 2.6 and 2.9, respectively.