

## Homework 1

### Quiz Date: February 9

There is nothing to hand in for this homework assignment. There will be a quiz at the **beginning of class** on the indicated date. Points on the quiz will be 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 – good practice for the quiz. The solution sheet will be posted on the course web page.

Do the following problems:

1. A process takes  $9.1792\mu\text{s}$  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  $1536 \times 864$ . 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]<sup>1</sup>, 1.8 (part c only)[5], 1.10.1, 1.12.1–1.12.3, 1.13.1, 1.13.4.

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<sup>1</sup>Change the GHz ratings from 2.5 and 3 to 2.6 and 2.9, respectively.