HOMEWORK ASSIGNMENT #1

due: Wednesday 3 pm, February 2

1. Do all C-exercises 1.-5. of the January 24. class. If you are new to C do 1.1, 2.1 etc., if you are experienced with C do 1.2, 2.2 etc.. (4P)

2.a Write a program that reads in a speed in miles/hour and prints out the speed in m/s. (2P)

2.b Use the same program but use a function for the conversion from miles/hour to m/s. (2P)

3. Write a program that reads in the names and ages of three people and prints out the name and age of the oldest person. (3P)

4. Write a program that reads in the current day and the birthdate of a person and prints out the age of the person. (3P)

5. Write a program that reads in \( n \), the number of measurements and then reads in \( n \) measurements \( (x_i) \). The program prints out the average \( \frac{1}{n} \sum_{i=1}^{n} nx_i \) and the standard deviation of the mean \( \frac{1}{n} \sqrt{\sum_{i=1}^{n} nx_i^2 - \frac{1}{n} \left( \sum_{i=1}^{n} nx_i \right)^2} \).

For the advanced programmers: Do the same but without having to read in \( n \). (3P)

6. Write a program that reads in any day of the year 2000 and prints out if this day is a school day of the spring semester.

**Hint:** Use the operator \%. (3P)