CIS 130 - Intro to Programming - Spring 2007
Homework Assignment #1 - **INDIVIDUAL** assignment

Homework #1 DUE**: BEGINNING** of class, Wednesday, January 31, 2007

Purpose: get some practice with Python arithmetic expressions and functions.

How to turn in: turn in the files **hw1.py** and **hw1.txt** that you create below using the tool **130submit** on cs-server

1. Write Python expressions for each of the following, When you are comfortable with them, connect to **cs-server** using ssh, and type each of your expressions into the **python** interpreter. Then **paste** the part of your **python** session where you tested these into a file **hw1.txt**, using pico (like we did during the lab exercise).

a. Write an expression that Python would consider to be the integer value seventeen.

b. Write an expression that Python would consider to be the floating point value seventeen.

c. Write a Python expression that would compute the product of the integers seventeen and twelve.

d. Write a Python expression that would compute 170 minus (5.0 raised to the 12th power)

e. Write a Python expression that would compute the product of 5 times 6 times 7 times 8.

f. Write a Python expression that would compute the sum of:
the product of 5 and 6
added to:
87 minus 46.

g. Write a Python expression that would compute the result of dividing the integer five by the integer two. (Consider: what do you think the value of this expression will be?)

h. Write a Python expression that would compute the result of dividing the floating point value five by the floating point value two. (Consider: will this value be the same as **g.**'s expression?)

i. Write a Python expression that would compute the result of dividing the floating point value five by the integer two. (Consider: will this value be the same as **g.**'s value? **h.**'s value?)

j. Write a Python expression that would compute the square root of the floating point value seventy-five.

k. Write a Python expression that would compute the square root of the result of dividing the floating point value twenty-three by the integer eleven.

2. Create a new file **hw1.py** using pico. In it, write definitions for the following functions:

a) The function described in Exercise 2.2.1 in the HtDP reading packet.

b) The function described in Exercise 2.2.2 in the HtDP reading packet.

c) The function described in Exercise 2.2.4 in the HtDP reading packet.

d) The functions described in Exercise 2.2.5 in the HtDP reading packet.

(Note: we'll be discussing the design recipe next Monday, but you are not required to use it for **this** assignment (although you can if you WANT to... 8-))

Test your functions in **python**; remember that typing **from hw1 import *** will import them into a **python** session so that you can call them (although you need to exit **python** and re-enter if you change your functions and want to run the new versions).

To the bottom of your **hw1.txt** from problem #1, paste the results of importing your functions and testing each at least once within a **python** session.

3. When you are happy with your files **hw1.txt** and **hw1.py**, type the following command at the cs-server prompt:

~st10/130submit

Then follow its directions to submit your files .