
For this assignment, you should have a driver script that calls each of the functions that you need to write. You should hand in your driver script, the file containing all the functions you wrote along with any requested sample output.

- 1) (2 pts) Write a Python function that will accept two inputs, a and b (these should be floats in the driver script) and outputs the values of $a + b$, $a - b$, ab and $\frac{a}{b}$. You can assume that b will not be zero. Choose your own values for a test run, then:
 - a) (1 pt) Call the function from your driver script with each output returned in its own variable.
 - b) (1 pt) Call the function from your driver script with all outputs returned in a tuple.
- 2) (2 pts) Write a Python function to compute $n!$ given the value of n .
- 3) (2 pts) Write a Python function to compute the binomial coefficient given the values of n and k . This function should make use of the function you wrote in Question 2.
- 4) (x pts) Write a Python function for Problem 1 of HW 10. Test your function for $a = 13.4$, $b = -7.6$ and $n = 8$. The driver script should compute the relative error between the value returned from your function and the value obtained by computing $(a + b)^n$ directly.

Repeat this exercise, but use $n = 50$ instead. What happens to the relative error? Why do you think this happens?