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CSE13s Winter 2022 Assignment 2: Numerical Integration Writeup

Reflection:

Through this project much was learned about how higher level math is implemented using a lower level language. This brought light to the techniques learned in math class, as we find these ideas and concepts to be very important to many things we take for granted.

Analysis:

Although very similar there are differences in the outputs. This could be caused by the accuracy we have selected for the loops to run to and the formula. In combination there will be a variance in the outputs in comparison to the math library. The larger the calculation the more variance there is in the answer as there is going to be more estimation as the accuracy is only to 14 digits after going above the answer will start varying as the numbers are being added together with a loop like a summation. Due to this as long as the number being summed together is not of infinite accuracy the number will start to vary from the actual number. We would need to find a function that can bypass this logical error. We see that the answers that these two libraries provide are accurate and precise to the scope we are looking for.