

Assignment 2 Writeup Document

For this assignment, I was able to complete the task with no difference in the output. By tweaking the epsilon value that I used, I was able to reduce the error to be too small to fit in a double.

For Asin and Acos, I used the fact that:

$$\text{Asin}(x) = \text{Sgn}(x)(\text{PI}/2 - \text{Asin}(\text{Sqrt}(1 - x * x)))$$

This fact allowed me reduce error near ± 1 as the taylor series requires many more terms near these values to reach desired accuracy.

For all purposes, my implementations of Asin, Acos, Atan, and Log produce identical results as the math library used does.