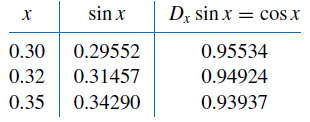
Homework 6

# Section 3.3

## Problem 5

1. Use the following values and five-digit rounding arithmetic to construct the Hermite interpolation polynomial to approximate .



The Hermite polynomial is given by:

Where:

For these values, we calculate the Lagrange Polynomials and their derivatives:

Now for the Hermitian Polynomials at :

Thus now that we can get the Polynomial evaluated at :

This is a relative error of .

1. The error of this polynomial is given by:

The reason for the discrepancy in my error is because we did 5-digit rounding and that caused us to have a huge error.