NMTL01E Numerical Methods

Lab Activity

1. Make a C++ program that will give the derivative of $f(x)=5x^4 + 4x^3- 8x^2 -2x + 1$.

   Sample output:

   Enter the literal coefficient of 1st term: 5 (enter)
   Enter the exponent of 1st term: 4 (enter)
   .
   .
   .
   The derivative of f(x) is _____ .

2. Make a C++ program that will display the 1st up to 6th significant figures of 8.28478.

   Sample Output:

   Significant, as the name suggests means the number of digits that are actually meaningful to the user.

   X=8.28478.

   1 significant digit 8

   2 significant digits 8.3

   3 significant digits 8.28
   4 significant digits 8.285
   5 significant digits 8.2848
   6 significant digits 8.28478

3. Make a C++ program for the accumulated error table below.

Variable	Exact Value	Computed Value	Accumulated error
X1	4.99	5	0.01
X2	4990	5000	10
X3	4990000	5000000	10000
X4	4990000000	5000000000	10000000