COMPUTER LAB #1
MATH 5610/6860 FALL 2009

(1) Use the Taylor expansion of $f(x) = \ln(1 + x)$ at $x = 0$ to approximate $f(x)$ for $x = 0.1$, $x = 0.5$ and $x = 1$. To practice your Matlab skills, please implement this in two ways: one using a for loop and the other one relying only on array syntax. Put each of the different "methods" in its own Matlab function.

(2) Produce a table with the approximation error for $n = 5$, $n = 10$ and $n = 20$ in the rows and all the combinations of values of x and methods to compute the Taylor approximation as columns.