Write a MATLAB code for the Bisection Method (Algorithm 2.1) and use it to find an approximation to the root of the following function:

$$f(x) = x^3 + 4x^2 - 10 \quad \text{on the interval } [1, 2]$$

using TOL $= 10^{-4}$.

Arrange your output in a table similar to Table 2.1 in your textbook

<u>MATLAB hints:</u>
You may use the following to define your function:
$f = @(x) \ x^2 - 2 * x$
this define, for example, the function $f(x) = x^2 - 2x$ then you may use $f(2)$ to evaluate your function at $x = 2$. Try to define other functions.