NUM I 23-24: Assignment 5

Write a Fortran program which does the following task:

1) Find the root of the function

$$f(x) = x^2 + 4x - \sin(x) + \log(x/4) - 3$$

in the interval [0.5,1.5] with a precision of 1.0E-6, by using first the bisection method, and afterward the false position method.

2) Write on two output files, one per method, the values of the iteration step and that of the estimated root for each one of the two methods.

REQUIRED: implement the two methods as subroutines

HINT: reset the first guess estimates before calling the second method.

BONUS QUESTION: What is the fastest method and why?

HELP: https://www.desmos.com/calculator

Send the source code to <ggiulian@ictp.it> by October 4th