NUM I 23-24: Assignment 7

Write a Fortran program which does the following task:

1) Ask the program user a first estimate of x_0 and x_1, and a precision ε

2) Find the roots of the function

$$f(x) = 2 \log(x) - x + 4$$

by using the secant method and the bisection method.

3) Write on an output file the values of the iteration step and that of the estimated root at each iteration step for the two methods.

BONUS QUESTION: Which method is the faster?

HINT: Attention to use the correct bounds!

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

Send the source code to <ggiulian@ictp.it> by October 9th