NUM I 23-24: Assignment 6

Write a Fortran program which does the following task:

1) Ask the program user a first estimate x_0 and a precision ε
2) Find the root **<u>for x < 0</u>** of the function

$$f(x) = |\tan(x)| - (x^{**}3)/3 - 1$$

   by using the Newton-Raphson method.
3) Write on an output file the values of the iteration step and that of the estimated root at each iteration step.

REQUIRED: implement the method as a subroutine.
BONUS QUESTION: Why had I to specify “for x < 0”? What are the “problematic” points for this function for the Newton method?
HELP: https://www.desmos.com/calculator

Send the source code to <ggiulian@ictp.it> by October 5th