Summer 2020-2021 – Section B

ASSIGNMENT #1 (Computer)

Due Date: 16.07.2021

Question:

$$\int_{\pi/6}^{\pi/2} \frac{cos(x)(e^x + x)}{(x^2 - ln(x))}dx$$

 The value of the integral given above has to be determined within an **error bound of ε = 1x10⁻⁵**. Determine the number of subintervals required for the compound midpoint, compound trapezoidal and Simpson's to assure this accuracy.

Note: You can make use of any software like MATLAB, Python, Excel etc.