MTH 264/114
Computer Project 3

Use numerical integration to approximation of the definite integral using the listed below methods.

1. Integrate the following functions

    i. $\int_0^{\pi/2} \sin(x^2)dx$

    ii. $\int_0^{\pi/2} \frac{x}{\sin(x)}dx$

    iii. $\int_0^{\pi/2} \frac{e^x - 1}{\sin(x)}dx$

    NOTE: $N =$ is a number of point x between a and b.
    The choice of x can not be a or b.

    (a) Bayesian Numerical Integral Using $N = 1000$ repeat it 5 times.
        Random generator on interval $[a, b]$ using this code
        $a + rand(1, 1) * (b - a)$

    (b) Monte Carlo with Trig distribution Numerical Integral using $N = 1000$ repeat it 5 times. Using this code
        $a + \sin(i * \pi/N) * (b - a)$

RUBRIC:
+ Hard copy of the report is due on Dec 12, 2018 at the beginning of class.
+Answers all questions and label it.
+ MUST WORK INDIVIDUALLY
+ You turn in as many draft as possible to receive 100% December 3, 2018.