

Due Date: March 5th, 2020

Problems due: 2,3

1. Complete the in-Class Worksheet
2. Write a **R**-program called **adapt-Simpson** that computes the $\int_0^8 e^{-3x} \sin(x)$ within 2×10^{-5} tolerance.
3. Consider $f : [-5, 5] \rightarrow \mathbb{R}$ given by

$$f(x) = \frac{1}{1+x^2}$$

Using **ipvlagrange.R** in the R-code shared folder write a **R**-code to plot the function and the 5,6,7-th degree polynomial interpolating the data given by the function f at equally spaced points in the interval.