

1. Consider evaluating the integral

$$\int_0^1 \sqrt{x}$$

- (a) Using the NMM routines `trapezoid`, `simpson`, evaluate the integral for three different panel sizes $N = 3, 27, 159$. Present a table comparing the measured truncation error as a function of panel size.
- (b) Do the above using the Gaussian-Legendre Scheme.
- (c) Modify the NMM routine `adaptsimpson` scheme discussed in class with $\epsilon = 0.00005$.
- (d) Use inbuilt `quad` function and evaluate the integral.