HOMEWORK 20

Due Date: Monday, July 5

Homework should be handed in *individually*, though you may work with others and collaboration is encouraged. For MATLAB problems please follow the guidelines specified in ELMS.

1. Following the derivation of the trapezoid rule from class, derive an open quadrature rule with 2 nodes (i.e. subdivide $[a, b]$ into equal subintervals) for approximating $\int_a^b f(x)\, \mathrm{d}x$. Also include the error term. You may use MATLAB's Symbolic Toolbox to evaluate any integrals, or do them by hand.