Chapter 7 - Numerical Integration - Spring 2021 - Part 2

Hi Autar, when you submit this form, the owner will be able to see your name and email address.

1. Single segment trapezoidal rule integration true error is given by Et=-(b-a)^3/12*f''(c).
   The point c is

   - ◯ $(a + b)/2$
   - ◯ *between a and b, both included*
   - ◯ *same as a*
   - ◯ *same as b*

2. To estimate an integral of a function, a student is using a multiple-segment trapezoidal rule with 32 segments. The student then uses 16 segments for the same estimation. The true error in the 16 segment-rule estimate would be _____ of the true error for the 32-segment rule estimate.

   - ◯ exactly quarter
   - ◯ approximately quarter
   - ◯ approximated quadruple
   - ◯ exactly quadruple
   - ◯ exactly double
   - ◯ approximately double

- ◯ exactly half
- ◯ approximately half

3. The trapezoidal rule can be written as (Check all that apply)

- ☐ $\frac{b-a}{2}(f(a)+f(b))$
- ☐ $(b-a)f(a)$
- ☐ $\frac{b-a}{2}f(a)+\frac{b-a}{2}f(b))$
- ☐ $(b-a)\frac{f(a)+f(b)}{2}$

Submit