

Name:

Section: 5 6 9 10

1. Evaluate $\int \frac{2x + 1}{(x^2 + 1)(x + 2)} dx$

2. Use the Trapezoidal Rule to find T_4 for the integral $\int_{-1}^3 x^2 dx$

3. The error bound for Simpson's Rule to $\int_a^b f(x)dx$ is

$$|E_S| \leq \frac{M(b-a)^5}{180n^4},$$

where M is any number such that $|f^{(4)}(x)| \leq M$ for $a \leq x \leq b$. Find n so that the approximation using Simpson's Rule S_n is within 10^{-9} of $\int_0^4 e^{-x} dx$.