Name: Section: 1 2

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

2. Use the Trapezoid 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 $\int_0^4 e^{-x}\, dx$.