1. The Midpoint Rule:

2. Estimate $\int_0^2 e^{x^2}\,dx$ using M_4, the Midpoint Rule with 4-subintervals. Round your estimate to 4 decimal places.

3. The Trapezoid Rule:

4. Estimate $\int_0^2 e^{x^2}\,dx$ using T_4, the Trapezoid Rule with 4-subintervals. Round your estimate to 4 decimal places.

5. Simpson's Rule:

6. Estimate $\int_0^2 e^{x^2}\,dx$ using M_4, Simpson's Rule with 4-subintervals. Round your estimate to 4 decimal places.

7. WolframAlpha gives the following estimate: $\int_0^2 e^{x^2}\,dx = 16.45262776550$. Using WolframAlpha's estimation as the exact value of the integral, determine the *absolute* error for each of our three estimates.