(1) [2 points] Express $\lim_{n\to\infty} \sum_{i=1}^{n} x_i \sin(x_i)\Delta x$ as a definite integral on the interval $[0, 5]$.

(2) [5 points] Use an area interpretation to evaluate $\int_0^3 \left(\frac{1}{2}x - 1\right) dx$.

(3) [4 points] Evaluate $\int_{-2}^{2} (3u+1)^2 \, du$.

(4) [4 points] Evaluate $\int_{0}^{\pi/4} \sec^2 t \, dt$.