For practice, solve the following by hand:

1) Consider the integral \( \int_{1}^{5} x^2 \, dx \)
   
   a) Approximate the integral with LRAM, with \( n = 4 \).
   
   b) Approximate the integral with Trapezoidal rule with \( n = 4 \).

2) Consider the integral \( \int_{0}^{3} 8x^3 \, dx \)
   
   a) Approximate the integral from RRAM, with \( n = 6 \)
   
   b) Approximate the integral with Simpson’s rule, with \( n = 6 \).

3) Consider the integral \( \int_{2}^{6} x^2 + 2x + 1 \, dx \).
   Approximate the integral with MRAM, with \( n = 4 \).