1. Let $I = \int_0^1 x \sin(x^2) \, dx$

   (a) Calculate L_4 by hand.

   Does this overestimate or underestimate I?

   (b) Write L_{10} and L_{50} using sigma notation.

   (c) Use Maple to draw L_{10} and R_{10}

   (Use the leftbox() and rightbox() commands)

   (d) Use Maple to calculate L_{10} and R_{10}

   (Use the leftsum() and rightsum() commands)

   How does I compare to L_{10} and R_{10}?

   (e) Find the exact value of I by using u-substitution.

   Does this make sense?

2. Approximate $\int_0^{1.5} \cos(x^2) \, dx$ within .002 of its

   actual value