1. Let $I = \int_0^2 e^{\cos(x)}\, dx$

   (a) Calculate L_{40} and R_{40}.
   How close are these to the actual value of I?

   (b) Approximate I accurate within 0.01

2. Let $I = \int_0^{\frac{\pi}{2}} x\cos(x)\, dx$

   (a) Calculate T_{40} and M_{40}.
   How close are these to the actual value of I?

   (b) Approximate I accurate within 10^{-6}

3. Explain how you could have used L_n and R_n in #2.