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.