Let
$$I = \int_{5}^{10} \cos\left(\frac{x^2}{3}\right) + x \, dx$$

- 1. Calculate L_{1000} and T_{1000} .
- 2. How close are these to the actual value of I?
- 3. Find a value of n so that L_n approximates I accurate within 0.01.

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 $\mathbf{Sklensky}$