

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

(a) Calculate L_{10} . Will this overestimate or underestimate I ?

(b) Calculate R_{10} . Will this overestimate or underestimate I ?

(c) How accurate are your approximations to the true value of I ?

(d) Approximate I accurate within 0.001.

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

Approximate I accurate within 0.02 of its actual value.