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.

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