

Basic Rectangular Approximations

Directions: Use a right, left, and midpoint rectangular approximation to find the area under the curve for each function on the given interval using the given number of subintervals.

1. $f(x) = x^3$; $[1,5]$; $n = 4$ subintervals

2. $f(x) = -x^2 + 8x - 12$; $[2,6]$; $n = 4$ subintervals

3. $f(x) = -\frac{1}{4}x^2 + 10$; $[-6,6]$; $n = 6$ subintervals

4. $f(x) = \ln(ex)$; $[1,5]$; $n = 2$ subintervals