

## 6.1

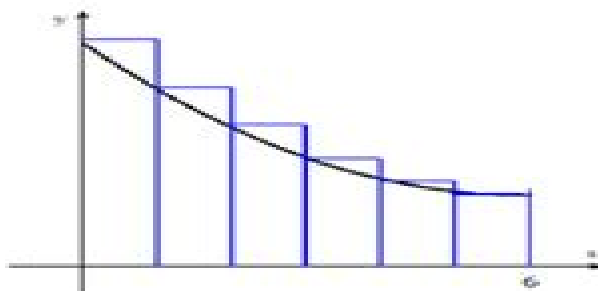
Approximating Areas with  
Riemann Sums Homework

**Problems 1 – 10, Complete the following exercises. Show set up for each approximation.**

1. A Riemann sum approximation with  $n$  partitions to  $\int_a^b f(x)dx$  is shown below.

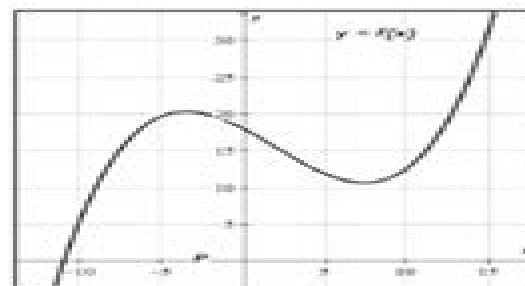
A. Is this a left- or right-hand sum?

B. What are the values of  $a$ ,  $b$ ,  $n$ , and  $\Delta x$ ?

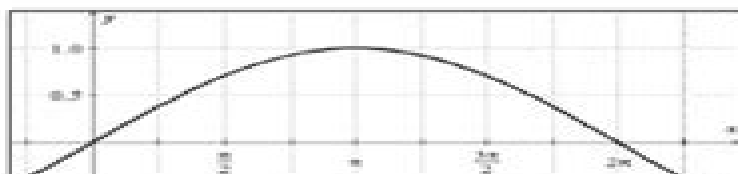


2. Use the graph below to estimate

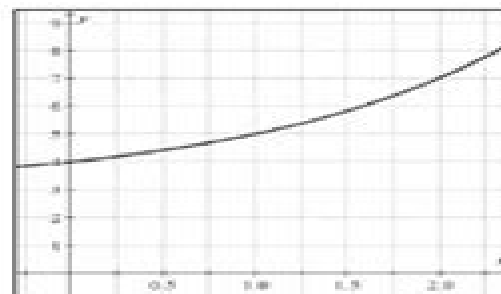
$$\int_{-1.0}^{1.5} f(x)dx$$



3. Find the area  $A$  under the graph of  $f(\theta) = \sin\left(\frac{\theta}{2}\right)$  on the interval  $[0, 2\pi]$  with  $n = 4$  partitions using Midpoint sums.



4. Find the area  $A$  under the graph of  $f(\theta) = 2^\theta + 3$  on the interval  $[0, 2]$  with  $n = 4$  partitions using the Trapezoidal sum method.



# Mastermathmentor Riemann Sums Homework Answers

**M Mosston**



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