

1/9/2016

Depute Integrals

Screen Shot 2016-11-08 at 10:20:49 PM.png

1. -10.9 points

Let $f(x) = 7 \sin x$ for $0 \leq x \leq \pi$.Use a calculator to compute the left, sum, midpoint sum, and right sum for the function f , using a partition with 50 subintervals of the same length. Give at least 6 decimal places of your calculator answers.

Left sum =

Midpoint sum =

Right sum =

2. -10.8 points

Approximate $\int_{-14}^7 x^2 dx$ by computing $L_f(P)$ and $U_f(P)$ for the partition $P = \{-14, -7, 0, 7\}$. $L_f(P) =$ $U_f(P) =$

Depute Integrals

-0.8 points

☐ My Notes

Approximate $\int_6^8 |x - 7| dx$, by computing $L_f(P)$ and $U_f(P)$ for the partition $P = \{6, 6.5, 7, 7.5, 8\}$.

 $L_f(P) =$ $U_f(P) =$

4. -0.5 points

☐ My Notes

Use the results of Section 5.2 to compute the following definite integral:

$$\int_{-2}^1 5x^2 dx =$$

5. -0.8 points

☐ My Notes

Compute the definite integral below using the results in Section 5.2. Type pi or use the MathPad symbol for π if needed.

$$\int_{-5}^6 \pi x^2 dx =$$

$$\text{Let } f(x) = -x.$$

Set up a definite integral to find the area A of the region between the graph of f and the x -axis on the interval $[-8, -3]$ and then calculate A .

$$A = \int \boxed{} \boxed{} = \boxed{}$$

[Symbolic Formatting Help](#)

0.9 points

My Notes

Approximate

$$\int_{-\pi}^0 \cos(x) dx$$

by Riemann sums with the partition $P = \left\{ -\pi, -\frac{2\pi}{3}, -\frac{\pi}{3}, 0 \right\}$, using first the left sum, then the right sum, and finally the midpoint sum. Use π for π in your answers when needed.

Left Sum =

Right Sum =

Midpoint Sum =

0.5 points

My Notes

Approximate the integral by the midpoint Riemann sum, using a partition having $n = 10$ subintervals of the same length.

$$\int_0^{\pi} \sin(x) \, dx$$

Midpoint Sum = (10 subintervals)

9. -11.4 points

My Notes

Let $f(x) = \sqrt{x}$.

Set up the definite integral for the area A of the region between the graph of f and the x axis on $[3, 15]$ and then approximate A by using the left sum with the partition

$$P = \{3, 7, 11, 15\}$$

$$A = \int \boxed{} = \boxed{}$$

(approximation to the nearest thousandth).

 Symbolic Formatting Help

-1/1 points

Let $f(x) = x$ on $[0, 5]$, and let $P = \{0, c, 5\}$. Find two values of c in $(0, 5)$ such that $U_f(P) = 22$.

$c =$ (smaller value)

$c =$ (larger value)

11. -1/1 points

Determine the function f satisfying the given conditions.

$$f'(x) = \sin(x) \cos(x)$$

$$f(3\pi/2) = 3.5$$

$$f(x) = A \sin^B(x) \cos^C(x) + D, \text{ where } A > 0.$$

$$A =$$

$$B =$$

$$C =$$

$$D =$$