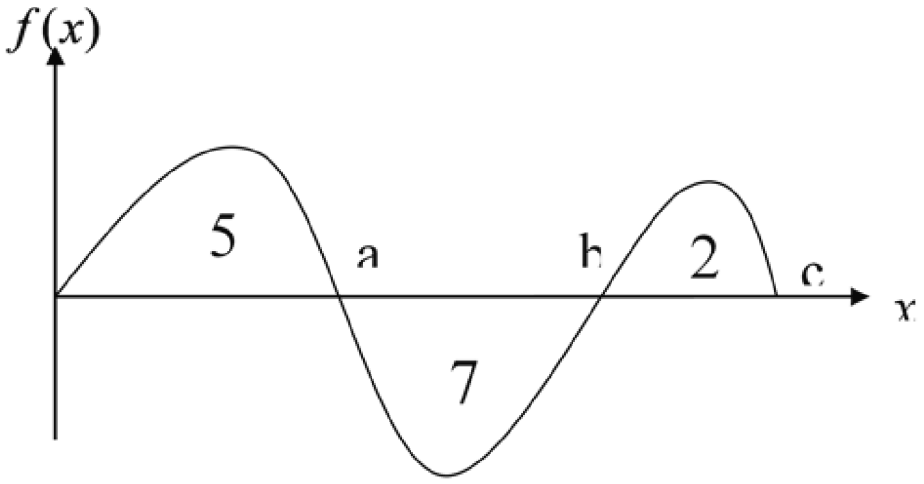
Chapter 7 - Spring 2021 - Numerical Integration - Part 1

Hi Autar, when you submit this form, the owner will be able to see your name and email address.

1

Given the $f(x)$ vs x curve, and the magnitude of the areas as shown, the value of $\int_0^b f(x)dx$



The value must be a number

2

Question

The exact mean value of the function $f(x)$ from a to b is

(A) $\frac{f(a)+f(b)}{2}$

(B) $\frac{f(a)+2f\left(\frac{a+b}{2}\right)+f(b)}{4}$

(C) $\int_a^b f(x)dx$

(D) $\frac{\int_a^b f(x)dx}{(b-a)}$

- ◯ Correct choice is A
- ◯ Correct choice is B
- ◯ Correct Choice is C
- ◯ Correct Choice is D

3

In 9-segment Trapezoidal rule, the number of points at which the function is evaluated is

- ◯ 8
- ◯ 9
- ◯ 10
- ◯ 18

4

Enumerate three different ways you can integrate a discrete function.

Enter your answer

5

The distance covered by a rocket from t=8 to t=34 seconds is calculated using the multiple segment trapezoidal rule by integrating a velocity function. Below is given the estimated distance for the different number of segments, n.

n	1	2	3	4	5
Value	16520	15421	15212	15138	15104

The number of significant digits at least correct in the answer for n=5 is

- ◯ 1
- ◯ 2
- ◯ 3
- ◯ 4

Submit