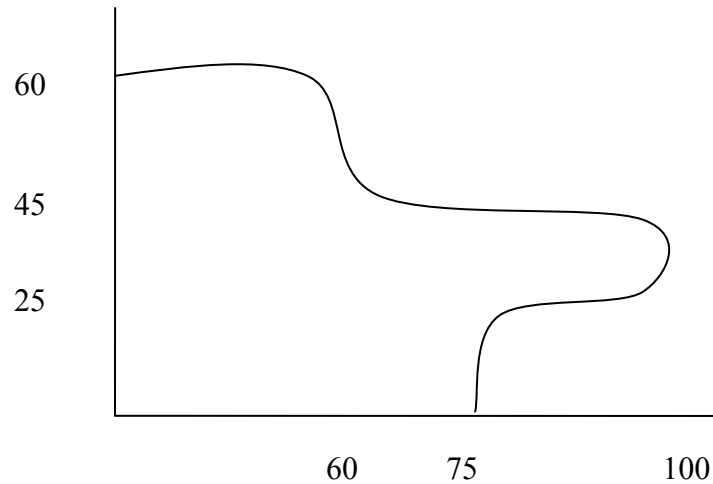


Multiple Choice Test

Chapter 07.02 Trapezoidal Rule

1. The two-segment trapezoidal rule of integration is exact for integrating at most _____ order polynomials.
(A) first
(B) second
(C) third
(D) fourth
2. The value of $\int_{0.2}^{2.2} xe^x dx$ by using the one-segment trapezoidal rule is most nearly
(A) 11.672
(B) 11.807
(C) 20.099
(D) 24.119
3. The value of $\int_{0.2}^{2.2} xe^x dx$ by using the three-segment trapezoidal rule is most nearly
(A) 11.672
(B) 11.807
(C) 12.811
(D) 14.633
4. The velocity of a body is given by
$$v(t) = 2t, \quad 1 \leq t \leq 5$$
$$= 5t^2 + 3, \quad 5 < t \leq 14$$
where t is given in seconds, and v is given in m/s. Use the two-segment trapezoidal rule to find the distance in meters covered by the body from $t = 2$ to $t = 9$ seconds.
(A) 935.00
(B) 1039.7
(C) 1260.9
(D) 5048.9

5. The shaded area shows a plot of land available for sale. The units of measurement are in meters. Your best estimate of the area of the land in m^2 is most nearly
- (A) 2500
 (B) 4775
 (C) 5250
 (D) 6000



6. The following data of the velocity of a body is given as a function of time.

Time (s)	0	15	18	22	24
Velocity (m/s)	22	24	37	25	123

The distance in meters covered by the body from $t = 12 \text{ s}$ to $t = 18 \text{ s}$ calculated using the trapezoidal rule with unequal segments is

- (A) 162.90
 (B) 166.00
 (C) 181.70
 (D) 436.50

[Complete Solution](#)