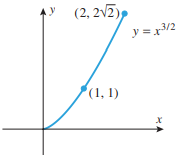
MGM University,Aurangabad.

Jawaharlal Nehru Engineering College,Aurangabad.

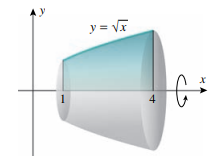
Program: FY B.Tech Academic Year 2023-24 Part-I

Course :Single and Multivariable Calculus Course Code: APS21BSL101

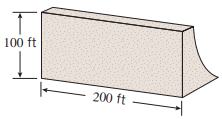
1. Evaluate
2. Evaluate
3. dx
4. dt
5. dt
6. .
7. Find the arc length of the curve from (1,1) to (2, ).



1. A steady wind blows a kite due west. The kite’s height above ground from horizontal position to ft is given by . Find the distance travelled by the kite.
2. Find the area of the region bounded above by bounded below by, and bounded on the sides by and
3. Find the area of the region that is enclosed between the curves and .
4. Find the area of the surface that is generated by revolving the portion of the curve between x = 0 and x = 1 about the x-axis.
5. Find the area of the surface that is generated by revolving the portion of the curve between and about the-axis.
6. Find the volume of the solid that is obtained when the region under the curve over the interval [1, 4] is revolved about the x-axis.



1. The face of a dam is a vertical rectangle of height 100 ft and width 200 ft .Find the total fluid force exerted on the face when the water surface is level with the top of the dam.



\*\*\*\* THE END \*\*\*\*