

Summary of the Shell Method

Regardless of the position of the axis of revolution (horizontal or vertical), the steps for implementing the shell method are these.

1. *Draw the region and sketch a line segment across it parallel to the axis of revolution. Label the segment's height or length (shell height) and distance from the axis of revolution (shell radius).*
2. *Find the limits of integration for the thickness variable.*
3. *Integrate the product 2π (shell radius) (shell height) with respect to the thickness variable (x or y) to find the volume.*