
Section 6.2 - Solids of Revolution

1. Set up the integral to evaluate the volume of a solid generated by revolving the given region: $y = e^{-x}$ rotated about the x -axis, bounded by $y = 0$, $x = 0$, and $x = \ln(4)$. **Do not evaluate the integral.**

2. Set up the integral to evaluate the volume of a solid generated by revolving the given region: $y = \ln(x)$ revolved around the y -axis, bounded by $y = 0$, $y = 2$, and $x = 0$. **Do not evaluate the integral.**

3. Set up the integral to evaluate the volume of a solid generated by revolving the given region: $y = x$ and $y = 2\sqrt{x}$ revolved around the line $y = 4$. **Do not evaluate the integral.**

4. Set up the integral to evaluate the volume of a solid generated by revolving the given region: $y = x$ and $y = 2\sqrt{x}$ revolved around the line $x = -2$. **Do not evaluate the integral.**
5. Use the general slicing method to find the volume of the following solid. The solid with a circular base of radius 5 whose cross sections perpendicular to the base and parallel to the x -axis are equilateral triangles.
6. Use the general slicing method to find the volume of the following solid. The solid whose base is a triangle with vertices $(0, 0)$, $(2, 0)$, and $(0, 2)$ and whose cross sections perpendicular to the base and parallel to the y -axis are semicircles.