

Fill in the Blanks

Volumes of Revolution Around the Y-Axis

Question	Definite Integral	Integrate...	Evaluate Upper and Lower Limits		Volume of Revolution
Find the volume of the solid formed when the curve $x^2 = 4y$ is rotated 360° around the y-axis between $y = 1$ and $y = 4$	$\pi \int_1^4 4y \, dy$	$\pi \left[\frac{4y^2}{2} \right]_1^4$			
Find the volume of the solid formed when the curve $x = \frac{2}{3}y^2$ is rotated 2π radians around the y-axis between $y = 2$ and $y = 3$	$\pi \int_2^3 \frac{4}{9}y^4 \, dy$				
Find the volume of the solid formed when the curve $x = \frac{1}{5}\sqrt{y^3}$ is rotated 360° around the y-axis between $y = 0$ and $y = 5$					
Find the volume of the solid formed when the curve $y = x^2 - 6$ is rotated 2π radians around the y-axis between $y = 1$ and $y = \frac{3}{2}$					
Find the volume of the solid formed when the curve $x = 3\sqrt{y}$ is rotated 360° around the y-axis between $y = 2$ and $y = \square$				18π	$\frac{405}{2}\pi$
Find the volume of the solid formed when the curve $y = 2x^2 - \square$ is rotated 2π radians around the y-axis between $y = 0$ and $y = 4$					10π