

# Fill in the Blanks

## Volumes of Revolution Around the X-Axis

Question	Definite Integral	Integrate...	Evaluate Upper and Lower Limits		Volume of Revolution
Find the volume of the solid formed when the curve $y = x^2$ is rotated $360^\circ$ around the $x$ -axis between $x = 1$ and $x = 3$	$\pi \int_1^3 x^4 dx$	$\pi \left[ \frac{x^5}{5} \right]_1^3$			
Find the volume of the solid formed when the curve $y = 2\sqrt{x}$ is rotated $2\pi$ radians around the $x$ -axis between $x = 2$ and $x = 5$	$\pi \int_2^5 4x dx$				
Find the volume of the solid formed when the curve $y^2 = 1 + \frac{1}{\sqrt{x}}$ is rotated $360^\circ$ around the $x$ -axis between $x = 4$ and $x = 9$					
Find the volume of the solid formed when the curve $y = \frac{1}{2} \sqrt[3]{x}$ is rotated $2\pi$ radians around the $x$ -axis between $x = 1$ and $x = 8$					
Find the volume of the solid formed when the curve $y = \frac{\sqrt{x^3-1}}{3}$ is rotated $360^\circ$ around the $x$ -axis between $x = 2$ and $x = \square$					$\frac{58}{9} \pi$
Find the volume of the solid formed when the curve $y^2 = \square x \sqrt{x}$ is rotated $2\pi$ radians around the $x$ -axis between $x = 0$ and $x = 2$					$\frac{48\sqrt{2}}{5} \pi$