

For each three dimensional object described below,

- (a) Sketch the object,
- (b) Set up an integral that gives you the volume of the object
- (c) and evaluate the integral to find the volume.

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1. The solid formed when the graph of $y = x^2 + 1$ from $x = 0$ to $x = 2$ is rotated about the x -axis.
 2. The solid formed when the region bounded by $y = x^2$ and $y = 4$ is rotated about the x -axis.
 3. The sphere of radius r .
 4. Repeat #1 and #2, this time finding the volume gotten when the region is rotated about the y -axis.