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) 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. The volume when the region in the first quadrant bounded by $y = x^2$ and $y = 4$ is rotated about the y-axis.
5. The volume when the region from #1 is rotated about the y-axis.