

3. Find the volume obtained by rotating the region bounded by $y = \sqrt{x}$ and $y = x$ about the line $y = 1$.

4. The base of a solid object S is the region bounded by the parabola $y^2 = 3x$ and the line $x = 3$. Cross-sections for the object perpendicular to the y -axis are equilateral triangles. What is the volume of S ?