More problems for Ch.7 Review after the AP Exam

1. Use a known cross-sectional area to compute the volume of the solid formed by rectangles with bases perpendicular to the x-axis and heights twice their bases on a circular base bounded by $x^2 + y^2 = 4$.

2. Use the shell method to find the volume of the solid formed by rotating the region bounded by $f(x) = \frac{1}{\sqrt{x}}$, $x = 1$, $x = 4$, and $y = 0$ about the y-axis.

3. Find the arc length of the curve $y = x^{\frac{3}{2}}$ from $(1, 1)$ to $(4, 8)$.

4. Find the surface area if the curve $y = \sqrt{x}$ is rotated about the x-axis from $x = 0$ to $x = 4$.

5. Find the volume of the solid formed by equilateral triangles perpendicular to the x-axis on the base formed by $y = .5x$ and $y = \sin(x)$ in quadrant I.