

Name: _____ **Section:** _____

Clear your desk of everything except pens, pencils and erasers. **Show all your work.**

If you have a question raise your hand and I will come to you.

1. Find the volume of the solid generated by rotating the region of the $x - y$ plane between the curves $y = x^2$ and $y = \sqrt{x}$, for $0 \leq x \leq 1$, about the y -axis.

(a) (4 points) Draw a picture of the region in the plane, and a picture of the solid.

(b) (3 points) Write the formula for the area of a cross-section.

(c) (3 points) Set up, **but do not evaluate**, the integral representing the volume of the solid.