

ESP Quiz 8 (Kouba)

Please PRINT your name here : -----

This quiz is due next Tuesday at the beginning of ESP.

1.) (10 pts. each) Consider the region R bounded by the graphs of $y = \sqrt{x}$, $x = 0$, and $y = 2$. SET UP, but do not evaluate, integrals for each of the following :

a.) the volume of the solid formed by rotating R about the x-axis using the Disc Method.

b.) the volume of the solid formed by rotating R about the x-axis using the Shell Method.

c.) the volume of the solid formed by rotating R about the line $x = -3$ using the Shell Method.

d.) the volume of the solid formed by rotating R about the line $x = -3$ using the Disc Method.

2.) (20 pts.) A spherical tank of radius 5 feet is filled with water to a depth of 8 feet. Compute the volume of water in the tank.