Fun with Rotational Volumes with Washers   Name:

AP Calculus

<u>No calculators!</u>

Consider the space enclosed between the graphs of $f(x) = \sqrt{x}$ and $g(x) = x^2$

a)   Determine the area of that space.

b)   Suppose that space is rotated over the x-axis. <u>Set up an integral expression</u> that would find the volume of the solid formed.

c)   Calculate the volume

d)   Suppose that original space was rotated over the line y = 1. <u>Set up an integral expression</u> that would find the volume of the solid formed.

e)   Suppose that original space was rotated over the line x = 1. <u>Set up an integral expression</u> that would find the volume of the solid formed.