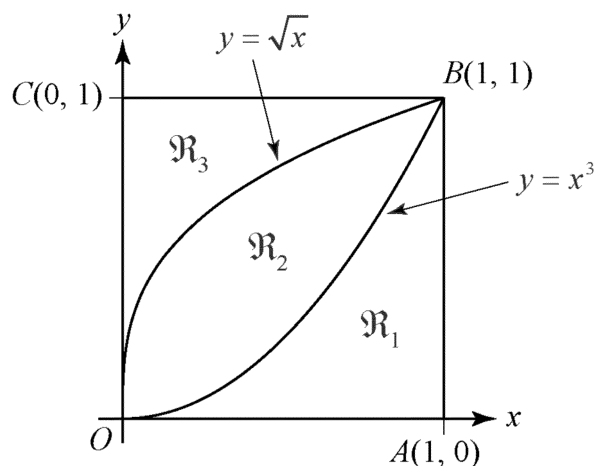


Math 1A
Test 4 - Review

1. The figure below shows the graphs of $y = x^2$ and $y = \sqrt[3]{x}$. Three bounded regions are formed in a square of side length one \mathfrak{R}_1 , \mathfrak{R}_2 , and \mathfrak{R}_3 . For parts (a) through (d), set up and EVALUATE an integral for finding the given quantities. (25 points)



- The area of region \mathfrak{R}_2 .
- The volume generated by revolving the region \mathfrak{R}_1 about the x -axis using the disk method.
- The volume generated by revolving the region \mathfrak{R}_3 about the y -axis using the shell method.
- The volume generated by revolving the region \mathfrak{R}_2 about the y -axis, you choose the method.
- The volume generated by letting \mathfrak{R}_2 be the foot print of a solid such that when the solid is sliced by a plane perpendicular to the x -axis the intersection is a square.