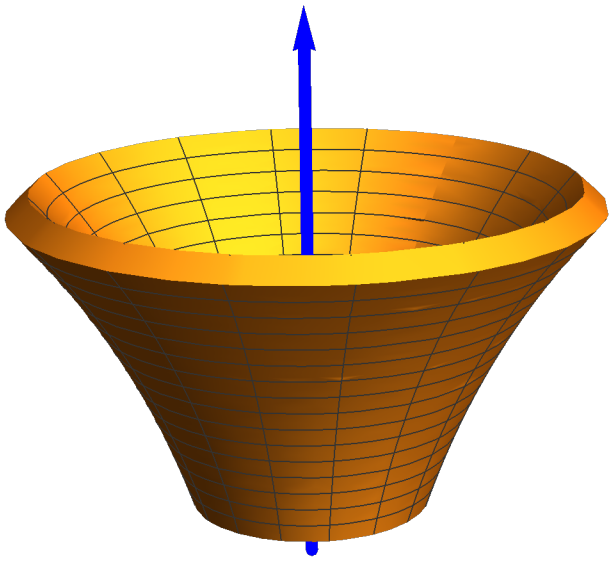
INTRODUCTION TO CALCULUS

MATH 1A

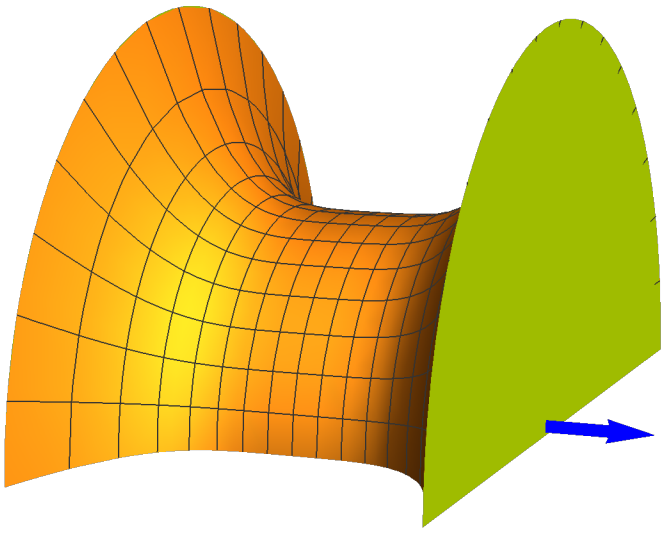
UNIT 21: WORKSHEET

Volume Computation

1: A flower pot for a lemon tree has cross section $A(x) = e^x$ and goes from $x = 0$ to $x = 1$. Find the volume of the flower pot.



2: The solid of revolution for which the radius at position x is $r = x^4 + 1$ and $x \in [-2, 2]$ is seen in the picture. Note that the cross section is a half circle only. Find its volume.



3: Find the volume of the solid that is formed by rotating the graph of $y = 3x^2$ around the x-axis, for $0 \leq x \leq 1$.