

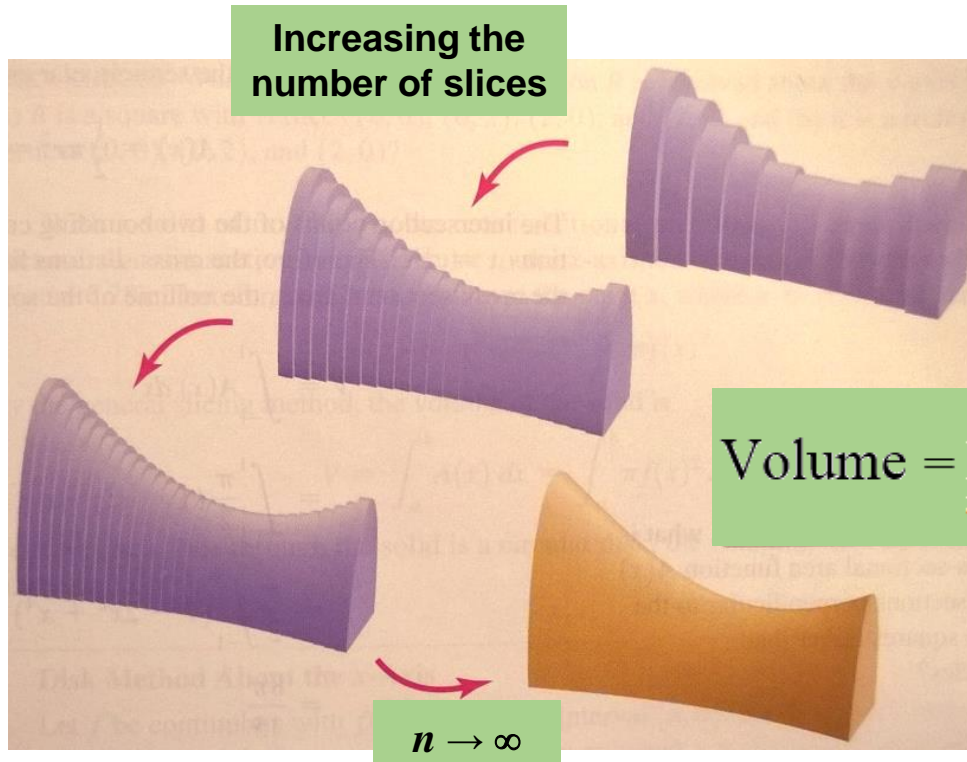
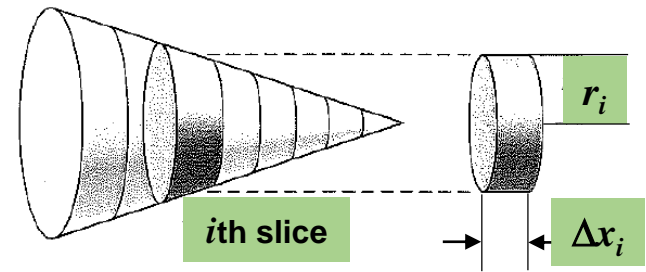
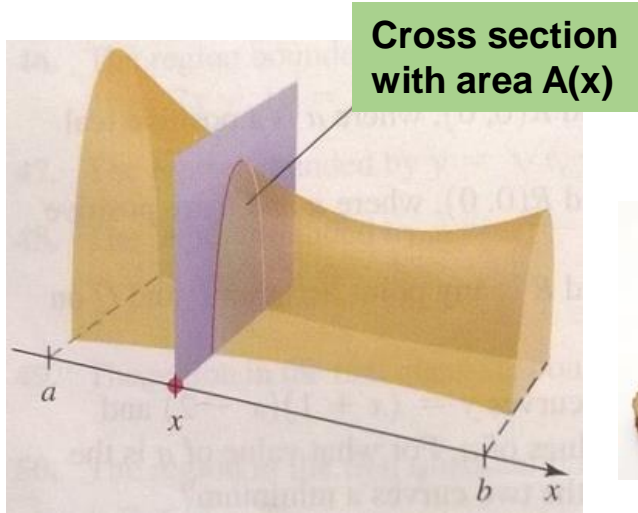
MA1022:
Calculus II

Supplementary Class Notes

PART II

B'19
2019-2020

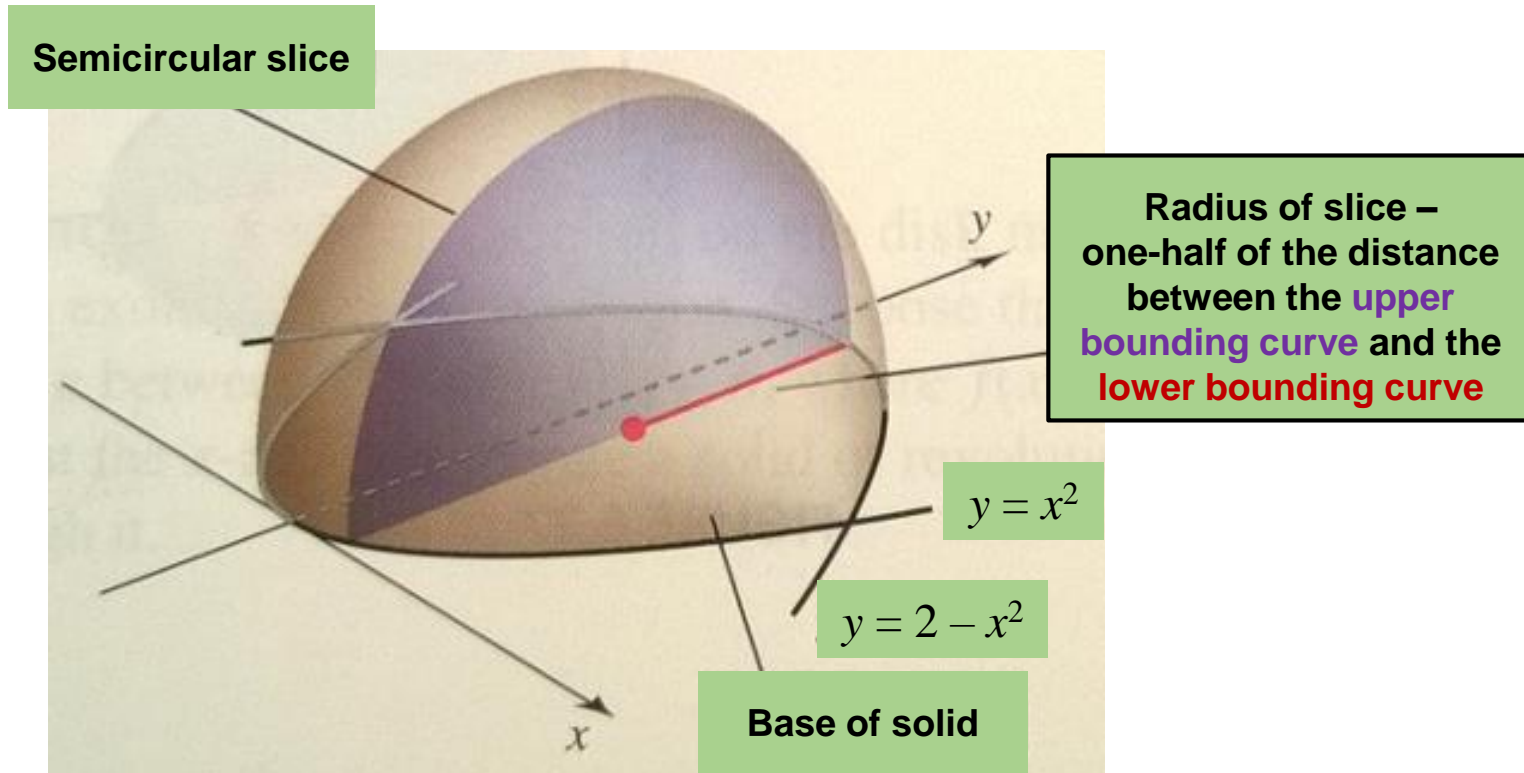
Volumes by Slicing – a Concept



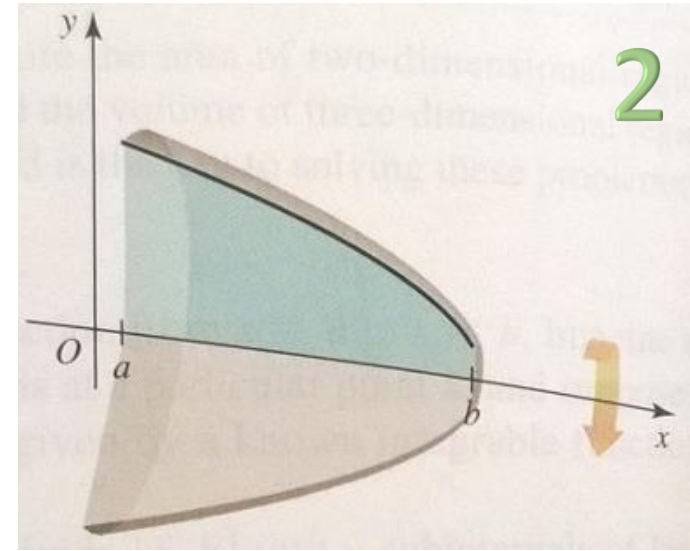
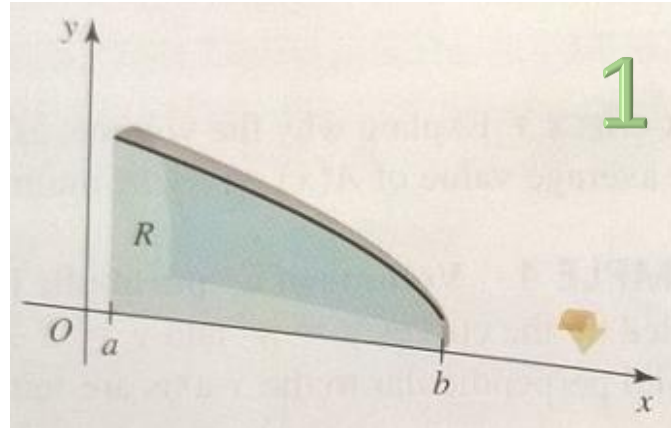
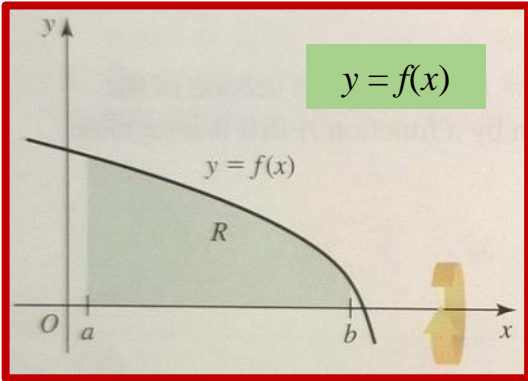
$$\text{Volume} = \lim_{n \rightarrow \infty} \sum_{i=1}^n A(x_i) \Delta x_i$$

Volume of a “Parabolic Hemisphere”

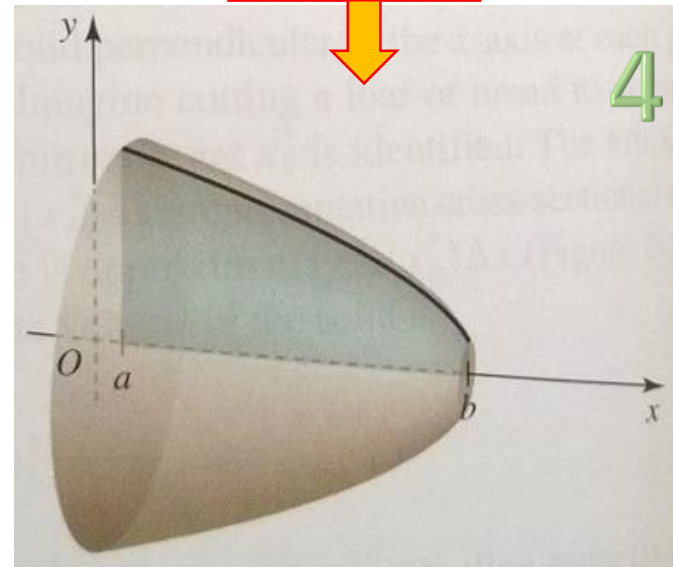
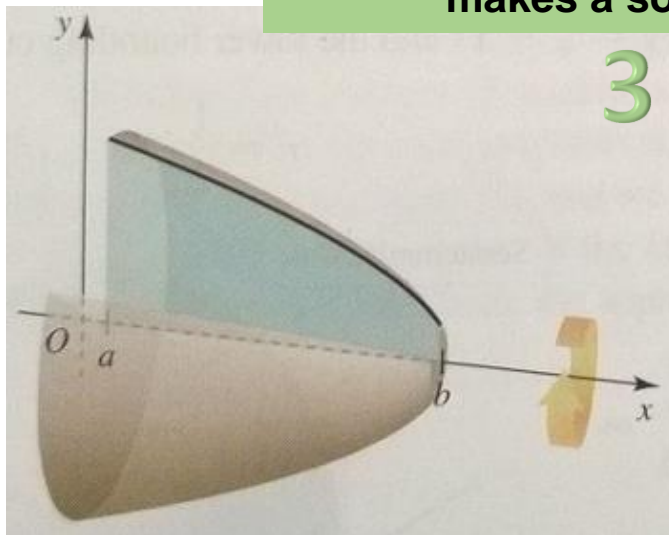
A solid has a **base** that is bounded by the curves $y = x^2$ and $y = 2 - x^2$ in the xy -plane



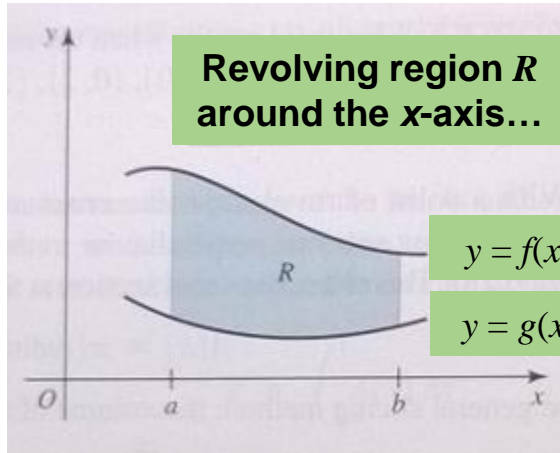
Generation of a Solid of Revolution



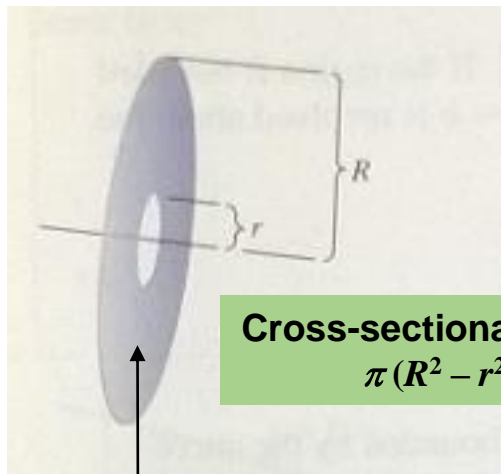
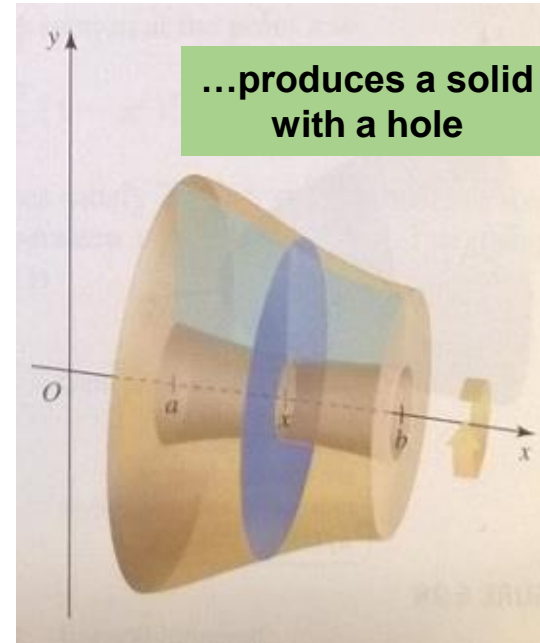
Revolving the region R around the x -axis makes a solid of revolution



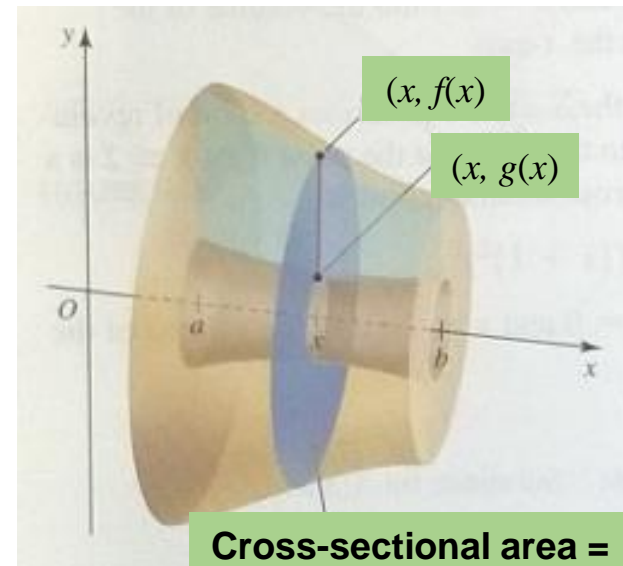
The Washer Method



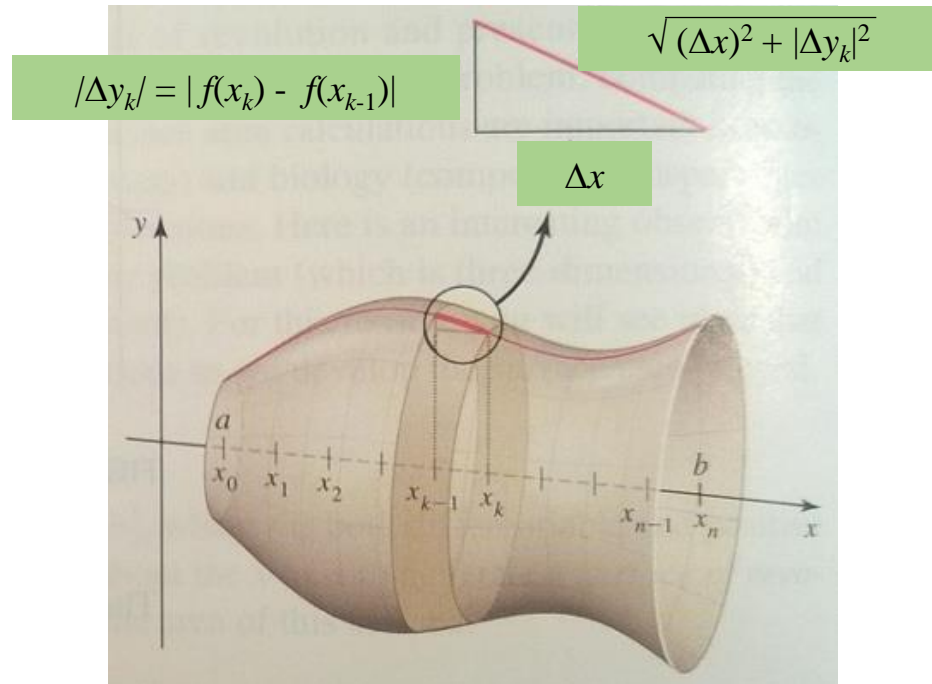
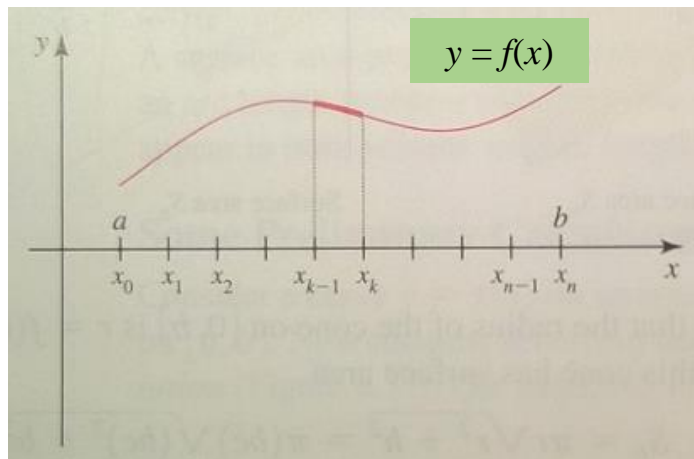
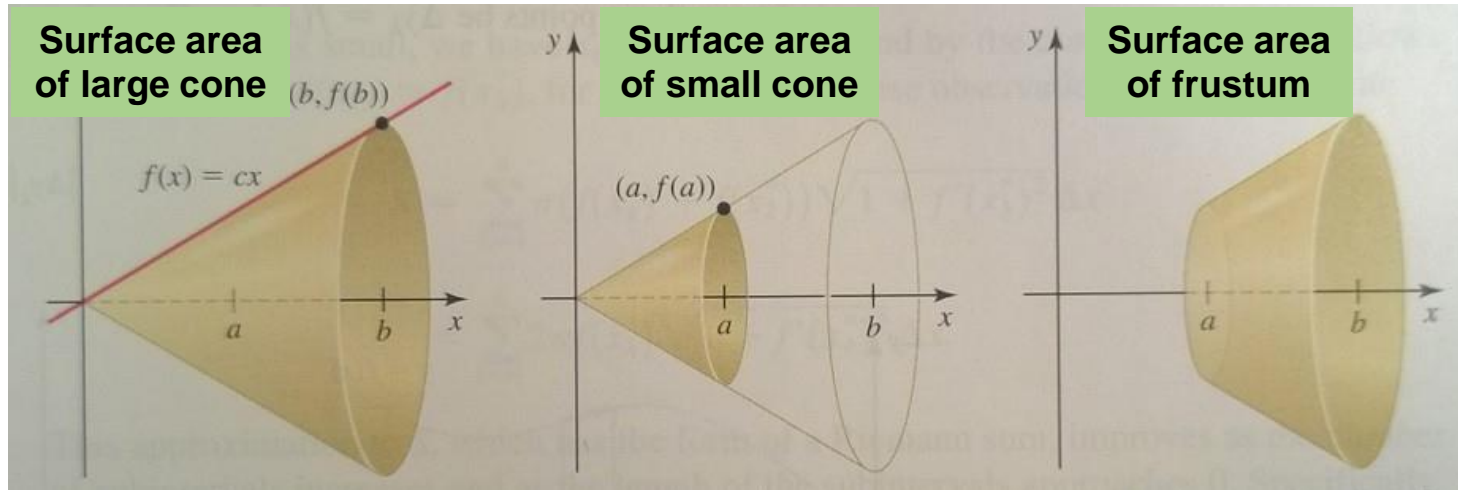
$$f(x) \geq g(x) \geq 0$$



circular washer
(annular ring)



Surface of Revolution



Cheese Plates as Plane Laminae

