Name: _____   Date: _____
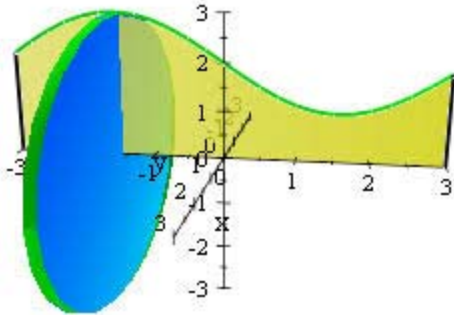AP Calculus: Volumes of Solids of Revolution   Ms. Loughran

Vertical Strip:

Volume of each disk:

Volume of Solid:

Volume of Solid:

When you integrate area you get volume, just like when we integrated height we got area.
The representative rectangle in the disk method is always perpendicular to the axis of revolution.

1. Find the volume generated when $y = x^2$ from $x = 0$ to $x = 1$ is revolved about the x-axis.

2. Find the volume of the solid that results from revolving the region bounded between $y = x$ and the x-axis from $x = 0$ to $x = 1$ around the x-axis.

3. Find the volume of the solid that results when the region bounded by $y = \sqrt{9 - x^2}$ and the x-axis is revolved around the the x-axis.

DAY 2

Do Now:
1. Find the volume of the solid generated by revolving the region bounded by $y = \sqrt{x}$ and the lines $y = 2$ and $x = 0$ about the line $y = 2$.

Horizontal Strip:

1. Find the volume of the solid found by revolving the region bounded by the curve $y = x^2$, the y-axis and $y = 1$ about the y-axis.

2. Find the volume of the region bounded by $x = 1 - y^2$ and the y-axis revolved around the y-axis.

3. Find the volume of the region bounded by $x = y^2$ and the y-axis from $y = -1$ and $y = 1$ revolved around the y-axis.