

7.3 Volumes

How could we find/approximate the volume of the solid?

sketch a cross section

Find the area formula

Find the limits of integration

Integrate $A(x)$ to find the volume with dx as the differential

Jan 18-9:53 PM

Volumes of known cross section

$$V = \int_a^b \Delta A$$

Jan 18-10:06 PM

Find the volume of the solid generated by rotating $y = x^2$
about the x-axis from $x = 0$
 $x = 3$

Jan 5-7:46 AM

$y = \sin x$ from $x = 0$ about the x-axis
 $x = \pi$

Jan 5-7:48 AM

The region between the graph of $f(x)=x\cos(x)+2$ and the x-axis over the interval $[-2,2]$ is revolved about the x-axis to generate a solid. Find the volume of the solid.

Jan 18-9:55 PM

Find the volume of the object generated by revolving
 $y = 4 - x$ and $y = 9 - x^2$ about the x-axis.

Jan 18-10:02 PM

Pail

$y = \frac{3}{2}x - 3$ and $x = 0$ about the y-axis from $y = 0$ to $y = 4$

Jan 18-10:09 PM

Rotate around the y-axis $y = x^2$ and $x = 0$ from $y = 0$
 $y = 2$

Jan 18-10:04 PM