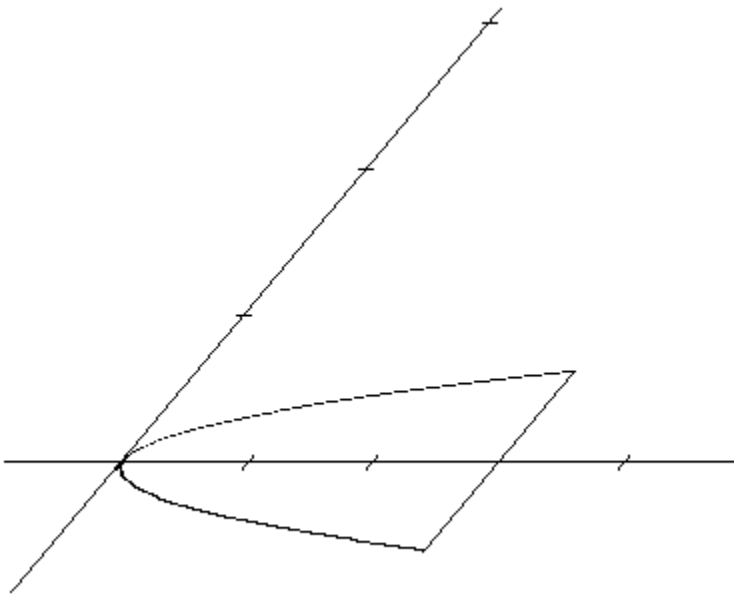


Volumes by Cross Sections



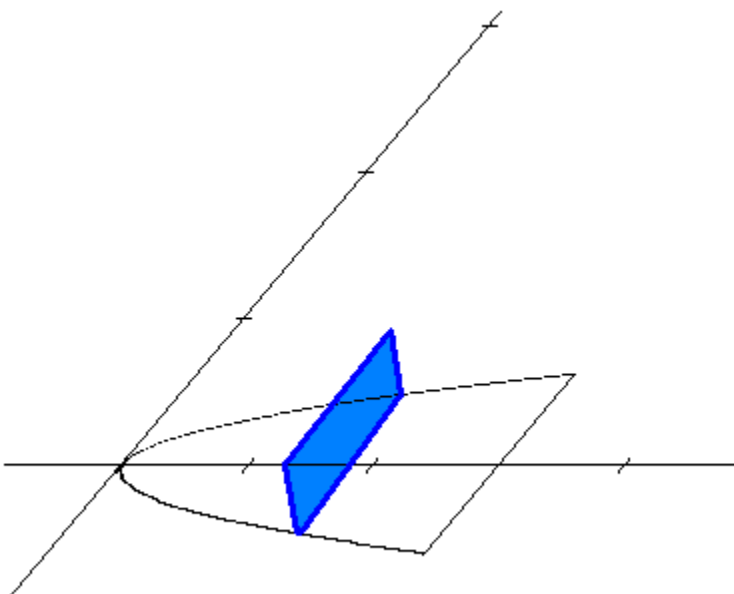
$$x = y^2$$

$$x = 9$$

$$V = \int_a^b A(x) dx$$

Volumes by Cross Sections

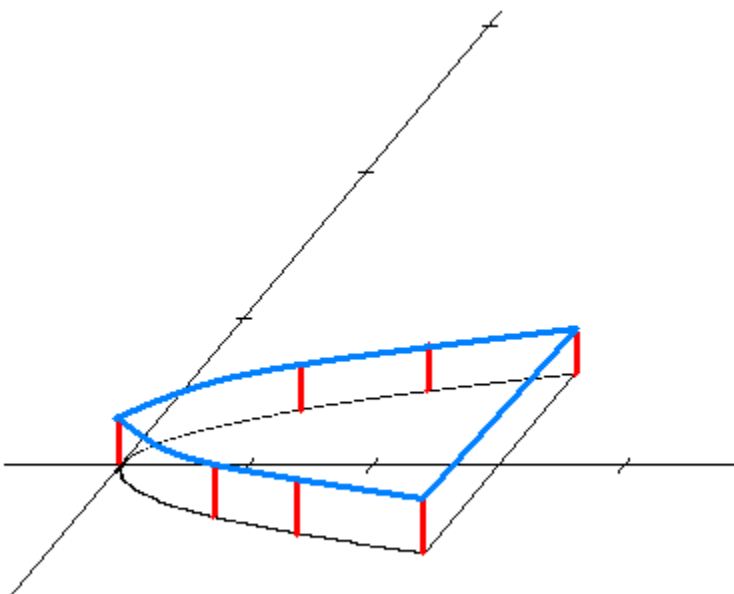
A rectangle of height 2



$$x = y^2$$

$$x = 9$$

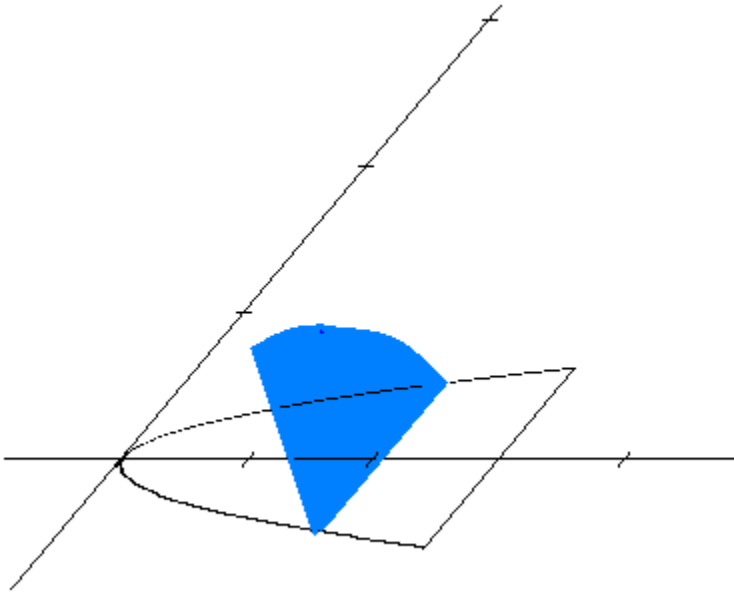
$$V = \int_a^b A(x) dx$$



$$V = \int_0^9 2(2\sqrt{x}) dx$$

Volumes by Cross Sections

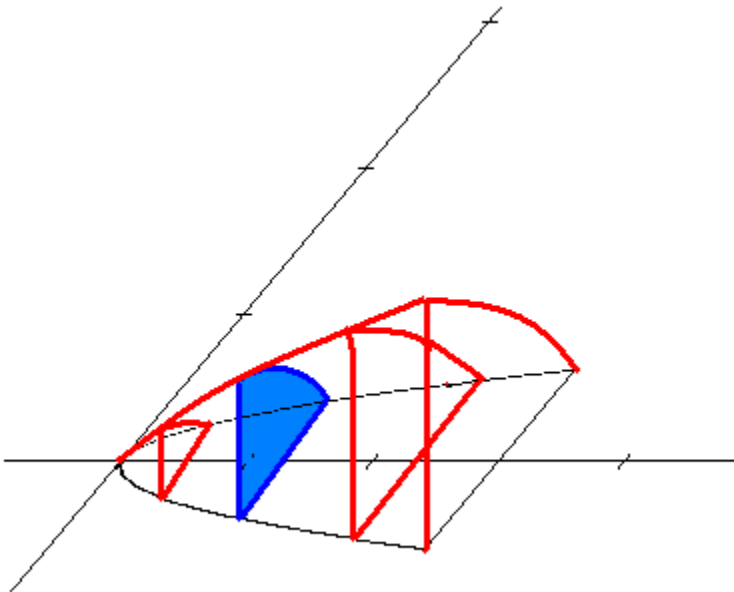
A quarter circle



$$x = y^2$$

$$x = 9$$

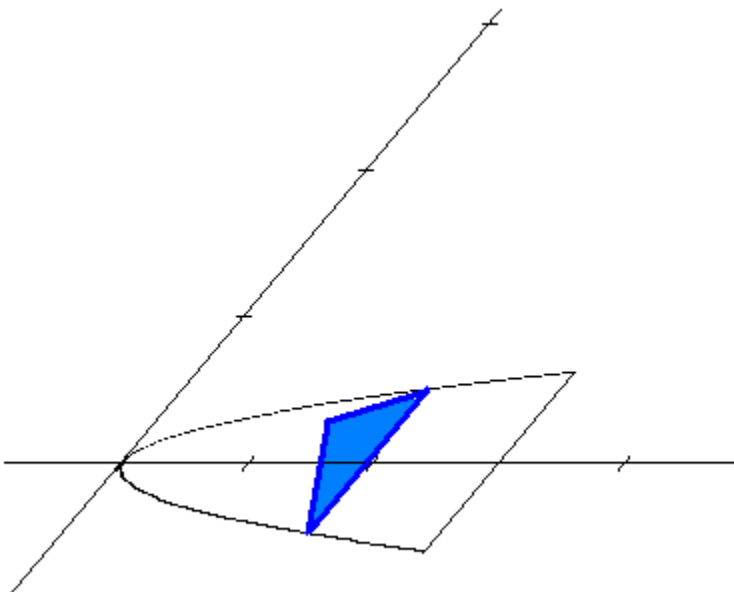
$$V = \int_a^b A(x) dx$$



$$V = \int_0^{\frac{9\pi}{4}} (2\sqrt{x})^2 dx$$

Volumes by Cross Sections

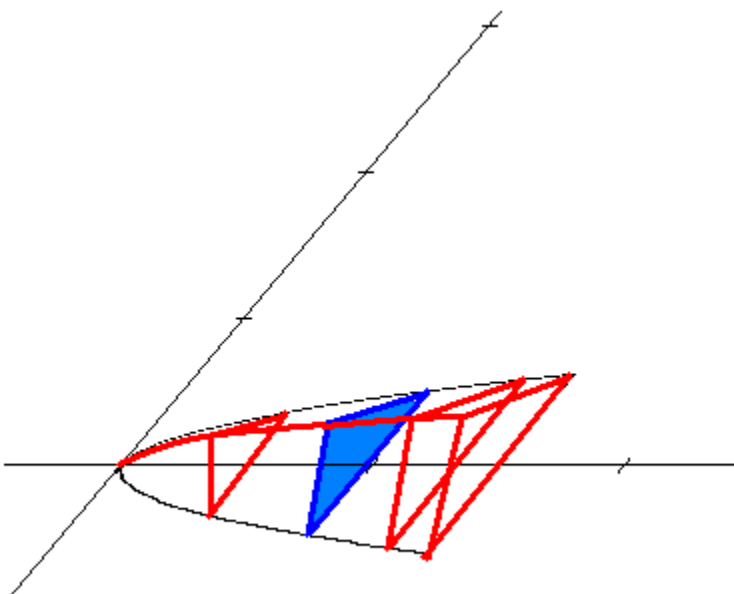
A triangle with height = $\frac{1}{4}$ the base



$$x = y^2$$

$$x = 9$$

$$V = \int_a^b A(x) dx$$



$$V = \int_0^9 \frac{1}{2} b h dx = \int_0^9 \frac{1}{2} b \left(\frac{1}{4} b \right) dx = \int_0^9 \frac{1}{8} (2\sqrt{x})^2 dx$$