General Known Cross-section	$V = \int_a^b A(x)\,dx$
Disc Method Rotate around x-axis	$V = \pi \int_a^b [f(x)]^2\,dx$
Disc Method Rotate around y-axis	$V = \pi \int_a^b [f(y)]^2\,dy$
Washer Method Rotate around x-axis	$V = \pi \int_a^b [f(x)]^2 - [g(x)]^2\,dx$
Washer Method Rotate around y-axis	$V = \pi \int_a^b [f(y)]^2 - [g(y)]^2\,dy$
Shell Method Rotate around y-axis	$V = 2\pi \int_a^b x \cdot f(x)\,dx$
Shell Method Rotate around x-axis	$V = 2\pi \int_a^b y \cdot f(y)\,dy$

Note 1: To Rotate x=k or y=k:
Draw the cross-section
Determine the radii
Adjust x or y in the formulas shown above

Note 2: You may have to break the integral apart if the rotated area is between different functions over [a, b].