

Formula sheet for Section 6.1 - 6.4

Disk Method: $V = \int_a^b \pi [R(x)]^2 dx$ **Washer Method:** $V = \int_a^b \pi \left([R(x)]^2 - [r(x)]^2 \right) dx$

Shell Method: $V = \int_a^b 2\pi r(x)h(x) dx$ **Surface Area:** $S = \int_a^b 2\pi f(x) \sqrt{1 + (f'(x))^2} dx$

Arc Length Formula: $L = \int_a^b \sqrt{1 + (f'(x))^2} dx$