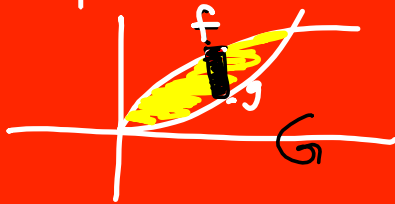
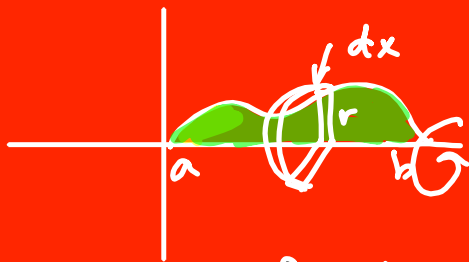


# VOLUMES OF SOLIDS OF REVOLUTION



$$V = \int_a^b \pi r^2 dx$$

$$V = \pi \int_a^b [f(x)]^2 dx$$

$$V = \pi r_o^2 - \pi r_i^2$$

$$V = \pi \int_a^b (r_o^2 - r_i^2) dx$$

$\square$  is  $\perp$  to axis of revolution

$$y = x^2 + 2 \quad y = \sqrt{-x} + 2$$

$$y = x + 8 \quad \text{around } x\text{-axis}$$

$$\pi \int_{-4}^0 \left( (x+8)^2 - (\sqrt{-x} + 2)^2 \right) dx$$

$r_o^2 - r_i^2$

$$+ \pi \int_0^3 \left[ (x+8)^2 - (x^2 + 2)^2 \right] dx$$

