Volume of a Revolution
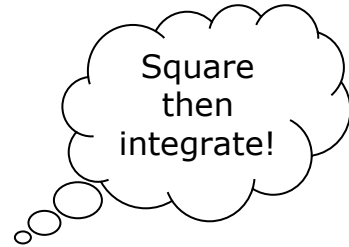
Volume (about x axis) =

$$\int_a^b \pi y^2 dx$$

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

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

Square then integrate!

Volume (about y axis) =

$$\int_c^d \pi x^2 dy$$