

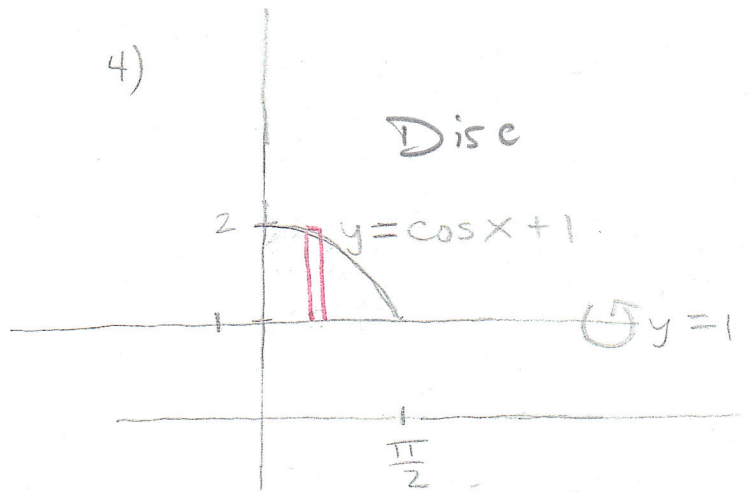
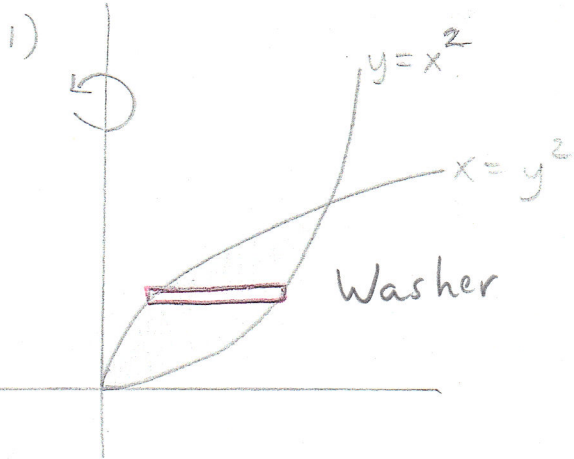
# Volume WS 2

\* Return to after shell method

Directions: Set up the integral for the volume using the given cross section.

$$V = \pi \int_0^1 (\sqrt{y})^2 - (y^2)^2 dy$$

$$V = \pi \int_0^{\frac{\pi}{2}} (\cos x + 1 - 1)^2 dx$$

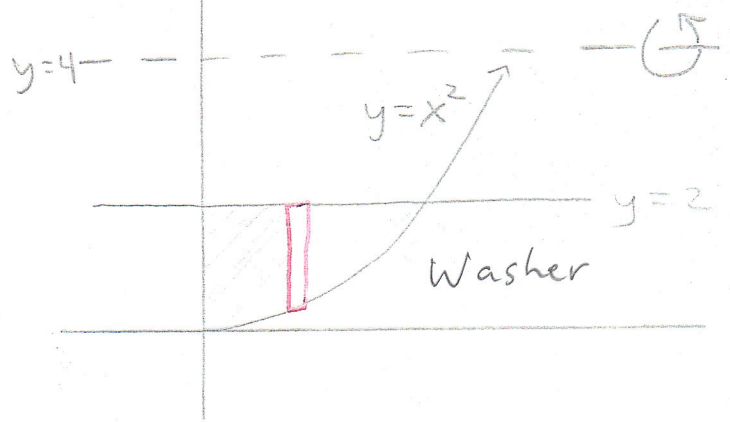
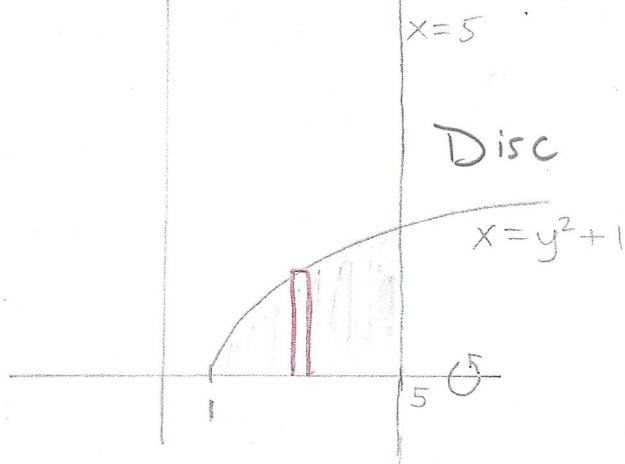


2)

$$V = \pi \int_1^5 (\sqrt{x-1})^2 dx$$

5)

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



3)

$$V = \pi \int_0^8 (2 - \sqrt[3]{y})^2 dy$$

Shell:  $V = 2\pi \int_0^1 x [3-x - \frac{x^2}{2}] dx$

