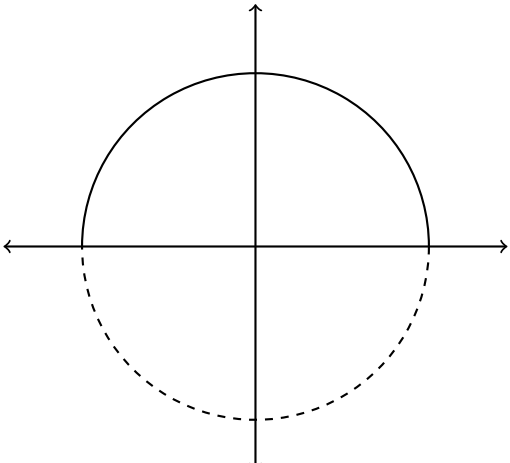

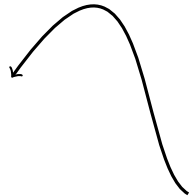

$V = \int_{-r}^{r} \pi[\sqrt{r^2 - x^2}]^2 \; dx \to \int_{=r}^{r} \pi(r^2 - x^2) \; dx = \pi \int_{-r}^{r} r^2 - x^2 \; dx = \pi[r^2 x - \frac{x^3}{3}]_{-}^{r} = \pi[r^2 \cdot r - \frac{r^3}{3}) - (r^2(-r) - \frac{-r^3}{3}]$

$= \ldots = \frac{4\pi r^3}{3}$