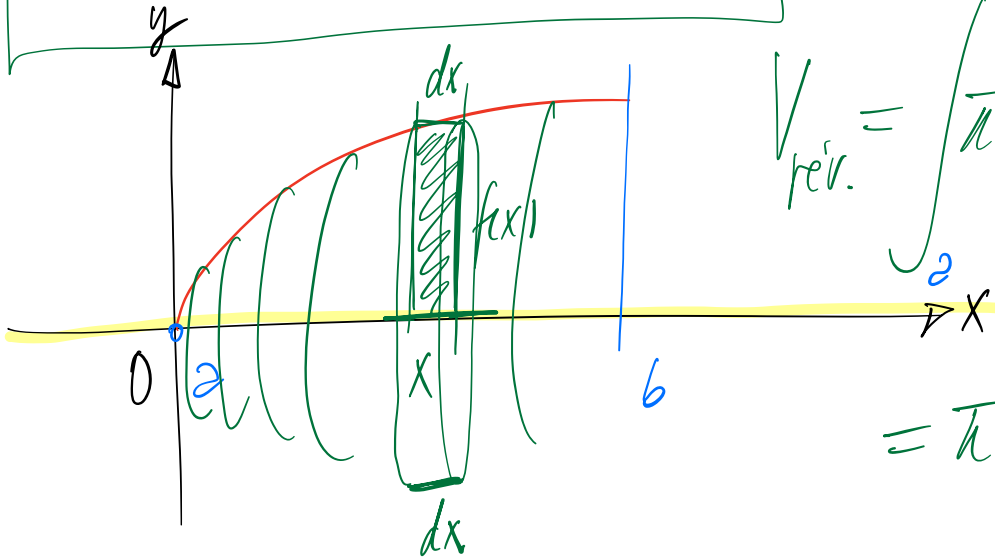
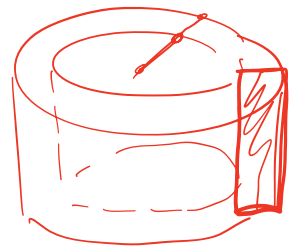
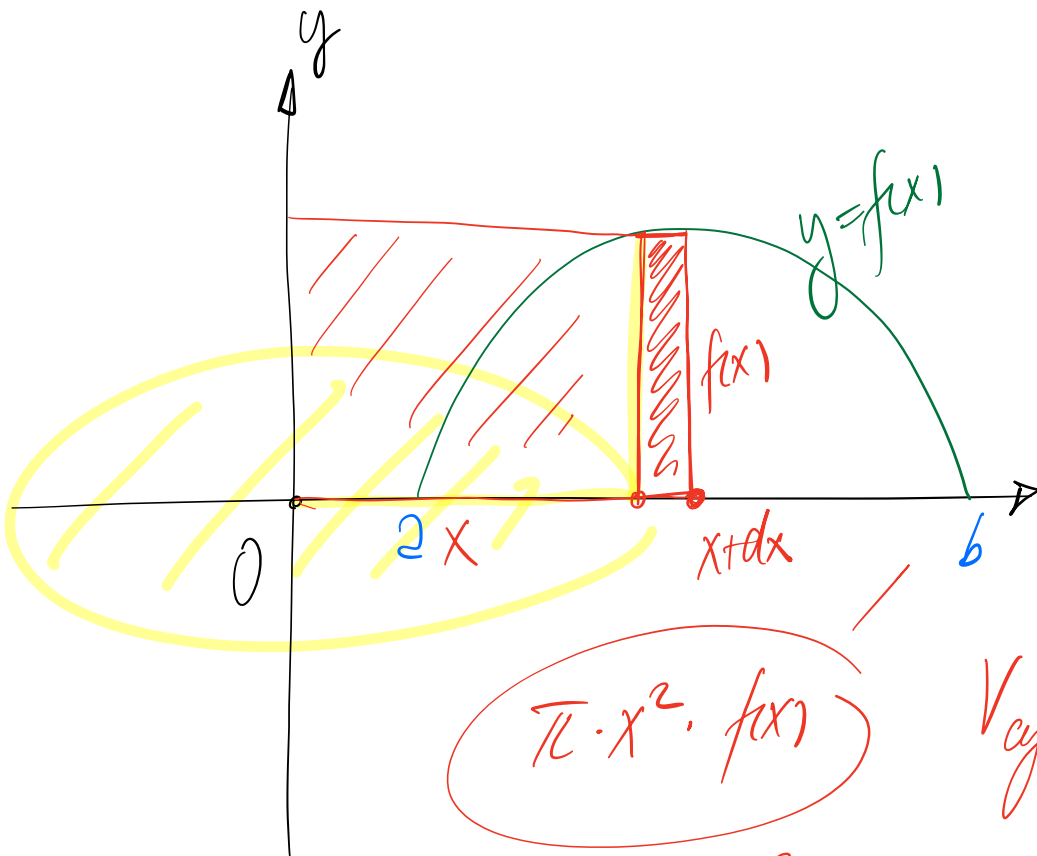


CALCULER UN VOLUME



$$V_{\text{rev.}} = \int_a^b \pi \cdot (f(x))^2 \cdot dx$$

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



$$\pi \cdot x^2 \cdot f(x)$$

V cylindre intérieur

$$\pi \cdot (x+dx)^2 \cdot f(x)$$

V cylindre extérieur

$$\pi f(x) (x^2 + 2x dx + dx^2 - x^2) = \pi f(x) (2x dx + \cancel{dx^2})$$

négligeable

$$V_{\text{revol. } y} = 2\pi \int_a^b x f(x) dx$$