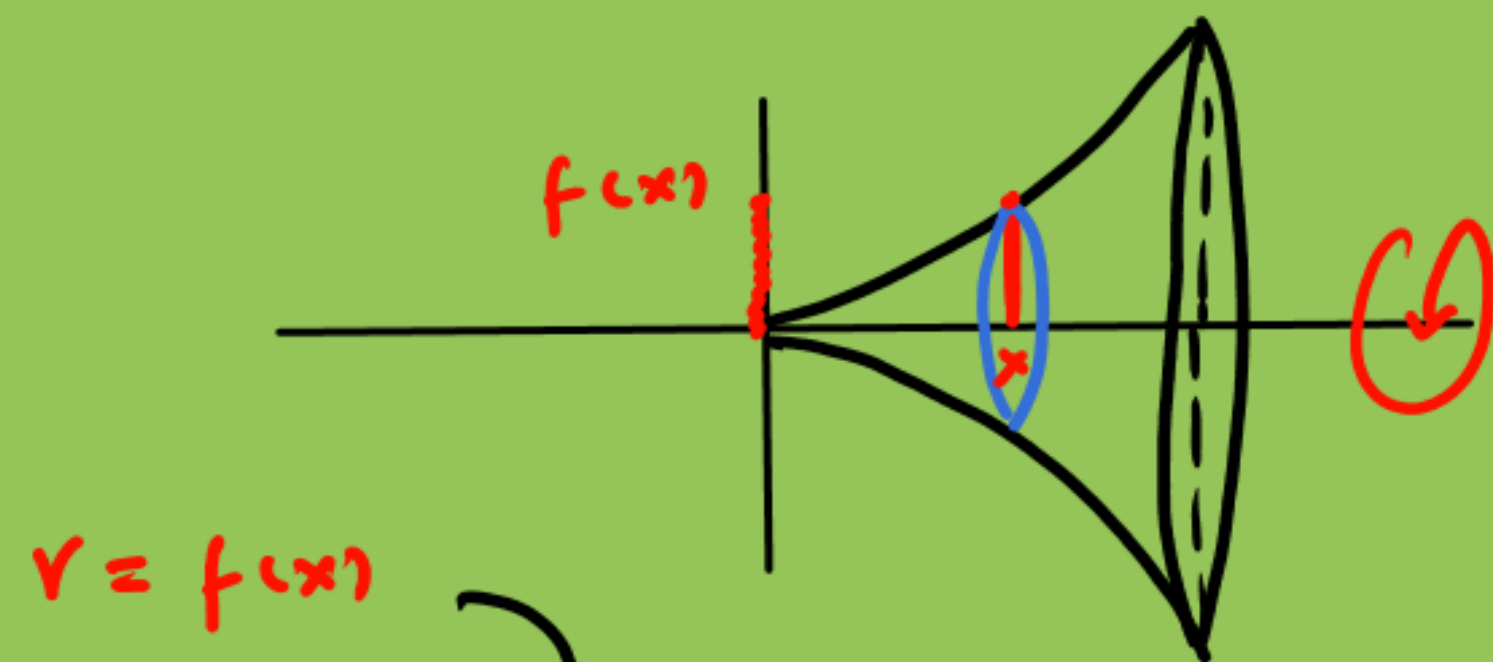


a) Eje x



$$r = f(x)$$

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

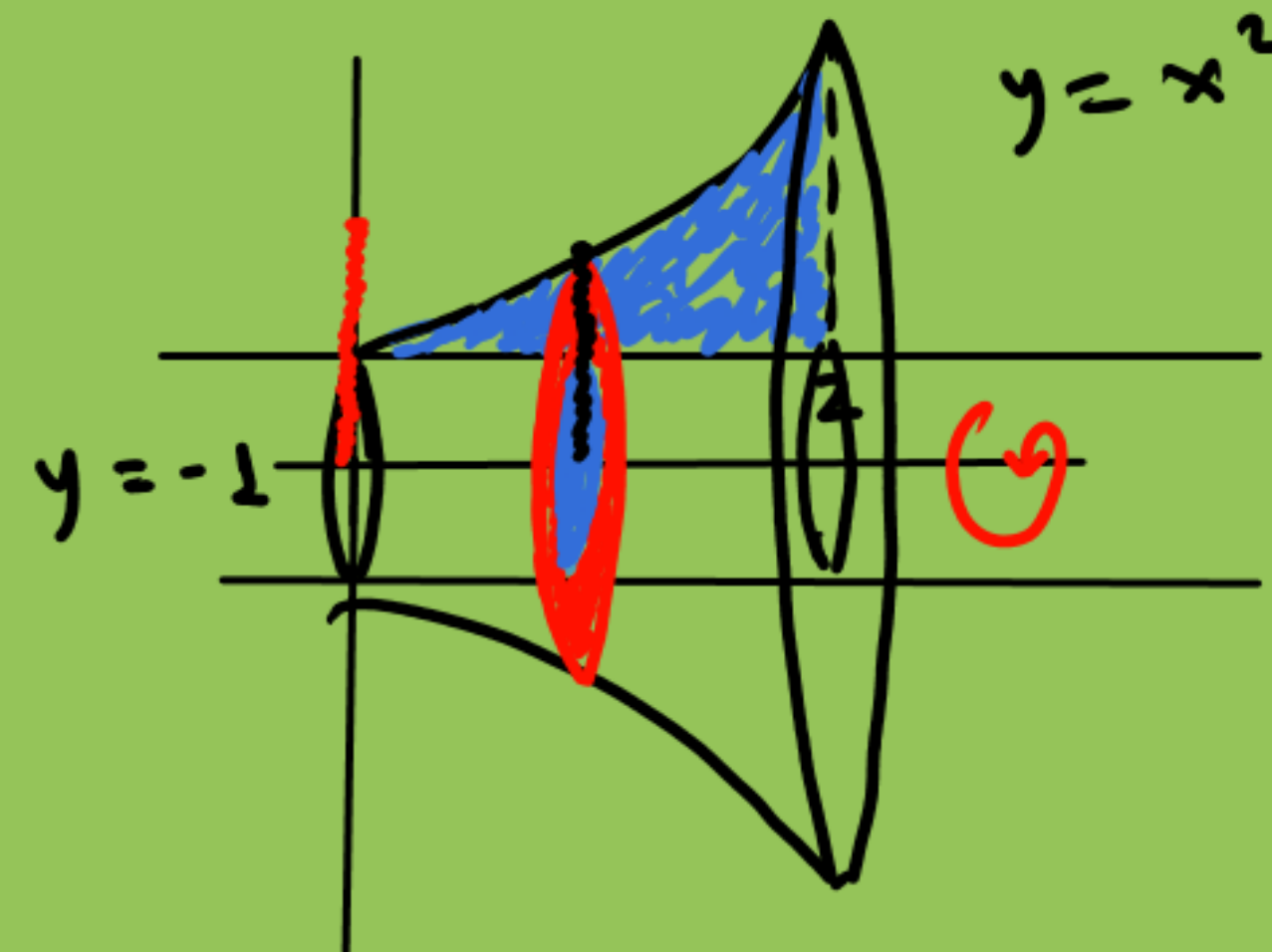
$$= \pi \int_0^2 (x^2)^2 dx$$

$$= \pi \int_0^2 x^4 dx$$

$$= \pi \left[\frac{1}{5} x^5 \right]_0^2$$

$$= \frac{32}{5} \pi$$

b) La recta $y = -1$



$$r_e = x^2 - (-1) \\ = x^2 + 1$$

$$r_i = 1$$

$$V = \pi \int_a^b [r_e^2 - r_i^2] dx$$

$$= \pi \int_0^2 [(x^2 + 1)^2 - 1^2] dx$$

$$= \pi \int_0^2 [x^4 + 2x^2 + \cancel{1} - \cancel{1}] dx$$

$$= \pi \left[\frac{1}{5} x^5 + \frac{2}{3} x^3 \right]_0^2 = \frac{176}{15} \pi$$