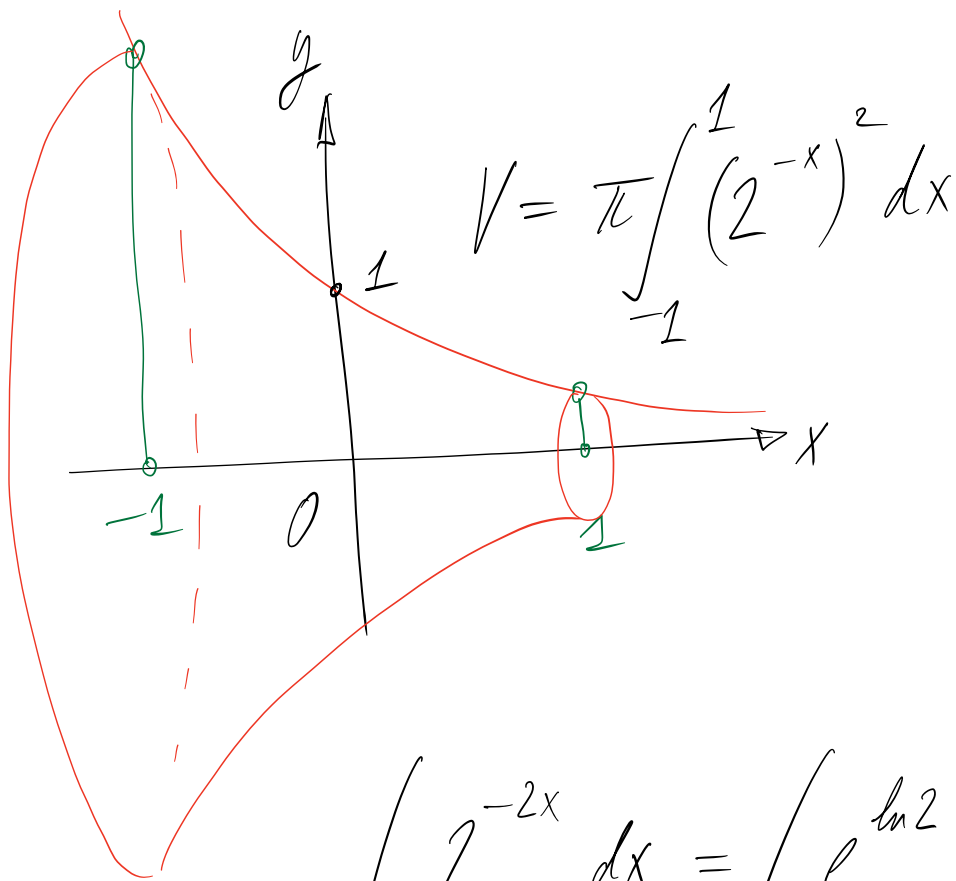


$$y = 2^{-x} = \frac{1}{2^x}$$

$$x=0 \Rightarrow y=1 \quad \left| \frac{1}{2^x} \xrightarrow{x \rightarrow +\infty} 0 \right| \quad \left| \frac{1}{2^x} \xrightarrow{x \rightarrow -\infty} +\infty \right|$$



$$\int 2^{-2x} dx = \int e^{\ln 2 \cdot (-2x)} dx$$

$$= \frac{1}{-2 \ln 2} \int e^{(-2 \ln 2) \cdot x} \cdot (-2 \ln 2) \cdot dx$$

$$= \frac{e^{(-2 \ln 2) \cdot x}}{-2 \ln 2}$$

$$\Rightarrow V = \pi \cdot \frac{e^{(-2 \ln 2) \cdot x}}{-2 \ln 2} \Bigg|_{-1}^1$$

$$\Leftrightarrow V = \frac{\pi}{-2 \ln 2} \left(e^{-2 \ln 2} - e^{2 \ln 2} \right)$$

$$\approx \frac{15 \pi}{8 \ln 2} \approx 2,705 \cdot \pi \approx 8,498$$
$$\approx 8,5$$