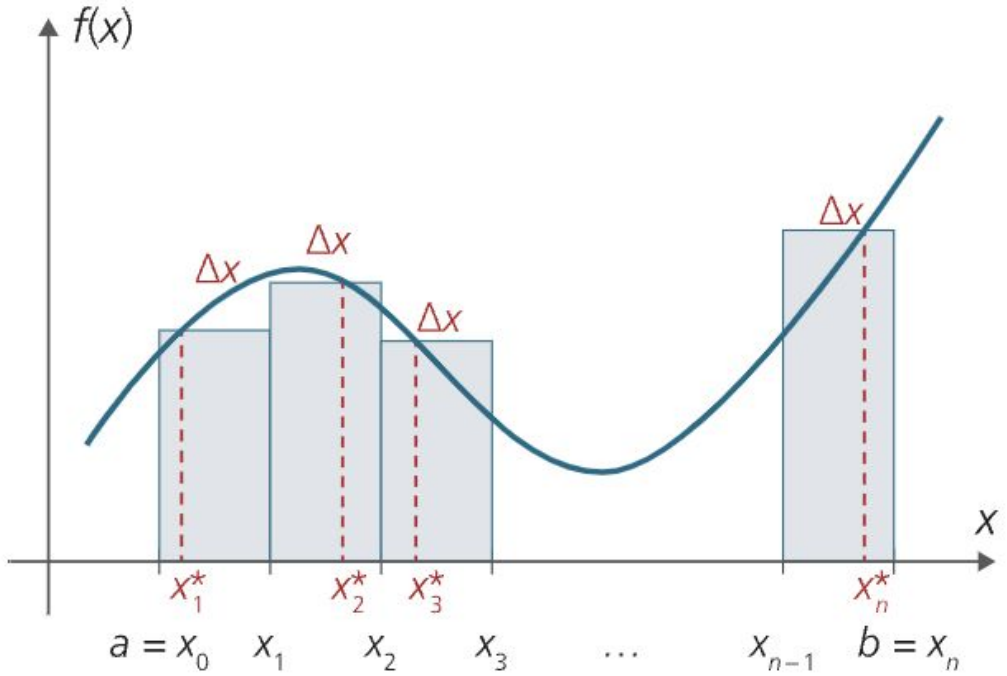
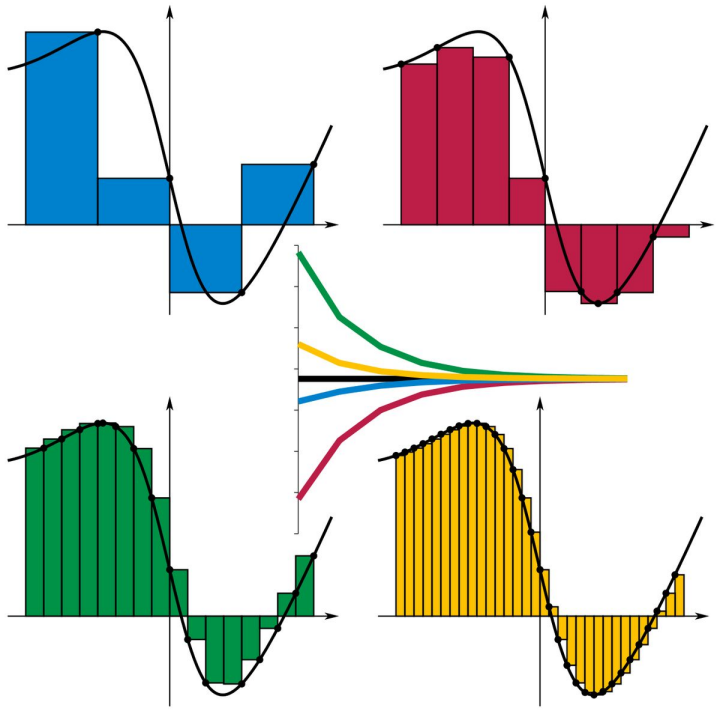
AREAL OG VOLUM

INTEGRASJON

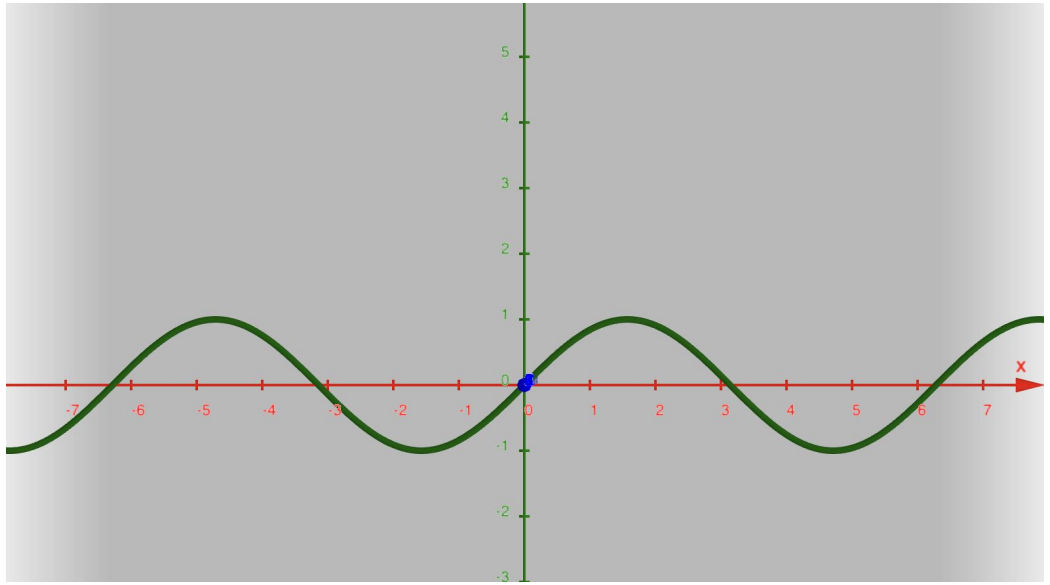
$$\int_a^b f(x)\,dx = \lim_{n\to\infty} \sum_{i=1}^{n} f(x_i) * \frac{b-a}{n}$$

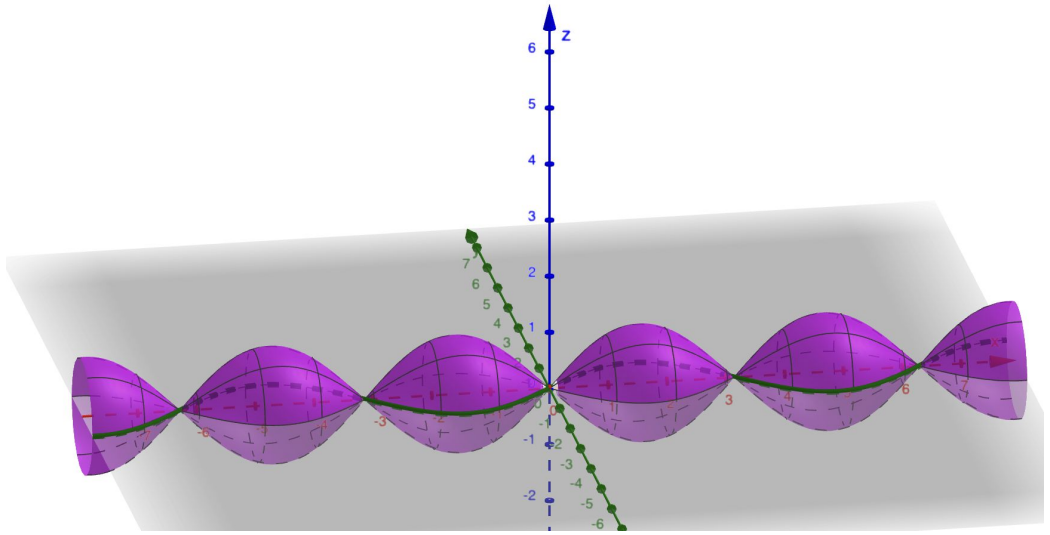


Hentet fra Matematikk R2 VG3 s. 105



Hentet fra Wikipedia https://en.wikipedia.org/wiki/Riemann_sum





OMDREININGSLEGEME

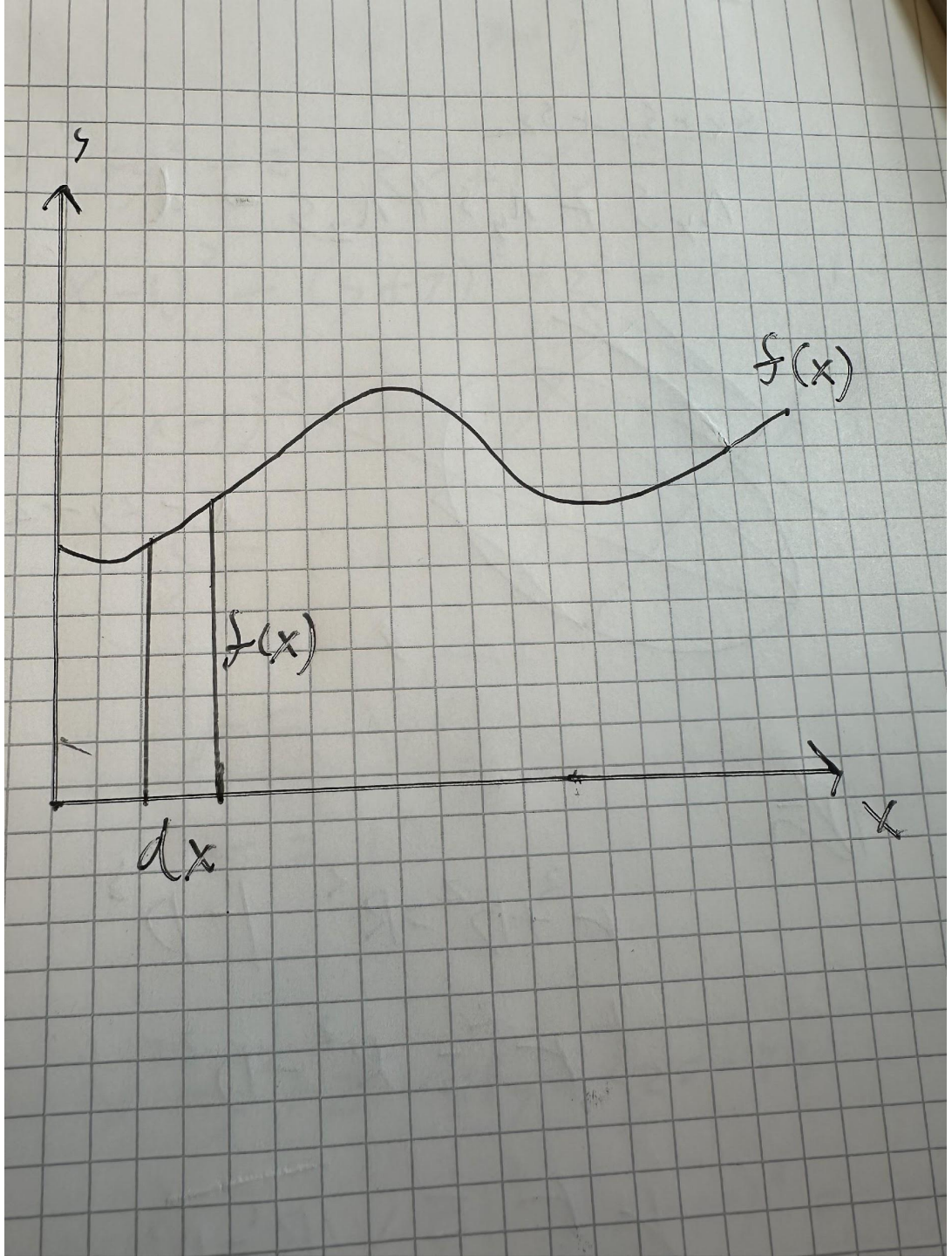
VOLUM

$$V = \pi r^2 * h$$

$$dV = \pi * (f(x))^2 * dx$$

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

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



OVERFLATEAR

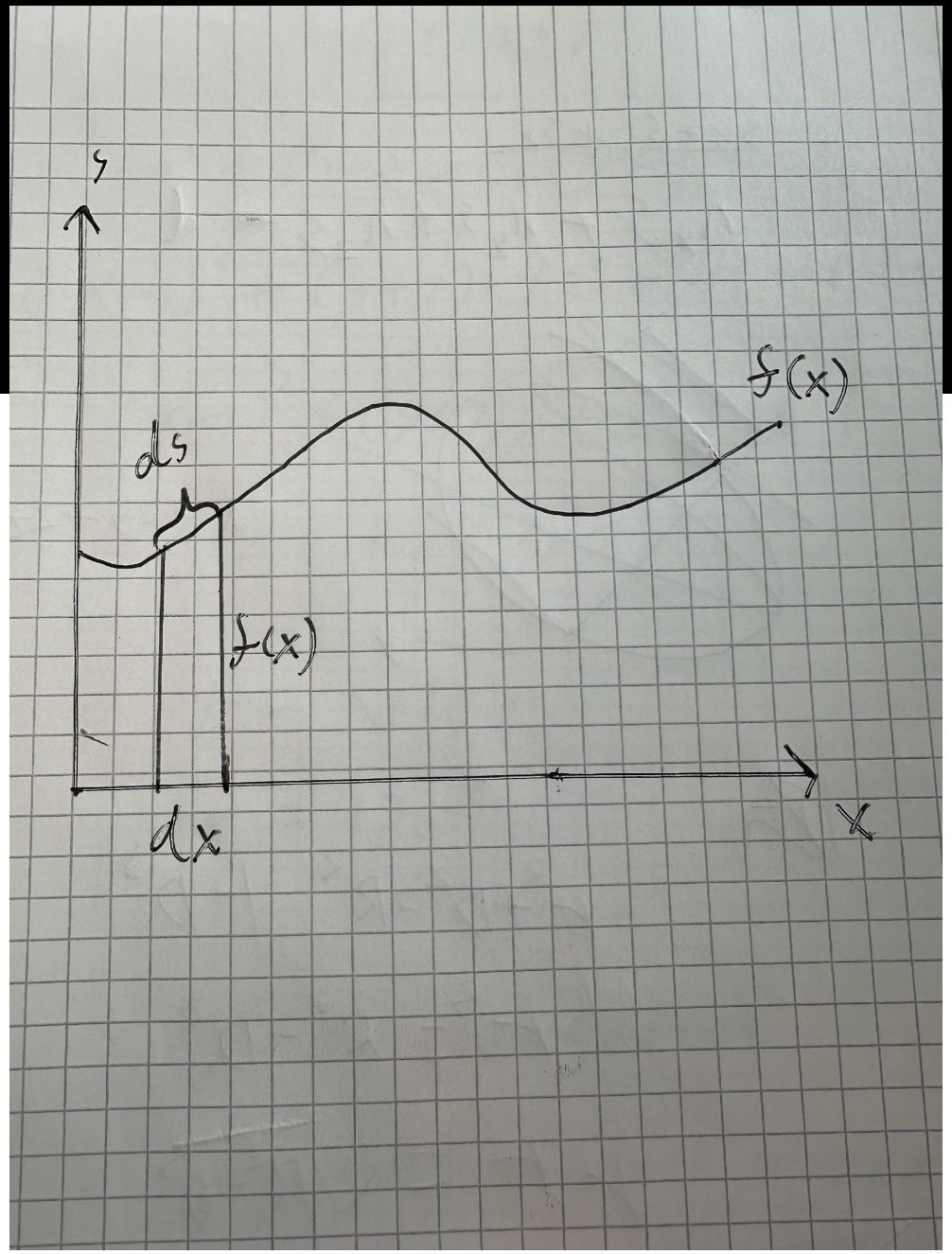
$$ds = \sqrt{1 + \left(f'(x)\right)^2}\, dx$$

$$A = 2\pi r * h$$

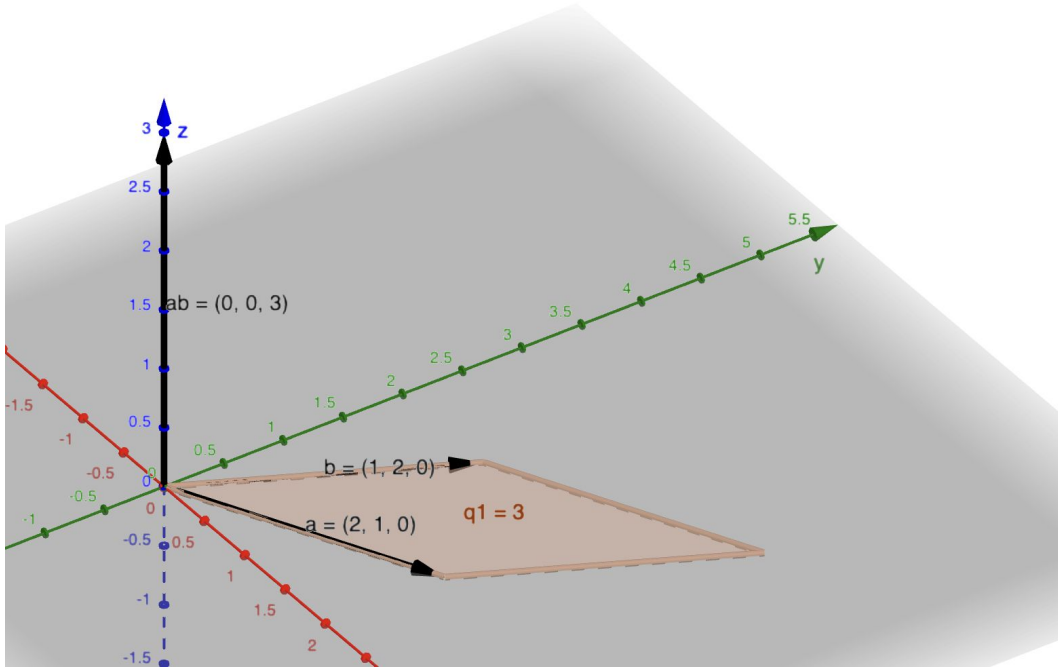
$$dA = 2\pi * f(x) * ds$$

$$dA = 2\pi * f(x)\sqrt{1 + \left(f'(x)\right)^2}\, dx$$

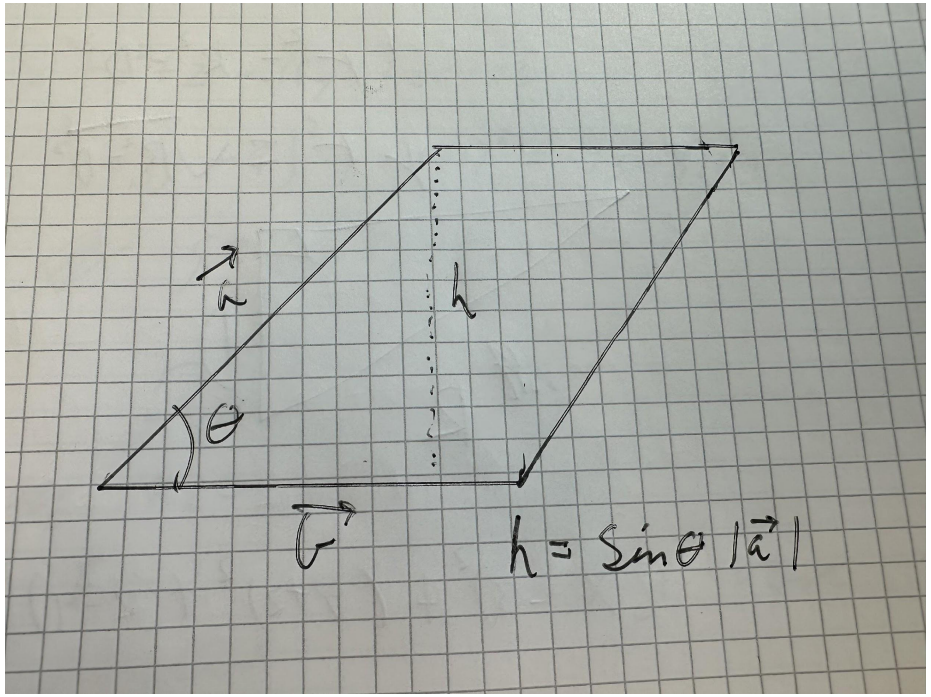
$$A = 2\pi \int_a^b f(x)\sqrt{1 + \left(f'(x)\right)^2}\, dx$$



VEKTORPRODUKT



$$\left|\vec{a}\times\vec{b}\right| = |\vec{a}|\left|\vec{b}\right| * \sin(\theta)$$

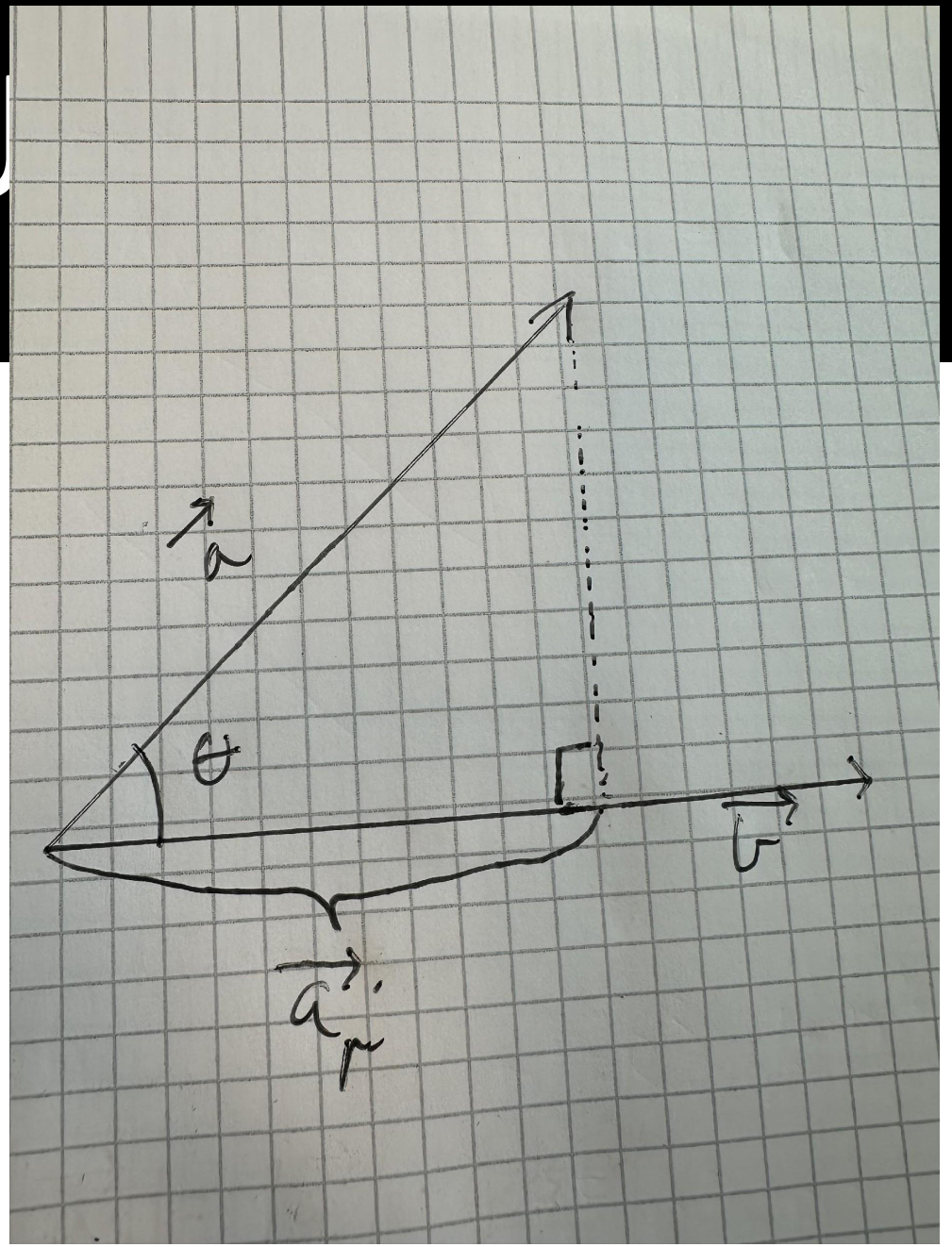


SKALARPRODU

$$\left|\overrightarrow{a_p}\right| = |\vec{a}| * \cos(\theta)$$

$$\vec{a} \cdot \vec{b} = \left|\overrightarrow{a_p}\right|\left|\vec{b}\right|$$

$$\vec{a} \cdot \vec{b} = |\vec{a}|\left|\vec{b}\right| * \cos(\theta)$$



VOLUM (VEKTORREGNING)

$$V = G * h$$

$$V = \left|\vec{a} \times \vec{b} \cdot \vec{c}\right|$$