

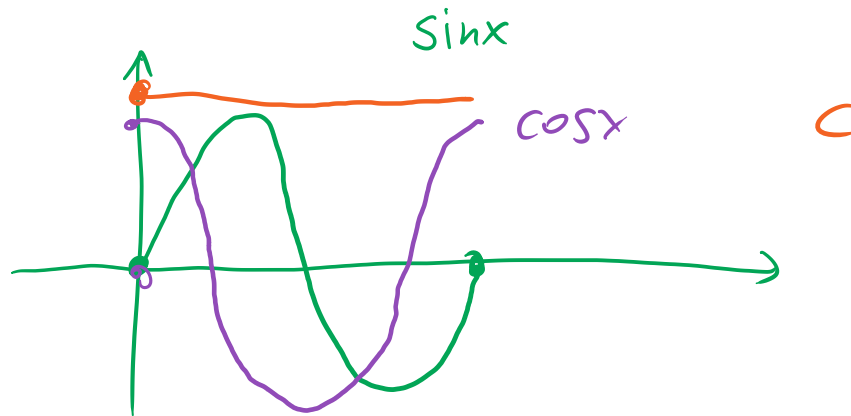
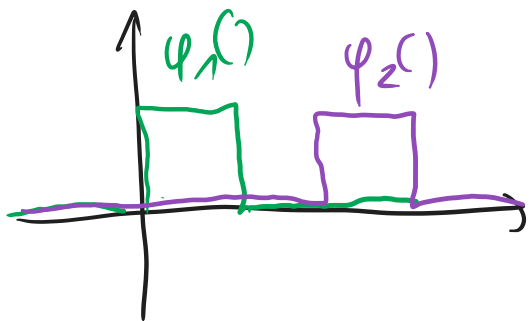
SCALAR PRODUCT OF TWO FUNCTIONS

EXAMPLE:

$$\varphi_1(x)$$

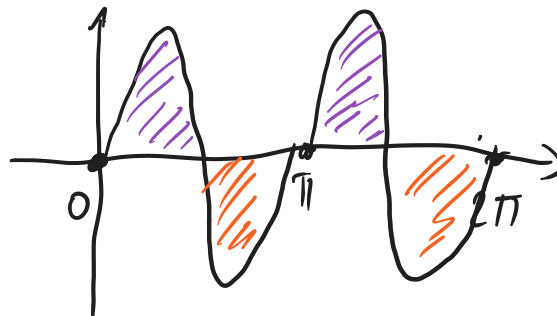
$$\varphi_2(x)$$

$$\langle \varphi_1(x), \varphi_2(x) \rangle \stackrel{\text{def}}{=} \int_D \varphi_1(x) \varphi_2(x) dx$$



$$\sin 2x = 2 \sin x \cos x$$

$$\sin x \cdot \cos x = \frac{1}{2} \sin 2x$$



$$\int = 0$$