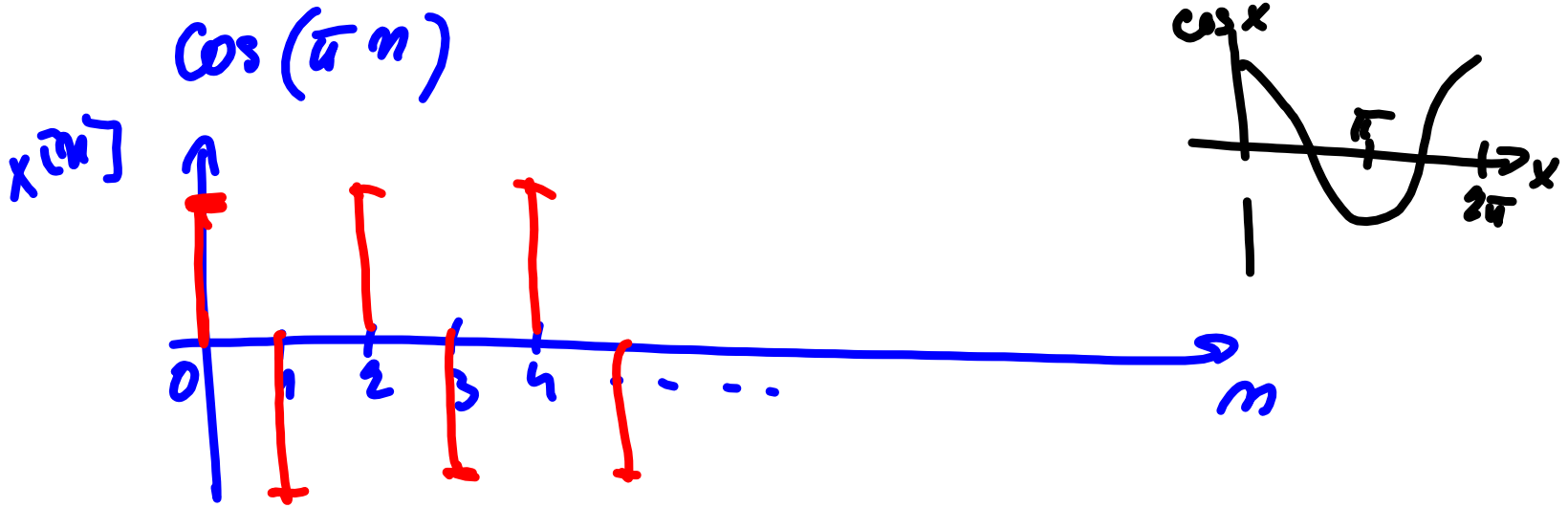
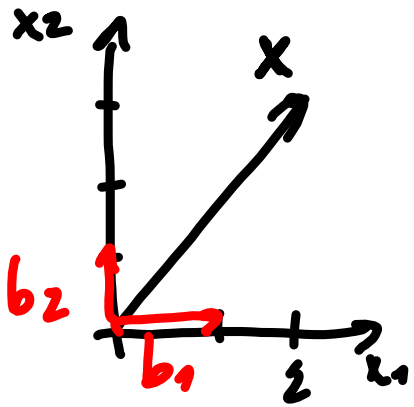
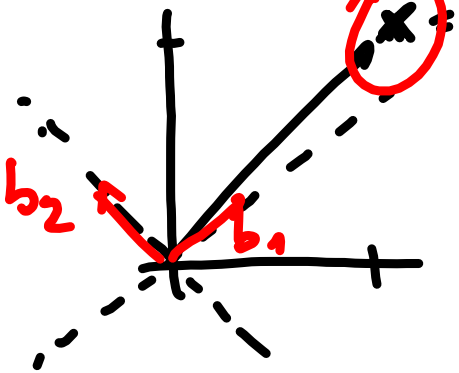

cos(π n)
x[n]
0
1
2
3
4
n
cos x
π
x
2π



$$x = \begin{bmatrix} 2 \\ 3 \end{bmatrix} \qquad b_1 = \begin{bmatrix} 1 \\ 0 \end{bmatrix} \qquad b_2 = \begin{bmatrix} 0 \\ 1 \end{bmatrix}$$

$$c_1 = b_1^T x = \begin{bmatrix} 1 & 0 \end{bmatrix} \begin{bmatrix} 2 \\ 3 \end{bmatrix} = 2$$

$$c_2 = b_2^T x = \begin{bmatrix} 0 & 1 \end{bmatrix} \begin{bmatrix} 2 \\ 3 \end{bmatrix} = 3$$

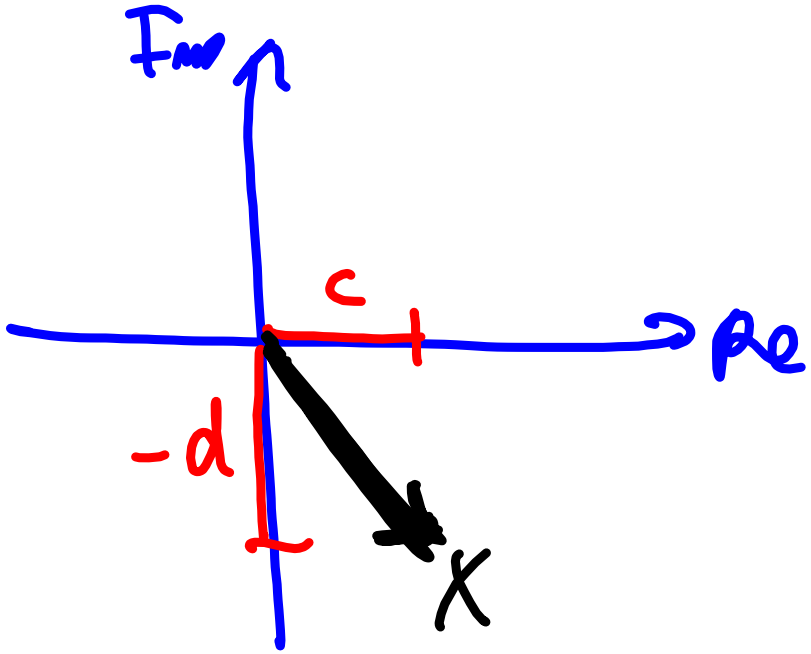


$$x = \begin{bmatrix} 2 \\ 3 \end{bmatrix} \qquad b_1 = \begin{bmatrix} \frac{1}{\sqrt{2}} \\ \frac{1}{\sqrt{2}} \end{bmatrix} \qquad b_2 = \begin{bmatrix} -\frac{1}{\sqrt{2}} \\ \frac{1}{\sqrt{2}} \end{bmatrix}$$

$$c_1 = \begin{bmatrix} \frac{1}{\sqrt{2}} & \frac{1}{\sqrt{2}} \end{bmatrix} \begin{bmatrix} 2 \\ 3 \end{bmatrix} = 3{,}53$$

$$c_2 = \begin{bmatrix} \frac{1}{\sqrt{2}} & -\frac{1}{\sqrt{2}} \end{bmatrix} \begin{bmatrix} 2 \\ 3 \end{bmatrix} = -0{,}707$$

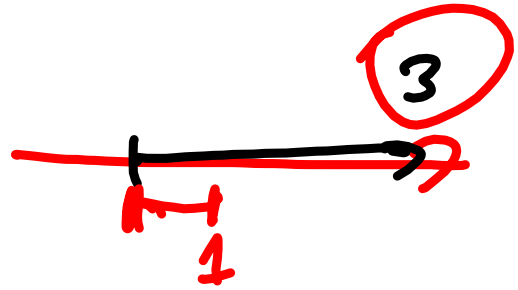
Podobnost ≈ korelace ≈ promítání do báze
≈ skalární součin



$|X| = c^2 + d^2$

abs()

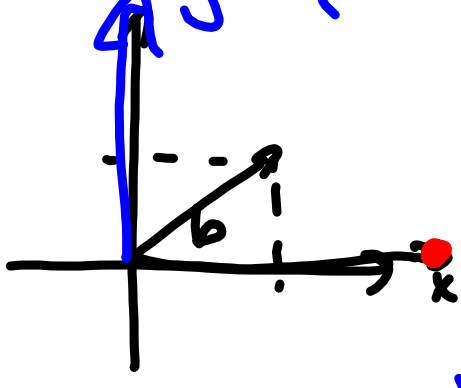
np.abs()



$c = x \cdot b = 3 \cdot 1 = 3$

$c \cdot b = 3 \cdot 1 = 3$

$3j$:(



$b = \frac{1}{\sqrt{2}} + j\frac{1}{\sqrt{2}}$

$c = x \cdot b = 3\left(\frac{1}{\sqrt{2}} + j\frac{1}{\sqrt{2}}\right) = \frac{3}{\sqrt{2}} + j\frac{3}{\sqrt{2}}$

$c = x \cdot b^* = 3\left(\frac{1}{\sqrt{2}} - j\frac{1}{\sqrt{2}}\right) =$