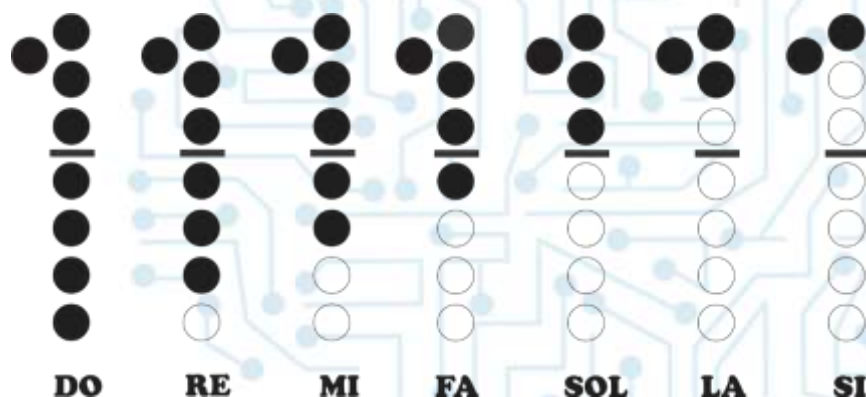




TRANSFORMADA DISCRETA DE FOURIER

$$X_k = \frac{1}{N} \sum_{n=0}^{N-1} X_n e^{-\frac{2\pi i}{N} kn} \quad k = 0, \dots, N-1$$



NOTA	FRECUENCIA
DO	523
RE	587
MI	659
FA	704
SOL	784
LA	880
SI	980

$$Re(X_k) = \frac{1}{N} \sum_{n=0}^{N-1} X_n \cos\left(\frac{2\pi}{N} kn\right)$$

$$Im(X_k) = -\frac{1}{N} \sum_{n=0}^{N-1} X_n \sin\left(\frac{2\pi}{N} kn\right)$$

$$k = 0, \dots, N-1$$

