🔖 Quick Reference: Signal Sampling in DSP

Term	Meaning	Think of it as...
`f`	Signal frequency (Hz)	How fast the wave "spins"
`Fs`	Sampling rate (samples/sec)	How often we *look* at the wave
`T = 1/Fs`	Time between samples	Like a camera shutter interval
`t[n] = n / Fs`	Time of sample `n`	When sample `n` was taken
`x[n] = exp(j·2π·f·t[n])`	Sampled complex signal	Each point on a spinning circle
`Samples per cycle = Fs / f`	How many samples for 1 full wave	Important for DFT/FFT!
`Total time = N / Fs`	Total capture duration	If you collected N samples