
TOOL:

	Inverse DTFT	$\Longleftrightarrow$	DTFT
Definition	$x[n] = \frac{1}{2\pi}\int_{-\pi}^{\pi} X(e^{j\omega})e^{j\omega n}d\omega$	$\Longleftrightarrow$	$X(e^{j\omega}) \equiv \sum_{n=-\infty}^{\infty} x[n]e^{-j\omega n}dt$
	$x[n]$	$\Longleftrightarrow$	$X(e^{j\omega})$
	$y[n]$	$\Longleftrightarrow$	$Y(e^{j\omega})$
Linearity	$ax[n]+by[n]$	$\Longleftrightarrow$	$aX(e^{j\omega})+bY(e^{j\omega})$
Conjugation	$x^*[n]$	$\Longleftrightarrow$	$X^*(e^{-j\omega})$
Symmetry	$x[n]$ real valued	$\Longleftrightarrow$	$X(e^{j\omega}) = X^*(e^{-j\omega})$
Time reversal	$x[-n]$	$\Longleftrightarrow$	$X(e^{-j\omega})$
Time shift	$x[n-d]$	$\Longleftrightarrow$	$e^{-j\omega d}X(e^{j\omega})$
Modulation	$x[n]e^{j\omega_0 n}$	$\Longleftrightarrow$	$X(e^{-j(\omega+\omega_0)})$
Convolution	$y[n] = x[n] * h[n]$	$\Longleftrightarrow$	$Y(e^{j\omega}) = X(e^{j\omega})H(e^{j\omega})$
Parseval's	$\sum_{n=-\infty}^{\infty} \lvert x[n]\rvert^2$	$=$	$\frac{1}{2\pi}\int_{-\pi}^{\pi} \lvert X(e^{j\omega})\rvert^2 d\omega$

REF: Ronald Bracewell, *The Fourier Transform and its Applications*, 2nd Ed., New York, NY: McGraw-Hill, 1978. ISBN 0-07-007013-X

Alan V. Oppenheim and Alan S. Willsky, with S. Hamid Nawab, *Signals and Systems,* 2nd Edition, Upper Saddle River, NJ: Prentice Hall, 1996. ISBN 0-13-814757-4