
DEF: The Discrete-Time Fourier Transform of $x[n]$ is $X(f)$:

$$X(e^{j2\pi f}) = \sum_{n=-\infty}^{\infty} x[n]e^{-j2\pi fn}$$

DEF: The Inverse Discrete-Time Fourier Transform of $X(f)$ is $x(t)$:

$$x[n] = \int_{-f_s/2}^{f_s/2} X(e^{j2\pi f})e^{j2\pi fn}df$$

REF: [1] Ronald Bracewell, *The Fourier Transform and its Applications*, 2nd Ed., New York, NY: McGraw-Hill, 1978. ISBN 0-07-007013-X

[2] 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