

DEF: Fourier Transform pair

$$f(x) = \int_{-\infty}^{\infty} F(\omega) e^{-i\omega x} d\omega$$

Inverse Fourier
Transform

$$F(\omega) = \frac{1}{2\pi} \int_{-\infty}^{\infty} f(x) e^{i\omega x} dx$$

Fourier Transform of $f(x)$