0.1 Fourier transforms

0.1.1 Fourier transform

$\hat{f}(\Xi) = \int_{-\infty}^{\infty} f(x) e^{-2\pi i x \Xi} dx$

0.1.2 Inverse Fourier transform

$f(x) = \int_{-\infty}^{\infty} \hat{f}(\Xi) e^{2\pi i x \Xi} d\Xi$

0.1.3 Fourier inversion theorem