
Reading quizzes: no talking, no looking in your books/notes

Q1. Which of the following is known as the “sifting property” of the delta function?

a. \[ \int_{-\infty}^{\infty} \delta(x-x_0) = 1 \]

b. \[ \int_{-\infty}^{\infty} \delta(x-x_0)f(x)dx = f(x_0) \]

c. \[ \delta(t-t_0) = \frac{1}{2\pi} \int_{-\infty}^{\infty} e^{-i\omega(t-t_0)}d\omega \]

Q2. What symbol did I use for the convolution in my convolution handout?

a. +

e. \( \times \)

b. \( \times \)

f. \( \varnothing \)

c. \( \odot \)

d. \( \oplus \)

Q3. True/False: Aside from a constant factor, the Fourier transform of a convolution is the product of the Fourier transforms of the individual functions.

\[ \mathcal{F} \left( f \ast g \right) \sim \mathcal{F}(f) \cdot \mathcal{F}(g) \]