

- $\int_{-\infty}^{\infty} \delta(x) f(x) dx = f(0)$
- $\int_{-\infty}^{\infty} \delta(x-a) f(x) dx = f(a)$
- $\int_{-\infty}^{\infty} \delta(x) dx = 1$
- $\int_{-\infty}^{\infty} \delta(x) \delta(x-a) dx = 0$