



Why

Toward a theorem for iterated integrals, we show a result for rectangular functions.

Result

Proposition 1. *Let (X, \mathcal{A}, μ) and (Y, \mathcal{B}, ν) be σ -finite measurable spaces. Let $E \in \mathcal{A} \times \mathcal{B}$. Let $\mu = \mu_1 \times \mu_2$ be the product measure on the product sigma algebra $\mathcal{A}_1 \times \mathcal{A}_2$. Let $f : X_1 \times X_2 \rightarrow [-\infty, \infty]$ be the indicator of E . Then: TODO*

