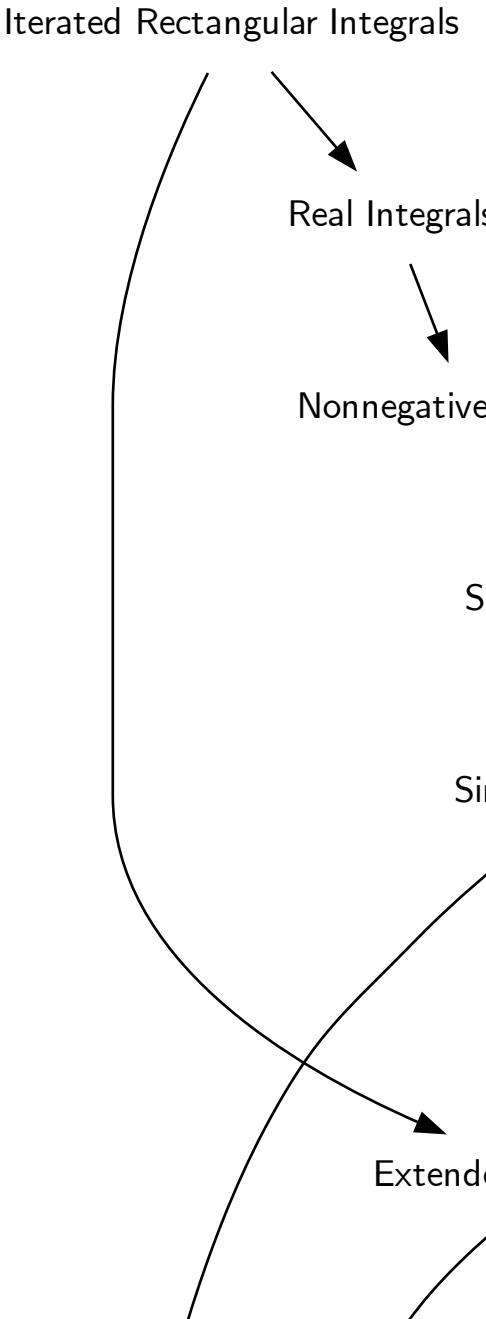
Iterated Rectangular Integrals

1 Why

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

2 Result

Proposition 1. *Let $(X, \mathcal{A}, \mu)$ and $(Y, \mathcal{B}, \nu)$ 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 $f : X_1 \times X_2 \to [-\infty, \infty]$ be the indicator of E. Then: TODO*


Iterated Rectangular Integrals
Real Integrals
Nonnegative
S
Si
Extend