??
(Ω, F)
Ω
F
$I =$
$[0, 1]$
$\Pi :$
$F \mapsto$
I
Ω
π
π
$\{X_1, \dots, X_{}\}$
Π
$g \in$
$L^1(\Pi)$

$$\int_\Omega g \approx \frac{1}{} \sum_{i=1}^{g} (X^{[i]}).$$

$\Omega =$
F
π
??
??
$(\Omega^{}, F^{\otimes}, \pi_\beta)$
1
Ω
π
$\pi_\beta \propto$
$\pi^{\beta_1} \times$
$\dots \times$
$\pi^{\beta_{}},$
$\beta =$
$(\beta_1, \dots, \beta_{})$
$1 =$
$\beta_1 >$
$\dots >$
$\beta_{} > 0$
$T_i =$
$\frac{1}{\beta_i}$
T_i
π^{β_l}
π
2
$X \equiv$
$\{X^{[k]}\}_{k \geq 0}$
Ω^L
π^β_l
X

$$X^{[k]} = (X_1^{[k]}, \dots, X^{[k]}_{}).$$

??
X
π
$X^{[0]}$
$\pi(X_l^{[0]}) >$
0
$l \in$
$\{1, \dots, \}$
$\pi(X_l^{[0]})^\beta_k >$
0
0
??
π
??
3
y

Here $F^{\otimes} \equiv \underbrace{F \otimes \dots \otimes F}_{Ltimes}$ is the usual product sigma algebra. For the

l^{th}
Π
x
$\pi(y) <$
$\pi(x)$

$$\alpha_{\beta_l}(x,y) = 1 \wedge \left(\frac{\pi(y)}{\pi(x)}\right)^{\beta_l} = \left(\frac{\pi(y)}{\pi(x)}\right)^{\beta_l} > \frac{\pi(y)}{\pi(x)} = 1 \wedge \frac{\pi(y)}{\pi(x)} = \alpha_{\beta_1}(x,y),$$

$X^{[0]}$
$\pi(X^{[0]}) \neq 0$
$\textsc{Metro}X^{[0]}$
N
$n \leftarrow 0, \ldots, N-1$
$Y \sim q(X^{[n]}, y)\,\mathrm{d}\,y$
$U \sim \mathcal{U}(0,1)$
$U \leq \alpha(X^{[n]}, Y)$
$X^{[n+1]} \leftarrow Y$
$X^{[n+1]} \leftarrow X^{[n]}$

$\{X^{[n+1]} \in A\}$
$A \in F$