

slln-lemma3^{11,40}

$\forall p:\text{FinProbSpace}, f:(\mathbb{N} \rightarrow \mathbb{N}), X:(n:\mathbb{N} \rightarrow \text{RandomVariable}(p;f(n))), s, k:\mathbb{Q}.$
 $(\forall n:\mathbb{N}, i:\{0..n^-\}. f(i) < f(n))$
 $\Rightarrow (\forall n:\mathbb{N}.$
 $E(f(n);X(n)) = 0 \in \mathbb{Q}$
 $\& E(f(n);(x.x * x) \circ X(n)) = s$
 $\& E(f(n);(x.(x * x) * x * x) \circ X(n)) = k)$
 $\Rightarrow (\forall n:\mathbb{N}, i:\{0..n^-\}. \text{rv-disjoint}(p;f(n);X(i);X(n)))$
 $\Rightarrow \text{nullset}(p;\lambda s.\exists q:\mathbb{Q}$
 $(0 < q \& (\forall n:\mathbb{N}. \exists m:\mathbb{N}. ((n < m) \& q \leq |\Sigma_{0 \leq i < m. (1/m) * (X(i)(s))|))))$