

rv-partial-sum-monotone^{11,40}

$\forall p:\text{FinProbSpace}, f:(\mathbb{N} \rightarrow \mathbb{N}), X:(n:\mathbb{N} \rightarrow \text{RandomVariable}(p;f(n)))$.

$(\forall n:\mathbb{N}, i:\{0..n\}^-. f(i) < f(n))$

$\Rightarrow (\forall n:\mathbb{N}. 0 \leq X(n))$

$\Rightarrow (\forall m:\mathbb{N}, n:\{0..(m+1)\}^-. \text{rv-partial-sum}(n;i.X(i)) \leq \text{rv-partial-sum}(m;i.X(i)))$