

### **rv-shift-linear**<sup>11,40</sup>

$\forall k:\text{FinProbSpace}, x:\text{Outcome}, n:\mathbb{N}^+, X, Y:\text{RandomVariable}(k;n), a, b:\mathbb{Q}.$   
 $\text{rv-shift}(x;a*X + b*Y) = a*\text{rv-shift}(x;X) + b*\text{rv-shift}(x;Y) \in \text{RandomVariable}(k;n - 1)$