

## expectation-rv-add-cubed<sup>11,40</sup>

$$\begin{aligned} & \forall p:\text{FinProbSpace}, n:\mathbb{N}, X, Y:\text{RandomVariable}(p;n). \\ & \text{E}(n;(x.(x * x) * x) \circ X + Y) \\ & = \\ & ((\text{E}(n;(x.(x * x) * x) \circ X) + (3 * \text{E}(n;X * X * Y))) + (3 * \text{E}(n;X * Y * Y))) \\ & + \text{E}(n;(x.(x * x) * x) \circ Y) \\ & \in \mathbb{Q} \end{aligned}$$