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Result

PROPOSITION 1. *Let A_1, \dots, A_n be a partition of a set of outcomes A . Let \mathbf{P} be an event probability function for some probability mass function. Let $B \subset A$ an event. Then*

$$\mathbf{P}(B) = \sum_{i=1}^n \mathbf{P}(B \cap A_i).^2$$

This result is often known as the *law of total probability*.

¹Future editions will include.

²Future editions will include an account.

