



# Event Independence

## 1 Why

todo

## 2 Definition

Two events are *independent* if the probability of their intersection is the product of their respective probabilities.

## 3 Definition

Let  $\mathbf{P}$  be an event probability function with set of outcomes  $A$ . Then the events  $B$  and  $C$  are independent if

$$\mathbf{P}(B \cap C) = \mathbf{P}(B)\mathbf{P}(C).$$