



## PRODUCT UNDER INDEPENDENCE

**Why**

TODO

**Result**

**Prop. 1.** *The expectation of the product of two independent random variables is the product of their expectations.*

*Proof.* Let  $f, g$  be two independent random variables. We want to show

$$\mathbf{E}fg = \mathbf{E}f\mathbf{E}g.$$

□



