



Expectation

1 Why

TODO

2 Definition

The *expectation* of a real-valued random variable defined on a probability space is its integral with respect to the probability measure.

2.1 Notation

Let (X, \mathcal{A}, μ) be a probability space and f be a random variable. We denote the expectation of f by $\mathbf{E} f$. We defined it by

$$\mathbf{E} f = \int f d\mu.$$