



Random Variable Moments

1 Why

TODO

2 Results

Let n be a natural number. If the integral of the n th power of a real-valued random variable exists, the *n th moment* of the random variable is the expectation of its n th power.

2.1 Notation

Let n be a natural number. Let (X, \mathcal{A}, μ) be a probability space. Let f be a real-valued random variable on X such that $\int f^n d\mu$ exists. In expectation notation, the n th moment of f is $\mathbf{E}(f^n)$.