

## RANDOM VARIABLE MOMENTS

## Why

1

## Results

If the integral of the nth power of a real-valued random variable exists, the nth moment of the random variable is the expectation of its nth power.

## Notation

Let  $(X, \mathcal{A}, \mathbf{P})$  be a probability space. Let x be a real-valued random variable on X such that  $\int x^n d\mathbf{P}$  exists. The nth moment of f is  $E(f^n)$ .

<sup>&</sup>lt;sup>1</sup>Future editions will include.

