



## Why

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## Results

If the integral of the  $n$ th power of a real-valued random variable exists, the *nth moment* of the random variable is the expectation of its  $n$ th 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  $n$ th moment of  $f$  is  $\mathbf{E}(f^n)$ .

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<sup>1</sup>Future editions will include.



