

# Модули метода random

betavariate, sample, Random,  
normalvariate, gammavariate

Beta distribution.

Conditions on the parameters are  $\alpha > 0$  and  $\beta > 0$ .

Returned values range between 0 and 1.

# **BETAVARIATE**

leaving the original population unchanged. The resulting list is in selection order so that all sub-slices will also be valid random samples. This allows raffle winners (the sample) to be partitioned into grand prize and second place winners (the subslices).

Members of the population need not be hashable or unique. If the population contains repeats, then each occurrence is a possible selection in the sample.

To choose a sample in a range of integers, use range as an argument. This is especially fast and space efficient for sampling from a large population: `sample(range(10000000), 60)`

# **SAMPLE**

Random number generator base class used by bound module functions.

Used to instantiate instances of Random to get generators that don't share state.

Class Random can also be subclassed if you want to use a different basic

generator of your own devising: in that case, override the following methods: random(), seed(), getstate(), and setstate().

Optionally, implement a getrandbits() method so that randrange() can cover arbitrarily large ranges.

# RANDOM

Normal distribution.

$\mu$  is the mean, and  $\sigma$  is the standard deviation.

# **NORMALVARIATE**

Gamma distribution. Not the gamma function!

Conditions on the parameters are  $\alpha > 0$  and  $\beta > 0$ .

The probability distribution function is:

$$\text{pdf}(x) = \frac{x^{(\alpha - 1)} * \text{math.exp}(-x / \beta)}{\text{math.gamma}(\alpha) * \beta^{**} \alpha}$$

# GAMMAVARIATE