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Binomial distribution B(1, 1/6)

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In R?

In Python?

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Binomial distribution B(1, 1/6)

In R?
rbinom(n = 1, size = 1, prob = 1/6)

In Python?
numpy.random.binomial(n = 1, p = 1/6)

I want to roll a die 100 times (without rolling a die) and see how many times I get 1. Encoding success (prob of 1/6) as 1 and failure (prob of 5/6) as 0 for each roll, what probability distribution should I sample an outcome (the number of success) from?

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Binomial distribution B(100, 1/6)

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Binomial distribution B(100, 1/6)

In R?

In Python?

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Binomial distribution B(100, 1/6)

In R?
rbinom(n = 1, size = 100, prob = 1/6)

In Python?
numpy.random.binomial(n = 100, p = 1/6)

How do we generate a random number of females out of 4 siblings (no twins)?

Binomial distribution B(4, 1/2)

In R?
rbinom(n = 1, size = 4, prob = 1/2)

In Python?
numpy.random.binomial(n = 4, p = 1/6)

How do we generate a random number of kids before the first daughter?

Geometric distribution G(1/2)

In R?
rgeom(n = 1, prob = 1/2)

In Python?

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Poisson distribution Poisson(rate = 10)

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In R?

In Python?

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Poisson distribution Poisson(rate = 10)

In R?
rpois(n = 1, lambda = 10)

In Python?
numpy.poisson(lam = 10)

I accidentally step on 1 ant per 100 m on average. The god of ants told me that I will be killed when I step on 1,000,000 ants from now. What is the distribution of distance of my walk until I die of stepping on ants?

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Exponential distribution Exp(10) [km]

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Exponential distribution Exp(10) [km]

In R?
rexp(rate = 10)

In Python?
numpy.random.exponential(scale = 1/10)

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Hypergeometric distribution Hyper(N = 100, K = 5, n = 10)

In R?
rhyper(nn = 1, m = 5, n = 100 – 5, k = 10)

In Python?
numpy.random.hypergeometric(ngood = 5, nbad = 100 – 5, nsample = 10)

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Hypergeometric distribution Hyper(N = 100, K = 5, n = 10)

In R?

In Python?

I want to randomly generate numbers for heights of 100 students assuming it follows a normal distribution with mean = 170 [cm] and standard deviation = 5 [cm].

In R?
rnorm(n = 100, mean = 170, sd = 5)

In Python?
numpy.random.normal(loc = 170, scale = 5, size = 100)