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Eco602:Week5 Reading Assignment- Probability Distributions

Q1 Answer:

As there are total three acorns species and two acorns of the same species are indistinguishable, the possible sample space size can be 6, where the arrangement of acorns will not matter.

Q2 Answer:

Three ways to collect two acorns of the same species.

Q3 Answer:

Three ways to collect two acorns of different species.

Q4 Answer:

One Third (1/3)

Q5 Answer:

One Third (1/3)

Q6 Answer:

One Third (1/3)

Q7 Answer:

One Ninths (1/9)

Q8 Answer:

Two Ninths (2/9)

Q9 Answer:

One Ninths (1/9)

Q10 Answer:

Infinite sample space

Q11 Answer:

The sample space of this distribution is 10 because, n=10.

Q12 Answer:

Binomial and Poisson distribution both are used in the model, which has number of occurrences of some events. Also, events are treated as independent events in both 'Binomial' and 'Poisson' distributions. They do not change by changing the scales of measurements, which can be the reason for being the good models for counts.

Q13 Answer:

With fixed sample size the Binomial distribution is better than the Poisson distribution. For example, if someone is told to do something (success or failure) in a specific number of times/chances, only two possible outcomes will be counted. In this type of data count, the Binomial distribution is best fit as a model.