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Week 5 reading questions

Worked on Alone

Q1. There are 6 elements in the sample space.

{(Bur, Bur), (Bur, Red), (Bur, White) (Red, White), (White, White), (Red, Red)}

Q2. Since the acorns are collected at the same time, there are only 3 ways to collect two acorns of the same species.

{(Bur, Bur), (White, White), (Red, Red)}

Q3. There are 3 different was you can collect two acorns of different species.

(Bur, Red), (Bur, White) (Red, White)

Q4. 1/3

Q5. 1/3

Q6. Assuming a basically infinite population, 1/3

Q7. 1/3 \* 1/3 = 1/9

Q8. 1/3\*1/3 + 1/3\*1/3 = 2/9

Q9. 1/3\*1/3 = 1/9

Q10. Infinity

Q11. n+1 = 10 + 1 = 11

Q12. Both the Binomial and Poisson distributions are discrete distributions, so they are good for counts which cannot take fractional values.

Q13. The binomial distribution may be a better count model than a Poisson distribution when the number of observed events are limited and the success rates are not very low. For instance, a scenario where you were studying successful predation events.