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1.
    a. events
    b. Probabilities
2. There are 8 possible outcomes for this scenario.
3. There are 3 different possible outcomes.
4. There are 4 outcomes if order is not important. If order is recorded, then there are 8 possibilities.
5. These have been a mixture of combinations and permutations. Combinations were the questions where order was not important for the possible outcomes. Permutations are those where order of outcome is important.
6. There are three possible outcomes when a penny is flipped three times for heads, 1, 2, or 3.
7. These would be combinations.
8. The sample space size is 2 for the number of samples that can be sampled at once.
9. There are three ways to collect two acorns of the same species.
10. There are three ways to collect two acorns of different species.
11. 1/3
12. 1/3
13. 1/3
14. 1/9
15. 2/9
16. 1/9
17. Poisson distributions have an infinite sample space.
18. The sample space of the binomial distribution is 11 (n+1, with n = 10).
19. The Binomial and Poisson distributions are summaries of data counts. They allow you to compare the number of successes for multiple trials with different success rates.
20. A binomial distribution would be better if you have a small number of samples or trials to compare. The Poisson is more suited for unlimited trials, especially considering the Binomial distribution approaches a similar curve to the Poisson at larger sample sizes.