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The Poisson Distribution: Example - Quiz

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Question 1

1/1 point (graded)

Which of the following are requirements for a series of events to be effectively modeled according to the Poisson distribution? (Select all that apply.)

- [x] a. Occurrences of the event must be countable and measureable
- [x] b. Each of the events are independent
- [ ] c. The probability of the occurrence versus not happening is 50/50
- [x] d. The average frequency for of occurrences is known for a certain time period

✔

Explanation

The Poisson distribution characterizes a series of events where occurrences can be counted in whole numbers, the occurrences are independent, and the average frequency of occurrences for a given time period is known.

Submit You have used 2 of 2 attempts

✔ Correct (1/1 point)

Question 2

1.0/1.0 point (graded)

As discussed in lecture, which of the following does the Poisson distribution express?

- a. The amount of time that you would need to wait for a certain number of a specific event to occur
- b. The number of a events, each independent, that will occur in a fixed interval of time ✔
- c. The probability that at least one occurrence will be observed within a given time period
- d. The probability that no occurrences will be observed within a given time period

Explanation

As is discussed in class, the Poisson distribution expresses the number of events that occur during a specific interval of time, where each of those events are independent. Examples of things that might be modeled according to the Poisson distribution include the number of shots that are made in a single basketball game (where you can use the Poisson distribution to compute the probability that the

- Exit Survey

number of shots made is greater than 40, for example), the number of business ideas that an entrepreneur may have in a given month, or the number of cars that will pass through an intersection within a certain number of time.

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Discussion
Topic: Module 6 / The Poisson Distribution: Example - Quiz

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