5. Exercise: Poisson models

Exercise: Poisson models

1/3 points (graded)

For each one of the following situations, state whether a Poisson model is a plausible model over the specified time frame.

1. The process of arrivals of passengers to the baggage claim section of an airport

   Yes ▼ ✖ **Answer:** No

2. The process of order arrivals at an online retailer between 3:00 and 3:15 pm

   Yes ▼ ✔ **Answer:** Yes

3. The process of order arrivals at a local pizza delivery shop over the course of a day

   Yes ▼ ✖ **Answer:** No

Solution:

1. Passengers go to the baggage claim area because their plane has just arrived. If I see that there were 20 arrivals to the baggage claim area over the last minute, I can infer that a plane just arrived, and I can expect a substantial number of arrivals over the next minute. Thus, the independence assumption does not hold.

2. Orders are generated from a large population of potential customers, and these are typically uncoordinated.

3. The rate of order arrivals should be much higher between during lunch and dinner meal hours and much lower at other times of the day, thus violating the time-homogeneity assumption.

提交 你已经尝试了1次（总共可以尝试1次）

ℹ Answers are displayed within the problem

讨论

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显示讨论

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