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15. Exercise: Random incidence

Exercises due May 13, 2020 05:29 IST   *Completed*

Exercise: Random incidence

1/1 point (graded)

Consider an arrival process whose interarrival times are independent exponential random variables with mean 2 (and consequently variance equal to 4), and consider the interarrival interval S seen by an observer who arrives at a fixed time t^*, as in the preceding video. What is the variance of S?

| 8 |

✔ **Answer:** 8

Solution:

As discussed in the preceding video, such an interval is the sum of two independent exponential random variables. Its variance is the sum of the variances of these two exponentials: $4 + 4 = 8$.

| Submit | You have used 2 of 3 attempts

ⓘ   Answers are displayed within the problem

Discussion

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Topic: Unit 9: Bernoulli and Poisson processes:Lec. 23: More on the Poisson process / 15. Exercise: Random incidence

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?   Which interarrival time has mean = 4 ?

I feel confused. I calculated the main lambda, then calculated expected value of two interarrivals, calcula...

💬 **Hint**
Please watch the previous video again

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❓ **S is the interval from U to V?**
as above

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