Exercise: Random incidence

(1/1 point)

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

Answer:
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: $4 + 4 = 8$.

You have used 1 of 2 submissions

Exercises 23 due May 11, 2016 at 23:59 UTC

Solved problems

Additional theoretical material

Problem Set 9
Problem Set 9 due May 11, 2016 at 23:59 UTC

Unit summary

▸ Unit 10: Markov chains