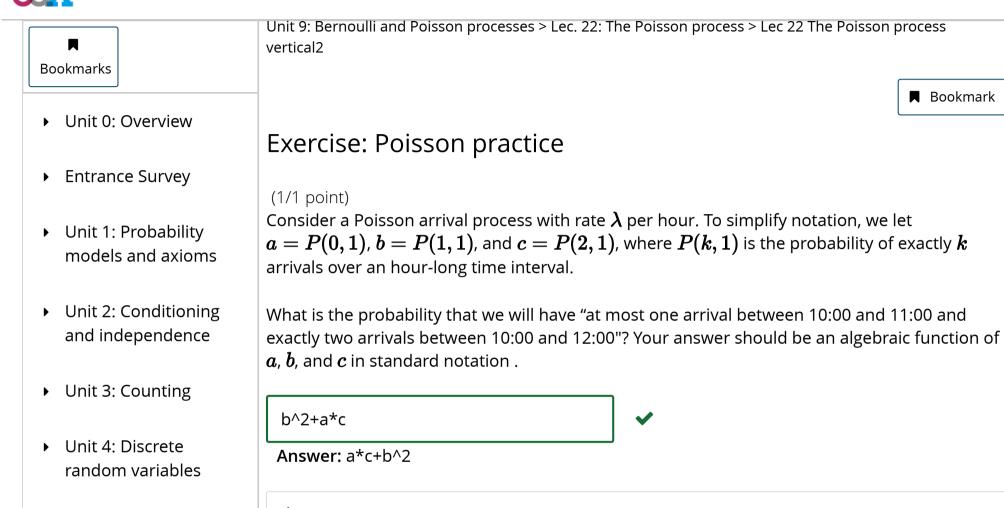


Exam 1

Unit 5: Continuous

random variables

## MITx: 6.041x Introduction to Probability - The Science of Uncertainty



## Answer:

The event of interest can happen in two ways:

(i) Zero arrivals during the first hour and two arrivals over the second hour; this has probability ac.

**■** Bookmark

- Unit 6: Further topics on random variables
- Unit 7: Bayesian inference
- ▶ Exam 2
- Unit 8: Limit theorems and classical statistics
- Unit 9: Bernoulli and Poisson processes

Unit overview

Lec. 21: The Bernoulli process

Exercises 21 due May 11, 2016 at 23:59 UTC

Lec. 22: The Poisson process

Exercises 22 due May 11, 2016 at 23:59 UTC

Lec. 23: More on the Poisson process

(ii) One arrival during each one of the two hours; this has probability  $b^2$ . Thus, the answer is  $ac+b^2$ . (Note that for both scenarios, we have used independence to find the associated probabilities.)

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** 

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