



Bookmarks

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Unit overview

Lec. 11: Derived distributions

Exercises 11 due Mar 30, 2016 at 23:59 UTC

Unit 6: Further topics on random variables > Lec. 13: Conditional expectation and variance revisited; Sum of a random number of independent r.v.'s > Lec 13 Conditional expectation and variance revisited Sum of a random number of independent r v s vertical2

Bookmark

Exercise: Conditional expectation example

(1/1 point)

The random variable Q is uniform on $[0, 1]$. Conditioned on $Q = q$, the random variable X is Bernoulli with parameter q . Then, $\mathbf{E}[X | Q]$ is equal to:

☐ q ☒ Q ✓☐ $1 - q$ ☐ $1 - Q$

Answer:

We have $\mathbf{E}[X | Q = q] = q$, for all $q \in [0, 1]$, which translates into the abstract statement $\mathbf{E}[X | Q] = Q$.

You have used 1 of 1 submissions

Lec. 12: Sums of independent r.v.'s; Covariance and correlation

Exercises 12 due Mar 30, 2016 at 23:59 UTC

Lec. 13: Conditional expectation and variance revisited; Sum of a random number of independent r.v.'s

Exercises 13 due Mar 30, 2016 at 23:59 UTC

Solved problems

Additional theoretical material

Problem Set 6

Problem Set 6 due Mar 30, 2016 at 23:59 UTC

Unit summary

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