csd3240-csd3241-f24-meta.sg

Started on	Thursday, 7 November 2024, 3:22 PM
State	Finished
Completed on	Thursday, 7 November 2024, 3:36 PM
Time taken	14 mins 24 secs
Grade	**10.00** out of 10.00 (**100**%)

Question **1**
Correct
Mark 2.00 out of 2.00
Flag question

Let E[X]=2, E[X^2]=4, E[XY]=-3 and E[Y]=1. Find Cov(X,3X-2Y).

Select one:
- a. None of these
- b. 9
- c. 10 ✔
- d. 7
- e. 8

Your answer is correct.
The correct answer is: 10

Question **2**
Correct
Mark 2.00 out of 2.00
Flag question

Consider random variables X and Y on the same probability space. If Var(X+2Y)=40 and Var(X-2Y)=20, what is Cov(X,Y)?

Select one:
- a. 2
- b. 2.5 ✔
- c. 1.5
- d. 0
- e. None of these

Your answer is correct.
The correct answer is: 2.5

Question **3**
Correct
Mark 2.00 out of 2.00
Flag question

Determine $\rho_{x,y},$ if Var(X)=2Var(Y).

Select one:
- a. 0.3536 ✔
- b. None of these
- c. 0.9827
- d. 0.4647
- e. 1

Your answer is correct.
The correct answer is: 0.3536

Question **4**
Correct
Mark 2.00 out of 2.00
Flag question

Let X be a discrete random variable. Suppose that PMF is:

PMF

x	0	1	2	3
f(x)	0.2	0.1	0.4	0.3

The value of $E(2X+3X^2)$ is

Select one:
- a. None of these ✔
- b. 17.6
- c. 14.4
- d. 18.6
- e. 15.6

Your answer is correct.
The correct answer is: None of these

Question **5**
Correct
Mark 2.00 out of 2.00
Flag question

Suppose that for the random variable X, Y we have E[X]=1, E[Y]=2, E[X^2]=10, E[Y^2]=5 and E[XY]=1. Find the number c so that X and X+cY are uncorrelated.

Select one:
- a. 8
- b. 7
- c. 9 ✔
- d. 10
- e. None of these

Your answer is correct.
The correct answer is: 9

Quiz navigation
1 2 3 4 5
Show one page at a time
Finish review

Finish review

◄ Week 10 Tutorial Solution
Jump to...
Week 10 Homework ►