

Quiz 2

⚠ This is a preview of the published version of the quiz

Started: Jun 22 at 9:11pm

Quiz Instructions



Question 1 1 pts

What is the sample space associated with flipping a coin until either heads or tails occurs twice?

☐

$\{HHT, THH, HTH, TT, HTT, THT\}$

☐

$\{HH, HHT, HTH, TT, TTH, THT\}$

☐

$\{HH, THH, HTH, TT, HTT, THT\}$

☐

$\{HH, THH, HTH, TT, TTH, THT\}$



Question 2 1 pts

Which of the following random variable is continuous?

☐

The number of calls received during any minute at a customer service call center.

☐

Highest temperature tomorrow.



Number of head when tossing a coin 10 times.



Throw a die.



Question 3 1 pts

Which of the following is NOT correct about PMF, PDF, and CDF?



The values of all three are between 0 and 1 because they are probabilities.



PDF only applies to continuous random variables.



PMF only applies to discrete random variables.



CDF applies to both discrete and continuous random variables.



Question 4 1 pts

If two random variables X and Y are independent, then



All of them!



The variance of $X+Y$ is the variance of X plus the variance of Y.



$E(XY) = E(X)E(Y)$, that is the expectation of XY is the expectation of X times expectation of Y.



The joint PDF of X and Y equals to the multiplication of the marginal PDF of X and Y.



Question 5 1 pts

What of the following statement is correct about a continuous random variable X ?

☐

All of them!

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CDF $F_X(x) = P(X \leq x)$, and is the integral of PDF $f_X(x)$ from negative infinity to x .

☐

Both PDF $f_X(x)$ and CDF $F_X(x)$ are non-negative.

☐

PDF $f_X(x) = F'_X(x)$ for all x values where CDF $F_X(x)$ is differentiable.

Not saved

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