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The Bernoulli Distribution - Quiz

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Question 1

1/1 point (graded)

Suppose that you have a Bernoulli variable X with some probability of success given by p and some probability of failure given by q . The mean of X is given by:

☒ a. p ✓

☐ b. $p/2$

☐ c. $(1 - p)$

☐ d. p^2


Explanation

The expectation of a Bernoulli variable X is given by p .


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Question 2

1/1 point (graded)

Suppose that there are two soccer players, Anna and Brian. For each attempt, the probability that Anna makes a shot is p_A and the probability Brian makes a shot is p_B . Suppose that $p_A = 0.2$ and that $p_B = 0.5$.

True or false: The variance of shots successfully made will be greater for Anna than for Brian.

☐ a. True

☒ b. False ✓

Explanation

This is false. The variance for a Bernoulli variable is given by $p^*(1-p)$. Hence the variance of Anna's shots is $(0.2)(0.8)=0.16$ and the variance of Brian's 100 shots is $(0.5)(0.5)=0.25$.

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Discussion

Topic: Module 6 / The Bernoulli Distribution - Quiz

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