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## Properties of Variance, Part II - Quiz

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### Question 1

1/1 point (graded)

True or False: As is the case with expectation, the variance of a sum of random variables is equal to the sum of the variances of the random variables, regardless of whether the random variables are independent or not.

☐ a. True

☒ b. False ✓

### Explanation


This is false. In the case of expectation, the expectation of a sum of random variables was equal to the sum of the expectations of the variables, even if the random variables are not independent. In the case of variance, however, the same is only true when the random variables are independent.

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You have used 1 of 1 attempts

▼ **Module 5: Moments of a Random Variable, Applications to Auctions, & Intro to Regression**


**Moments of a Distribution and Auctions**

Finger Exercises due Oct 31, 2016 at 05:00 IST 

**Expectation, Variance, and an Introduction to Regression**

Finger Exercises due Oct 31, 2016 at 05:00 IST 

**Module 5: Homework**

Homework due Oct 24, 2016 at 05:00 IST 

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✓ Correct (1/1 point)

**Question 2**

1/1 point (graded)

Standard deviation can be a useful way to capture the \_\_\_\_\_ of a random variable \_\_\_\_\_ as the random variable itself.

- ☐ a. measure of centrality ; in the same units
- ☐ b. measure of centrality; in the same moment
- ☒ c. measure of dispersion ; in the same units ✓
- ☐ d. measure of dispersion ; in the same moment

**Explanation**

Standard deviation is calculated as the square root of variance, and is another way of measuring the dispersion of a random variable. Standard deviation can sometimes be a convenient measure of dispersion, since it is in the same units as the random variable.

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✓ Correct (1/1 point)

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