question **103** views

Center and Spread Standard Deviation Sample

One of the questions asks for the standard deviation of the sample,
TWELVE COWORKERS LOG THEIR HOURS WORKED OVERTIME IN THE PAST MONTH

With the standard deviation, you need to divide by n-1 for a sample and n for a population?

comprehension_check2

5 days ago by Anonymous

the students' answer, *where students collectively construct a single answer*

just use the R function they talked about in the video
sd (x)

5 days ago by Full Name:

the instructors' answer, *where instructors collectively construct a single answer*

Yes, you answered your question correctly in your initial question.

4 days ago by Scott Carlton

followup discussions *for lingering questions and comments*

Resolved

Unresolved

panos makris 5 days ago
you will need the concat command

x <- c(10, 2, 6, 12, 14, 15, 15, 24, 15, 25, 3, 12)

Resolved

Unresolved

Karla McKee 5 days ago
Yes, you would use *n* - 1 for a sample and *n* for a population standard deviation calculation.

Jack 5 days ago Ok,that solved my problem

Stephanie 2 days ago Where is the explanation of this in the readings or videos? I see it for variance, but not for standard deviation.

Karla McKee 2 days ago You are correct, *n* and *n*-1 are used to calculate variance, then the square root of the variance provides the standard deviation:

$$s = \sqrt{\frac{\sum(x - \bar{x})^2)}{n - 1}}$$

$$\sigma = \sqrt{\frac{\sum(x - \bar{x})^2)}{n}}$$

Karen West 1 day ago That solved my problem too - however - the chapter 4 provided notes do NOT say that.
They say for standard deviation you use divide by n, and it said nothing about dividing by n-1 for a sample
instead of dividing by n for a population. Where did you see that in that chapter? Perhaps I missed it.

Karla McKee 16 hours ago I did not see this explicitly stated in the textbook, just inferred it from the variance discussion. Some of the subsequent standard deviation examples were a bit confusing, though, because they used the *s* symbol (the notation for sample standard deviation) but only used *n* in the calculation.

The optional Advanced High School Statistics textbook chapter provides a more explicit example on page 12 of the Chapter 2 PDF (page 48 of the textbook).