STA2023 Using R

HW questions in R. Example.

Use this procesure when the given dataset consists or a relatively large number of values. It is always possible to type in the data into R as a vector:

> x<-c(8,6,9,5,3,4,8,8,5,4,10,6,5,5,8,9,3,5,3,7,3,6,1,3,6,6)</pre>

But it is tedious and time consuming. Use Excel instead:

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Can the results be used to describe the variation among attractiveness ratings for the population of adult males?

O A. The results can be used to describe the population because the sample is random.

8. Since it is likely that the male subjects volunteered to participate in speed dating, they may not be representative of all adult males. Therefore, the results cannot be used to describe the population.

- O C. The results cannot be used to describe the population because a smaller sample would be needed.
- O. It is unlikely that a random sample of adult males can be representative of all adult males. Therefore, the results cannot be used to describe the population.

The excel file downloads; open it and insert a letter, the variable name, on the top cell.

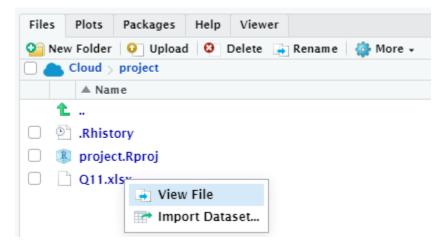
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Locate the excel file -by default the file's name is a date, in this case it was renamed as Q11. Choose file, click OK.



Once the file is uploaded, click on it and select Import Dataset. Type in the code needed to find range, standard deviation and variance:

```
> library(readx1)
> Q11 <- read_excel("Q11.xlsx")
> View(Q11)
> with(Q11, range(x))
[1] 1 10
> # range is 10- = 9
> with(Q11, sd(x))
[1] 2.2817
> # standard deviation is 2.2817. Remember, the # sign indicates that this is a comment.
> with(Q11, var(x))
[1] 5.206154
> # variance = 5.2 to one decimal place.
> |
```

```
Instead of using the function with, we may write the function of interest,
say range, and inside the parenthesis the file name$variable name, as
follows. It is less elegant but it is very simple:
> # another procedure in R:
> range(Q11$x)
[1] 1 10
> sd(Q11$x)
[1] 2.2817
> var(Q11$x)
[1] 5.206154
> [
```