Swirl() graphic

We do not cover the more advanced portions of graphics in R in this lesson.

These include lattice, ggplot2 and ggvis.

**Week 3 Quiz**

**TOTAL POINTS 5**

1.Question 1

Take a look at the 'iris' dataset that comes with R. The data can be loaded with the code:

1

2

library(datasets)

data(iris)

A description of the dataset can be found by running

1

?iris

**ANS: tapply(iris$Sepal.Length, iris$Species, summary)**

$setosa

Min. 1st Qu. Median Mean 3rd Qu. Max.

4.300 4.800 5.000 5.006 5.200 5.800

$versicolor

Min. 1st Qu. Median Mean 3rd Qu. Max.

4.900 5.600 5.900 5.936 6.300 7.000

$virginica

Min. 1st Qu. Median Mean 3rd Qu. Max.

4.900 6.225 6.500 6.588 6.900 7.900

**tapply(iris$Sepal.Length, iris$Species, mean)**

setosa versicolor virginica

5.006 5.936 6.588

**round(tapply(iris$Sepal.Length, iris$Species, mean))**

setosa versicolor virginica

5 6 7

There will be an object called 'iris' in your workspace. In this dataset, what is the mean of 'Sepal.Length' for the species *virginica*? **Please round your answer to the nearest whole number**.

(Only enter the numeric result and nothing else.)

1 point

2.Question 2

Continuing with the 'iris' dataset from the previous Question, what R code returns a vector of the means of the variables 'Sepal.Length', 'Sepal.Width', 'Petal.Length', and 'Petal.Width'?

**ANS: apply(iris[,1:4], 2, mean)**

Sepal.Length Sepal.Width Petal.Length Petal.Width

5.843333 3.057333 3.758000 1.199333

1 point

apply(iris, 2, mean)

rowMeans(iris[, 1:4])

apply(iris, 1, mean)

apply(iris[, 1:4], 1, mean)

colMeans(iris)

apply(iris[, 1:4], 2, mean)

3.Question 3

Load the 'mtcars' dataset in R with the following code

1

2

library(datasets)

data(mtcars)

There will be an object names 'mtcars' in your workspace. You can find some information about the dataset by running

1

?mtcars

How can one calculate the average miles per gallon (mpg) by number of cylinders in the car (cyl)? Select all that apply.

**ANS: > tapply(mtcars$mpg, mtcars$cyl, mean)**

4 6 8

26.66364 19.74286 15.10000

**> sapply(split(mtcars$mpg, mtcars$cyl), mean)**

4 6 8

26.66364 19.74286 15.10000

**> with(mtcars, tapply(mpg, cyl, mean))**

4 6 8

26.66364 19.74286 15.10000

1 point

tapply(mtcars$cyl, mtcars$mpg, mean)

sapply(split(mtcars$mpg, mtcars$cyl), mean)

with(mtcars, tapply(mpg, cyl, mean))

apply(mtcars, 2, mean)

sapply(mtcars, cyl, mean)

mean(mtcars$mpg, mtcars$cyl)

lapply(mtcars, mean)

tapply(mtcars$mpg, mtcars$cyl, mean)

split(mtcars, mtcars$cyl)

4.Question 4

Continuing with the 'mtcars' dataset from the previous Question, what is the absolute difference between the average horsepower of 4-cylinder cars and the average horsepower of 8-cylinder cars?

(**Please round your final answer to the nearest whole number**. Only enter the numeric result and nothing else.)

1 point

5.Question 5

If you run

1

debug(ls)

what happens when you next call the 'ls' function?

1 point

Execution of the 'ls' function will suspend at the 4th line of the function and you will be in the browser.

Execution of 'ls' will suspend at the beginning of the function and you will be in the browser.

The 'ls' function will return an error.

You will be prompted to specify at which line of the function you would like to suspend execution and enter the browser.

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