

## Week 3 Quiz

Quiz, 5 questions

✓ **Congratulations! You passed!**

Next Item



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1.

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

```
1 library(datasets)
2 data(iris)
```

A description of the dataset can be found by running

```
1 ?iris
```

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.)

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**Correct Response**

To get the answer here, you can use 'tapply' to calculate the mean of 'Sepal.Length' within each species.



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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'?



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

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- ☐ colMeans(iris)
- ☐ apply(iris[, 1:4], 1, mean)
- ☐ apply(iris, 1, mean)
- ☐ rowMeans(iris[, 1:4])
- ☐ apply(iris, 2, mean)



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3.

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

```
1 library(datasets)
2 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.

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

Correct

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

Correct

☐ split(mtcars, mtcars\$cyl)

Un-selected is correct

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☐ `tapply(mtcars$cyl, mtcars$mpg, mean)`  
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Un-selected is correct

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

Correct

☐ `sapply(mtcars, cyl, mean)`

Un-selected is correct

☐ `lapply(mtcars, mean)`

Un-selected is correct

☐ `mean(mtcars$mpg, mtcars$cyl)`

Un-selected is correct

☐ `apply(mtcars, 2, mean)`

Un-selected is correct



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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.)

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Correct Response

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5.

If you run

```
1 debug(ls)
```

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

- ☐ The 'ls' function will return an error.
- ☐ 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.

 **Correct**

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

