> tapply(iris[, 1], iris[, 5], mean)

setosa versicolor virginica

5.006 5.936 6.588

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

4 6 8

26.66364 19.74286 15.10000

> tapply(mtcars$hp, mtcars$cyl, mean)

4 6 8

82.63636 122.28571 209.21429

126.57793

**Feedback — Week 3 Quiz**[Help Center](https://accounts.coursera.org/i/zendesk/courserahelp?return_to=https://learner.coursera.help/hc/articles/201523125-Quizzes)

Thank you. Your submission for this quiz was received.

You submitted this quiz on **Fri 25 Sep 2015 8:51 PM PDT**. You got a score of **5.00** out of **5.00**.

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**Question 1**

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

library(datasets)

data(iris)

A description of the dataset can be found by running

?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 only enter the numeric result and nothing else.)

Answer for Question 1

**You entered:**



|  |  |  |  |
| --- | --- | --- | --- |
| **Your Answer** |  | **Score** | **Explanation** |
| 6.588 | Correct | 1.00 | To get the answer here, you can use 'tapply' to calculate the mean of 'Sepal.Length' within each species. |
| Total |  | 1.00 / 1.00 |  |

**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'?

|  |  |  |  |
| --- | --- | --- | --- |
| **Your Answer** |  | **Score** | **Explanation** |
| apply(iris[, 1:4], 1, mean) |  |  |  |
| rowMeans(iris[, 1:4]) |  |  |  |
| apply(iris, 2, mean) |  |  |  |
| apply(iris[, 1:4], 2, mean) | Correct | 1.00 |  |
| Total |  | 1.00 / 1.00 |  |

**Question 3**

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

library(datasets)

data(mtcars)

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

?mtcars

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

|  |  |  |  |
| --- | --- | --- | --- |
| **Your Answer** |  | **Score** | **Explanation** |
| split(mtcars, mtcars$cyl) |  |  |  |
| tapply(mtcars$mpg, mtcars$cyl, mean) | Correct | 1.00 |  |
| apply(mtcars, 2, mean) |  |  |  |
| tapply(mtcars$cyl, mtcars$mpg, mean) |  |  |  |
| Total |  | 1.00 / 1.00 |  |

**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?

Answer for Question 4

**You entered:**



|  |  |  |  |
| --- | --- | --- | --- |
| **Your Answer** |  | **Score** | **Explanation** |
| 126.57793 | Correct | 1.00 |  |
| Total |  | 1.00 / 1.00 |  |

**Question 5**

If you run

debug(ls)

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

|  |  |  |  |
| --- | --- | --- | --- |
| **Your Answer** |  | **Score** | **Explanation** |
| You will be prompted to specify at which line of the function you would like to suspend execution and enter the browser. |  |  |  |
| Execution of 'ls' will suspend at the beginning of the function and you will be in the browser. | Correct | 1.00 |  |
| The 'ls' function will return an error. |  |  |  |
| The 'ls' function will execute as usual. |  |  |  |
| Total |  | 1.00 / 1.00 |  |

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