

# Week 1 Quiz

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The **due date** for this quiz is **Mon 10 Aug 2015 1:30 AM CEST**.

- ☐ In accordance with the Coursera Honor Code, I (Eric Philippon) certify that the answers here are my own work.

## Question 1

The American Community Survey distributes downloadable data about United States communities. Download the 2006 microdata survey about housing for the state of Idaho using `download.file()` from here:

<https://d396qusza40orc.cloudfront.net/getdata%2Fdata%2Fss06hid.csv>

and load the data into R. The code book, describing the variable names is here:

<https://d396qusza40orc.cloudfront.net/getdata%2Fdata%2FPUMSDDataDict06.pdf>

How many properties are worth \$1,000,000 or more?

- ☐ 164
- ☐ 47
- ☐ 24
- ☒ 53

## Question 2

Use the data you loaded from Question 1. Consider the variable FES in the code book. Which of the "tidy data" principles does this variable violate?

- ☐ Tidy data has one observation per row.
- ☒ Tidy data has one variable per column.
- ☐ Each tidy data table contains information about only one type of observation.
- ☐ Tidy data has no missing values.

## Question 3

Download the Excel spreadsheet on Natural Gas Aquisition Program here:

[https://d396qusza40orc.cloudfront.net/getdata%2Fdata%2FDATA.gov\\_NGAP.xlsx](https://d396qusza40orc.cloudfront.net/getdata%2Fdata%2FDATA.gov_NGAP.xlsx)

Read rows 18-23 and columns 7-15 into R and assign the result to a variable called:

dat

What is the value of:

`sum(dat$Zip*dat$Ext, na.rm=T)`

(original data source: <http://catalog.data.gov/dataset/natural-gas-acquisition-program>)

- ☐ 0
- ☒ 36534720
- ☐ 33544718
- ☐ 338924

## Question 4

Read the XML data on Baltimore restaurants from here:

<https://d396qusza40orc.cloudfront.net/getdata%2Fdata%2Frestaurants.xml>

How many restaurants have zipcode 21231?

- ☐ 17
- ☒ 127
- ☐ 156
- ☐ 28

## Question 5

The American Community Survey distributes downloadable data about United States communities. Download the 2006 microdata survey about housing for the state of Idaho using `download.file()` from here:

<https://d396qusza40orc.cloudfront.net/getdata%2Fdata%2Fss06pid.csv>

using the `fread()` command load the data into an R object

DT

Which of the following is the fastest way to calculate the average value of the variable

pwgtp15

broken down by sex using the `data.table` package?

- ☐ `tapply(DT$pwgtp15,DT$SEX,mean)`
- ☐ `mean(DT[DT$SEX==1,]$pwgtp15); mean(DT[DT$SEX==2,]$pwgtp15)`
- ☒ `mean(DT$pwgtp15,by=DT$SEX)`
- ☐ `rowMeans(DT)[DT$SEX==1]; rowMeans(DT)[DT$SEX==2]`
- ☐ `DT[,mean(pwgtp15),by=SEX]`
- ☐ `sapply(split(DT$pwgtp15,DT$SEX),mean)`

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