1.3 Meet R - R Practice

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Getting Set Up

Before we begin, start a new file with `File` → `New File` → `R Script`. As you work through this sheet in the console in `R`, also add (copy/paste) your commands that work into this new file. At the end, save it, and run to execute all of your commands at once.

Creating Objects

1. Work on the following parts:

a. Create a vector called `me` with two objects, your first name, and your last name.

b. Call the vector to inspect it.

c. Confirm it is a character class vector.

2. Use R's help functions to determine what the `paste()` function does. Then paste together your name from `me`.

3. Create a vector called `my_vector` with all the even integers from 2 to 10.

4. Find the mean of `my-vector` with `mean()`.

5. Take all the integers from 18 to 763, then get the mean

Playing with Data

For the following questions, we will the `diamonds` dataset, included as part of `ggplot2`.

6. Install `ggplot2`.

7. Load `ggplot2` with the `library()` command.

8. Get the `structure` of the diamonds data frame. What are the different variables and what kind of data does each contain?

9. Get summary statistics separately for `carat`, `depth`, `table`, and `price`.

10. `color`, `cut`, and `clarity` are categorical variables (factors). Use the `table()` command to generate frequency tables for each.

11. Now rerun the `summary()` command on the entire data frame.

12. Now look only at (subset) the first 4 diamonds in the dataset.

13. Now look only at (subset) the third and seventh diamond in the dataset.

14. Now look only at (subset) the second column of the dataset.

15. Do this again, but look using the `$` to pull up the second column by name.

16. Now look only at diamonds that have a `carat` greater than or equal to 1.

17. Now look only at diamonds that have a VVS1 `clarity`.

17. Now look only at dimaonds that have a color of E, F, I, and J.

18. Now look only at diamonds that have a `carat` greater than or equal to 1 and a VVS1 `clarity`.

19. Get the average price of diamonds in question 18.[1]

20. What is the highest price for a diamond with a 1.0 carat, D color, and VVS1 clarity?

Execute your R Script

Save the R Script you created at the beginning and (hopefully) have been pasting all of your valid commands to. This creates a *.R* file wherever you choose to save it to. Now looking at the file in the upper left pane of *R Studio* look for the button in the upper right corner that says **Run**. Sit back and watch `R` redo everything you've carefully worked on, all at once.

[1] Hints: use your subset command as an argument to the mean function. You will not need a comma here because you are looking for a single row.