Lab 02: Introduction to Tables

Data 8 Discussion Worksheet

Tables are a fundamental way of representing data sets. A table can be viewed in two ways:

- A sequence of named columns that each describe a single attribute of all entries in a data set, or
- A sequence of rows where each row contains all the attribute information about that entry in the data set

1. Ready, Willing and Table

Let's look at an example table called `staff`

Name	Year	Semesters on Staff
Devarsh	4	3
Raymond	4	5
Miranda	2	3
Carlos	4	6
Peter	3	2
Olivia	4	4
James	3	4
Oswaldo	3	3
Meghan	4	8
Diana	2	3

The table has 10 rows, each corresponding to one member of Data 8 Staff. Each row has three attributes, the staff member's name, year, and how many semesters they have been on staff. Using just the information from the `staff` table, do we have enough information to generate the following by hand? If not, what additional information do you need? *(You don't need to worry about how you'd do it in Python.)* You can assume all calculations are correct.

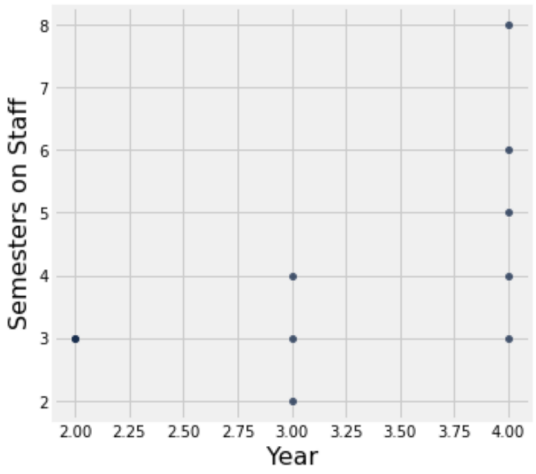
a. True / False

Year	Semesters on Staff average
2	3
3	3
4	5.2

b. True / False

Name	Year
James	Junior
Oswaldo	Junior
Peter	Junior

c. True / False



d. True / False

Semesters on Staff	2	3	4
2	0	1	0
3	2	1	1
4	0	1	1
5	0	0	1
6	0	0	1
8	0	0	1

2. Causality, Coworkers, and Coffee

Ciara collected the following information about her coworkers' methods of getting to work and their coffee consumption.

Method	Number of Coworkers	Average Cups of Coffee per Day
Take the Bus to Work	12	1.1
Drive to Work	15	1.9

a. Ciara is trying to compute the absolute value of the difference between the total number of cups drunk by driving coworkers per year vs the total number of cups drunk by bussing co-workers per year. She will do all of this in a single cell. Identify the errors in the following cell and correct them. *Make sure that the code cell outputs a single positive number.*

```
number_cups_bus = 12(1.1)
```

```
number_cups_drive = 15(1.9)
number_cups_day_difference = ((number_cups_bus -
number_cups_drive)
number_cups_week_difference = number_cups_difference * 7
yearly cups = number_cups_week_difference * 52
```

b. Is there a relationship between transportation method and coffee consumption—an association, a causal relationship or something else? Why?