

# Lab 02 - Data Type - Key

## PSC-012Y

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### Points

This assignment has 11 total questions thus 11 points.

### Part 1. Data Types and Structures

1. Evaluate the following expression: `(TRUE + TRUE) * 4`

```
(TRUE + TRUE) * 4
```

```
## [1] 8
```

```
8
```

2. Read in the dataset called `edu.csv` and assign it to the object `Education`

```
Education = read.csv("C:/Users/MyComputer/Dropbox/Jonathan Park/2. UC Davis/2024-2025/Courses/PSC-12Y/L
```

3. Take the variable `Education$EdAttain` and turn it into an Ordered Factor called `Attainment`

```
Attainment = factor(Education$EdAttain,
  levels = c("Some Highschool", "High School", "Some College",
             "College", "Masters", "Professional", "PhD"),
  labels = c("Some Highschool", "High School", "Some College",
             "College", "Masters", "Professional", "PhD"),
  ordered = TRUE)
levels(Attainment)
```

```
## [1] "Some Highschool" "High School"      "Some College"      "College"
## [5] "Masters"         "Professional"     "PhD"
```

4. Can you take the `mean()` of `Attainment`? Why or why not?

No. It's a factor-type variable and the mean of a factor makes no sense.

5. Nominal Data as we discussed in lecture are more like which data type in R?

Non-Ordered Factors

6. List the hierarchy of variable types in R ranging from the most restrictive to least:

Logical, Integer, Numeric, Character

## Part 2. Course Knowledge

1. Provide an example of the following:

Grade at your discretion

1. Nominal Variable (List levels):

2. Ordinal Variable (List levels):

3. Interval Variable:

4. Ratio Variable:

2. Provide a research question that involves a binary IV to an ordinal DV

3. Years of Education can be considered: Nominal or Ratio?

Ratio

4. Can “Age” be multiple variable types?

Yes.

5. Provide your thoughts on whether data should be discretized. When it is ethical and when would it not be? (1- to 2-sentences)

As long as some justification is provided