

**Complete all exercises and examples referenced in the following introductory notes for Chapter 1. Your textbook can be downloaded through the ~~Book~~ <sup>Book Manager</sup> ~~book~~. Responses will be graded on clarity and completeness. Submission through Canvas due **Tuesday, August 9, 2022 at 7:30 am**. This will be graded as a quiz assignment.**

## CHAPTER 1 INTRODUCTION – DATA ANALYSIS: MAKING SENSE OF DATA

Data Analysis – organizing, displaying, and summarizing data as well as asking questions

Individuals – objects described by a set of data

Variable – any characteristic of an individual

Categorical variable (aka qualitative variable) – places an individual into one of several groups or categories

Quantitative variable – takes on numerical values for which it makes sense to find an average

\*Read example on page 3 and 4: “Census at School”

\*Example: U.S. Census data – Here is information about 10 randomly selected U.S. residents from a recent census.

<b>STATE</b>	<b>NUMBER OF FAMILY MEMBERS</b>	<b>AGE</b>	<b>GENDER</b>	<b>MARITAL STATUS</b>	<b>TOTAL INCOME</b>	<b>TRAVEL TIME TO WORK</b>
Kentucky	2	61	Female	Married	21,000	20
Florida	6	27	Female	Married	21,300	20
Wisconsin	2	27	Male	Married	30,000	5
California	4	33	Female	Married	26,000	10
Michigan	3	49	Female	Married	15,100	25
Virginia	3	26	Female	Married	25,000	15
Pennsylvania	4	44	Male	Married	43,000	10
Virginia	4	22	Male	Single	3,000	0
California	1	30	Male	Single	40,000	15
New York	4	34	Female	Separated	30,000	40

Problem:

- a) Who are the individuals in this data set?
- b) What variables are measured? Identify each as categorical or quantitative.
- c) Describe the individual in the first row.
- d) What are three characteristics you can say about the individual in the eighth row that is different from the other individuals?

Distribution of a Variable – tells us what values the variable takes and how often it takes these variables

Inference – drawing conclusions that go beyond the data at hand

\*Do “Check your understanding” on page 4 in the textbook.

\*Do exercises 1 – 8 on pages 6 – 7 in the textbook.