

name: Solution

1 (10 points). The U.S. Census Bureau collects a large amount of information concerning higher education. For example, the bureau provides a table that includes the following variables: state, number of students from the state who attend (any) college, number of students who attend college in their home state.

- (a) What are the cases for this set of data?
- (b) Is there a label variable? If so, which is it?
- (c) Identify each variable as categorical or quantitative.
- (d) Consider a new variable computed for each state as follows: the number of students who attend college in their home state divided by the total number of students from the state who attend (any) college. Explain how you would use this variable to explain something about the states.

(a) The states

(b) Yes, the states

(c) The states variable is categorical.
The others are quantitative

(d) That variable is the percentage of undergrads from a state being educated in-state. Typically schools have goals regarding this stat, so computing it can help them adjust policy as needed to reach their goal. There are many other possible answers to this question.