

Problem Set 1-Solutions

Chapter 1

Problem 2: a. b. c.

- a. 9
- b. 4
- c. Country and room rate are qualitative variables; number of rooms and the overall score are quantitative variables.

Problem 4

- a. 10
- b. All brands of minisystems manufactured.
- c. Average price = $3140/10 = \$314$
- d. \$314

Problem 5

- a. 5
- b. Price, CD capacity, and the number of tape decks are quantitative. Sound quality and FM tuning sensitivity and selectivity are qualitative.
- c. Average CD capacity = $30/10 = 3$.
- d. $\frac{7}{10}(100) = 70\%$
- e. $\frac{4}{10}(100) = 40\%$

Problem 8

- a. 1005
- b. Qualitative
- c. Percentages
- d. $.29(1005) = 291.45$ or approximately 291.

Problem 9

- a. Qualitative
- b. 30 of 71; 42.3%

Problem 11(You do not have to answer the measurement scale part.)

- a. Quantitative
- b. Qualitative
- c. Qualitative
- d. Quantitative
- e. Qualitative

Extra Problem:

After graduation ceremonies at a university, six graduates were asked whether they were in favor of (identified by 1) or against (identified by 0) abortion. Some information about these graduates is shown below.

Graduate	Sex	Age	Abortion Issue	Class Rank
Nancy	F	52	1	1
Michael	M	24	1	2
Tammy	F	33	0	4
Edward	M	38	0	20
Jennifer	F	25	1	3
Tim	M	19	0	8

- a. How many elements are in the data set?
- b. How many variables are in the data set?
- c. How many observations are in the data set?
- d. Which of the above variables (Sex, Age, Abortion Issue, Class rank) are qualitative and which are quantitative variables?
- e. Are arithmetic operations appropriate for the variable "abortion issue"?

Answers:

- a. 6
- b. 4
- c. 6
- d. Sex: qualitative
Age: quantitative
Abortion Issue: qualitative
Class Rank: qualitative
- e. No