

1. Types of data.

- (a) Continuous
- (b) Discrete
- (c) Discrete
- (d) Discrete

2. Variability of data.

- (a) The data set with the largest variance is $\{1, 1, 9, 9\}$. This solution is unique.
- (b) Any data set consisting of only one number. The solution is not unique.

3. Numerical summary of data.

Note: $\sum x = 9$; $\sum x^2 = 23$; $n = 6$

(a) $\bar{x} = \frac{\sum x}{n} = \frac{9}{6} = 1.500$

(b) $s = +\sqrt{\frac{\sum x^2 - (\sum x)^2/n}{n-1}} = +\sqrt{\frac{23 - (9)^2/6}{6-1}} = 1.378$

4. See page 2.

5. Skewness.

- (a) The distribution of the data is positively skewed (mean > median).
- (b) On average, commuting times differ from the mean by 3.31 minutes.

6. Bias in scientific studies.

An example of a study in which the sample is not representative of the target population.

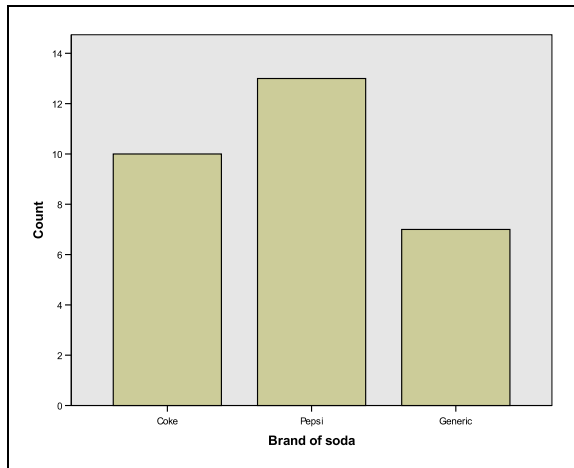
7. Graphical summary of data.

(a) $m = \frac{50 + 74}{2} = 62.000$

- (b) No.

4. Graphical summary of data.

(a) Bar chart.



(b) Pie chart.

