

Name Key
Date / /

Illowsky – Chapt. 1
Larson – Chapt. 1-2.1

Please show all work neatly and legible under the problem in the space provided.

Provide an appropriate response.

- 2) 1) Explain the difference between a sample and a population.

Pop: All possible outcomes
Sample: A subset of the pop.

30
—
30

Determine whether the numerical value is a parameter or a statistic. Explain your reasoning.

- 2) 2) The average salary of all assembly-line employees at a certain car manufacturer is \$42,000.

Parameter Based on all the workers

Determine whether the data are qualitative or quantitative.

- 2) 3) the number of complaint letters received by the United States Postal Service in a given day

Qualitative

Identify the data set's level of measurement.

- 2) 4) hair color of women on a high school tennis team

Nominal

- 5) temperatures of 73 selected refrigerators

2) Interval

Provide an appropriate response.

- 6) A report sponsored by the California Citrus Commission stated that cholesterol levels can be lowered by drinking at least one glass of a citrus product each day. Determine if the report is biased.

3) Biased because the commission might be more likely to reach a conclusion in their focus.

Identify the sampling technique used.

- 2) 7) Every fifth person boarding a plane is searched thoroughly.

Systematic

- 8) To avoid working late, the quality control manager inspects the last 10 items produced that day.

2) Convenience

Provide an appropriate response.

9) Explain the differences between cluster sampling and stratified sampling.

(+3) Strat. Smer; Each
Cluster : 1 or more but not all

The Highway Patrol, using radar, checked the speeds (in mph) of 30 passing motorists at a checkpoint. The results are listed below.

44 38 41 50 36 36 43 42 49 48
35 40 37 41 43 50 45 45 39 38
50 41 47 36 35 40 42 43 48 33

10) Construct a frequency distribution, a relative frequency distribution, and a cumulative frequency distribution using six classes.

(+10)

Class	Freq	Rel Freq	Cumud Freq
33-35	3	.10	3
36-38	6	.20	9
39-41	6	.20	15
42-44	6	.20	21
45-47	3	.10	24
48-50	6	.20	30