Math 136 - Statistics

Winter 2020 ~~Winter~~ Spring

Quiz 1: Ch 1

Dr. Jorge Basilio

NAME (PRINT): Solutions

SCORE: _____

SIGNATURE: _____

Directions

- YOU ARE ALLOWED TO USE A CALCULATOR ON THIS EXAM. (Ti83/Ti83+/Ti84/Ti84+/Ti84+CE-T, or scientific calculator)
- Handwriting should be neat and legible. If I cannot read your writing, zero points will be given.
- Make sure to ALWAYS SHOW YOUR WORK; you will not receive any partial credits unless work is clearly shown. *If in doubt, ask for clarification.*
- Leave answers in exact form (as simplified as possible), unless told otherwise.
- Put a box around your final answer where applicable.

Quiz (20 points)

Problem 1: 6 pts

Identify whether the given data set is **qualitative** or **quantitative**.
If the data is quantitative, also determine whether it is **discrete** or **continuous**:

(a) QN - continuous — Precise length of a snowboard

(b) QL — Most popular Olympic Events

(c) QN - discrete — Number of medals a country wins

(d) QN - continuous — Precise distance a ski jumper jumps

(e) QN - discrete — Number of units taken by a student this semester

(f) QL — Jersey numbers of the PCC football team

Problem 2: 4 pts

Identify appropriate **level of measurement** (nominal, ordinal, interval, ratio):

(a) ordinal — T-Shirt sizes (XS, S, M, L, XL)

(b) nominal — Social Security Numbers

(c) ratio — Cost of a gallon of gas — true zero ✓

(d) interval — Birth Years of American Presidents — true zero X

Problem 3: 4 pts

Determine the **type of sampling** used (random, simple random, stratified, systematic, cluster, or convenience):

(a) cluster — A group of test subjects is divided into twelve groups; then two of the groups are chosen at random.

(b) convenience — The first 50 people who walk into a sporting event are polled on their television preferences.

(c) simple random — A computer generates 100 random numbers, and 100 people whose names correspond with the numbers on the list are chosen.

(d) systematic — A market researcher polls every fifth person who walks into a store.

Problem 4: 6 pts

For the following scenario, identify the **key terms**:

An instructor would like to determine the average level of test anxiety in community college students. She has the 35 students in her class take the Westside Test Anxiety Survey and they had an average score of 3.1 out of 5.

(a) population: all community college students

(b) sample: the 35 students in instructor's class

(c) parameter: average level of test anxiety of all CC students

(d) statistic: average level of test anxiety of 35 students

(e) variable: level of test anxiety on Westside Test Anxiety survey

(f) data: average score of 3.1

(g) (Bonus Q: 1 point) What type of sampling was used (simple random, cluster, stratified, systematic, or convenience)?

either one seems appropriate