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ME 2C

WEEK 1 and 2
MATH EDA

PROGRESS CHECK ANSWERS:

(1.) Name and define the two areas of statistics. How do they differ? How are they applied or used?

the two areas of statistics are descriptive and inferential. Descriptive statistics is devoted to the collection, organization, summarization and presentation of data. Merely used to describe the basic features of the data in a study and provide simple summaries about the sample and the measures. While inferential statistic is concerned with generalizing from samples to populations. In other words, it allows the researcher to make assumptions about a wider group, using a smaller portion of that group as a guideline.

(2.) Give five (5) specific examples of statistics being used in everyday life.

I. In terms of government development planning, it requires statistics for the allocation of budget and resources for its short term and long term development goals.

II. In terms of safety, statistics can help in the formulation of safety guidelines or policies to avoid or reduce future accidents.

III. In terms of health, statistics is used in medical cases and studies leading to the formulation of medicines or vaccines for a virus or disease.

IV. For finance, statistics used to analyzed financial performance.

V. And for business, used statistics to improve sales, overcome competion and reduce costs.

(3.) Explain the differences between a sample and a population. Give examples.

A population is the whole gathering that you need to reach determinations about. But a sample is the particular gathering that you will gather information from. the size of the sample is in every case not exactly the all-out size of the population.

Example the situation is: From 500 teachers all over La Castellana, only 150 teachers were given a chance to take part in the said event.

Population = 500 teachers all over La Castellana
Sample = 150 teachers who will be participating in the event.

(4.) In each of these statements, tell whether descriptive or inferential statistics have been used. Write D if descriptive and I if inferential.

I In the year 2020, the population of Filipinos will be 110 million.

D Nine out of ten on-the-job fatalities are men.

I Expenditures for the cable industry were $5.266 billion in 1996.

D Drinking decaffeinated coffee can raise cholesterol levels by 7%.

D Allergy therapy makes bees go away.

(5.) Classify each as nominal-level, ordinal-level, interval-level, or ratio-level measurement. Write only N if nominal, O if ordinal, I if interval and R if ratio.

O Rankings of tennis players

R weights of air conditioners

I Temperatures inside 10 refrigerators

N Salaries of the top 5 CEO's in the United states

O Ratings of eight local plays (poor, fair, good, excellent).

(7.) Classify each variable as discrete or continous. Write only D if discrete and C if continous.

D Number of doughnuts sold each day by a Doughnut Heaven.

C water temperatures of six swimming pools in Pittsburgh on a given day

C weights of cats in a pet shelter.

D Lifetime (in hours) of 12 flashlight batteries.

D Number of cheeseburgers sold each by a hamburger stand on a college campus.

(6.) Classify each variable and write only 1 for qualitative or 2 for quantitative.

2 Number of bicycles sold in 1 year by a large sporting goods store

1 Colors of baseball caps in a store.

2 Times it takes to cut a lawn.

2 Capacity in cubic feet of six truck beds

1 Classification of children in a day care center (infant, toddler, preschool)

(8.) Name the four basic sampling methods and give example (1) each.

1. Random Sampling
   Ex. the 25 names of students being chosen out of a box from the 100 students attended the meeting.
2. Systematic Sampling
   Ex. Survey forms will be given in every 3rd students who are forming a straight line.
3. Stratified Sampling
   Ex. Socio Economic Divisions
4. Cluster Sampling
   Ex. From the schools representatives for quiz high.

9. In the study below made for butter and margarine, how would you conduct the study to arrive at a convincing conclusion.

In this kind of situation or problem, one of the procedures to be done is to collect data from the DOH. Specifically, the annual cases of illness caused by eating butter and margarine. For example, the numbers of illness regarding the usage of butter and margarine from 2000 until 2020. To sum it up, the higher the number of cases in illness caused by butter or margarine from the year 2000 until 2020 will be recognized as vulnerable. Only then we probably know what is more dangerous to our health and by then we can lessen the usage of that product.