Statistics

Lecture 2

Feb 19-8:47 AM

Definitions and terminologies:

What is Statistic?

It is about collecting information (Data), organize them, Graph them, do some Calculations, and we learn from it to draw Conclusion.

Two Branches

1) Descriptive: Collect data, and organize, graph, and calculate certain things.

2) Inferential: we use the results of descriptive statistics to draw Conclusion and make predictions.

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Population (Entire Field) vs. Sample (Collected Randomly from Population)

Parameter Statistic

Average age of all doctors in LA is 50 yrs.

Parameter

Median rent in LA for 20 selected 2B2B apt. is $2000/mo.

Statistic

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Data (information)

1) Qualitative
Non-Numerical
Eye Color
Type of drinks
Brand of Cars

2) Quantitative
Numerical

1) Discrete
Countable
# of Students

2) Continuous
Measureable
Room temp.

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Level of measuremens:

1) Nominal — Red, white, Blue
Small, Med., Large
Toyota, Ford, Chevy

2) Ordinal — order is meaningful
Small, Med, Large

3) Ratio — Ratio is meaningful.
Small (10oz) Large (20oz)

4) Interval — Range of values
90% – 100% → A

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Methods to Collect data:

1) Systematic — every Kth item Selected.

2) Stratified — Divide into groups,
Select few from each group.
Males → Select 4
Females → Select 6

3) cluster — Divide into groups
Select some of the groups
Collect information from entire Selected groups.
20 classes at this HS.
Select 4 classes,
ask all students to complete a survey.

4) Random/ Convenience — the least reliable method to do survey.

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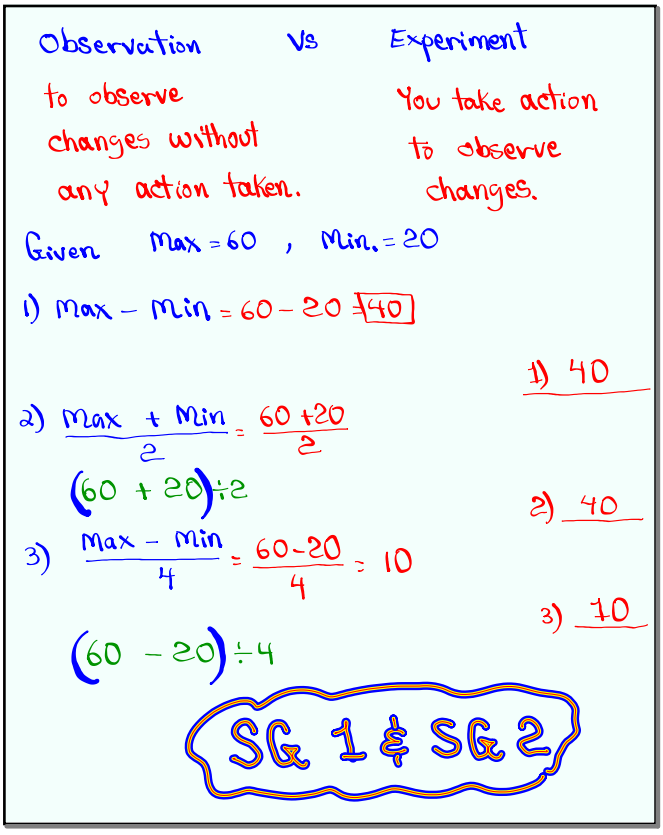

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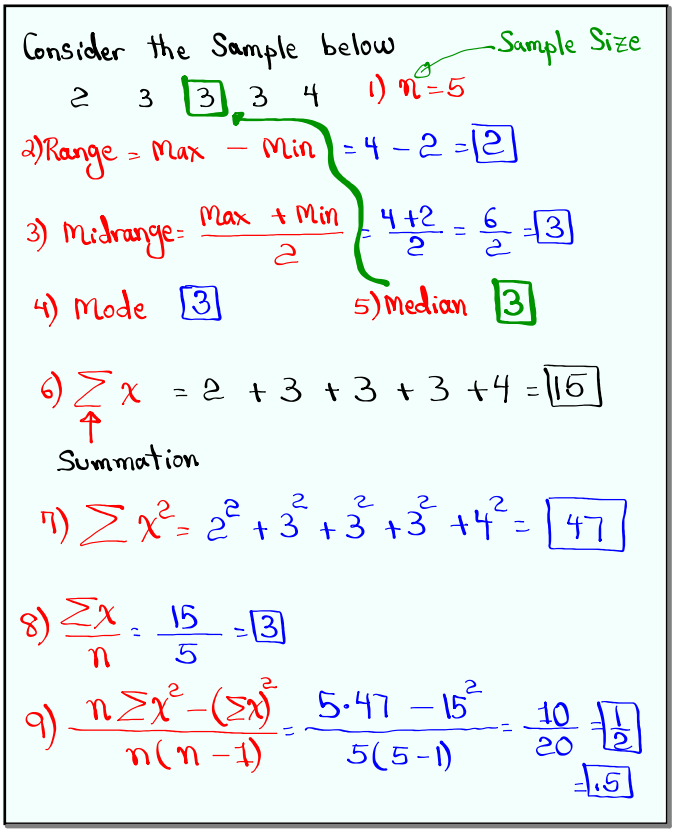

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