

Presentation of Data

Classification

A classification is the separation or ordering of objects into classes where classes are categories for grouping data.

Tabulation

Tabulation is placement of data into rows and columns with suitable heads and subheads.

Frequency

The frequency of a particular class is the number of original scores that fall into that class. Simply, frequency is the number of times that a repeated observation occurs.

Cumulative Frequency

The cumulative frequency for a class is the sum of the frequencies of that class and all the previous classes.

Relative Frequency

The relative frequency of a particular class can be found by dividing by the class frequency by the total of all frequencies.

Grouped data

The data presented in the form of a frequency distribution are called grouped data.

Frequency Distribution

The division of counts (frequencies) of number of scores that fall into each class (category) is called frequency distribution. In other words, a listing of classes and their frequencies is called frequency distribution. A table that represents classes along with their respective class frequencies is called frequency table.

Class Limits

The values or numbers specifying a class are called class limits. The smallest value specifying a class is called lower class limit while the largest value for specifying a class is called upper class limit.)

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Class Boundaries

Class boundaries are the numbers used to separate classes, but without the gaps created by class limits. They are obtained by increasing the upper class limits and decreasing the lower class limits by the same amount so that there are no gaps between consecutive classes. These boundaries are also called precise limits or true limits.

Class Mark (Midpoints)

Class marks or midpoints of the classes are obtained by adding lower class limits to the corresponding upper class limits and dividing by 2.

Class Interval (Width)

Class interval or class width is the difference between two consecutive lower class limits or two consecutive lower class boundaries.

In the table below, class interval (width) = $196 - 191 = 201 - 196 = 5$.

Cholesterol Level (Class Limits)	Class Boundaries	Class Mark	Frequency	Cumulative Frequency	Relative Frequency
191 – 195	190.5 – 195.5	193	1	1	$1/25 = 0.04$
196 – 200	195.5 – 200.5	198	3	$3+1 = 4$	$3/25 = 0.12$
201 – 205	200.5 – 205.5	203	4	$4+4 = 8$	0.16
206 – 210	205.5 – 210.5	208	7	$7+8 = 15$	0.28
211 – 215	210.5 – 215.5	213	5	$5+15 = 20$	0.20
216 – 220	215.5 – 220.5	218	4	$4+20 = 24$	0.16
221 – 225	220.5 – 225.5	223	1	$1+24 = 25$	0.04
Total			25		1.00

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Graph

A drawing representing the relationship between data sets is called the graph.

Histogram

A graph that displays the classes on the horizontal axis and the frequencies of the classes on the vertical axis is called histogram. The frequency of each class is represented by a vertical bar whose height is proportional to the frequency of that class.

Frequency Polygon

Polygon means closed shape. A frequency polygon is obtained by joining the mid points of the adjacent bars of histograms with straight lines and then joining the both ends with X -axis by assuming class frequencies zero at those points.

Frequency Curve

When frequency polygon is constructed for large numbers of observations and small class intervals, a smoothed curve can be approximated that is referred as frequency curve.

Cumulative Frequency Polygon (Ogive)

A cumulative frequency polygon or ogive is obtained by plotting cumulative frequencies of classes along Y -axis while upper class boundaries along X -axis.

Charts

It is the plotting data and showing results of a process over a period of time (day, month, etc.)

Diagram

A diagram is a simplified and structured visual representation of concepts, ideas, constructions, relations, statistical data, anatomy, etc. used in all aspects of human activities to visualize and clarify the topic.

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