ALMS8

TAILORED LEARNING, PERSONALIZED PROGRESS

SUPPLEMENTARY MODULE 1

Determine Measures of Central Tendency of Ungrouped Data

GRADE 8

malms8.online

1 DETERMINE MEASURES OF CENTRAL TENDENCY OF UNGROUPED DATA

Hey there, amazing learner!

Welcome to our exciting journey into the world of data analysis. In this course, we'll be diving deep into the fascinating realm of determining measures of central tendency for ungrouped data. Get ready to explore the mean, median, and mode like never before! We'll uncover the secrets behind these statistical measures and learn how to calculate them with ease. So, buckle up and get ready for an adventure filled with numbers, charts, and lots of fun.

LEARNING OBJECTIVES

1. Identify the presented measures of central tendency in the problem.

2. Familiarize the steps in calculating the mean, median and mode of ungrouped data.

3. Demonstrate appreciation for the significance of selecting the appropriate measure in various real-world scenarios.

Mean refers to the "average" in a dataset.

Steps on how to get mean:

Step 1: Collect the data

The first step is to collect all of the data that you need to calculate the mean.

Example: 12,16,24,18,15

Step 2: Calculate the sum of the data

The sum of the data is the total of all of the values in the data set. You can calculate the sum of the data by adding up all of the values.

12+16+24+18+15= 85

Step 3: Divide the sum of the data by the number of values

The mean is the sum of the data divided by the number of values in the data set. This can be written as:

Mean = sum of data / number of values

85/ 5= 17

Step 5: Round the answer to the nearest hundredth

The mean is often rounded to the nearest hundredth. This makes it easier to compare the means of different data sets.

In the above example, the mean is in whole number of form.

Median refers to the middle value in an ordered dataset.

Step by step in determining the median

Step 1: Order the data

First, arrange the data in ascending order from least to greatest or vice versa. This enables you to identify the middle value of the data set.

Example: 12,14,16,18,20,22

Step 2: Identify the middle value

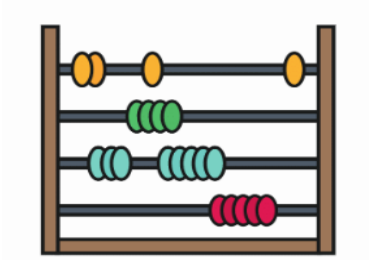
If there is an odd number of values, the median is the middle value. If there is an even number of values, the median is the mean of the two middle values.

Since the given data is even, the two middle values will be added and divided by 2.

16+18= 34

34/2= 17

Hence, 17 is the median of the set.



Mode refers to the most frequently occurring value in a dataset.

Step by step to know the Mode:

Step 1: Collect the data

The first step is to collect all of the data that you need to calculate the mode.

Step 2: Count the frequency of each value

The frequency of a value is the number of times that the value appears in the data set. You can count the frequency of each value by tallying up the number of times that each value appears.

Example scores: 1,2,4,3,2,5,6,7,2,2,3

Scores	Frequency
1	1
2	4
3	2
4	1
5	1
6	1
7	1

Step 3: Identify the value with the highest frequency

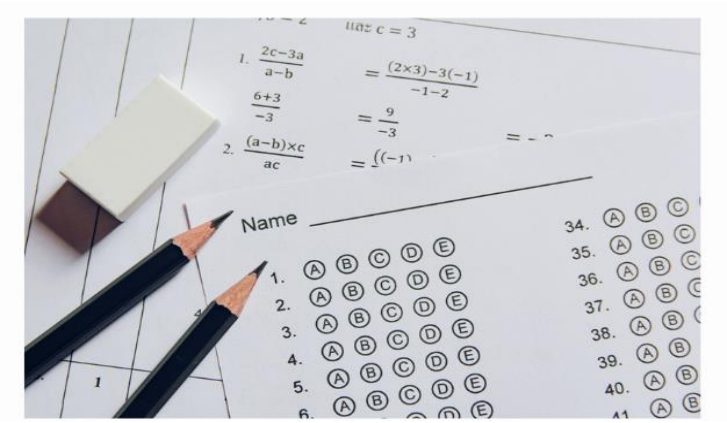
The mode is the value with the highest frequency in the data set. If there are multiple values with the same highest frequency, then the data set is said to be multimodal.

Since the score, 2 has the highest frequency which is 4, therefore, 2 is the mode of the set.

Enhancing Understanding with Real-world Scenarios

Mean: Consider the average height of students in a class, highlighting how this measure captures a central tendency by considering the entire range of heights.

Median: Relate the concept of the median to the middle score on a math test, illustrating its relevance in identifying a central position within a dataset.



Mode: Explore the most popular shoe size in a store, showcasing how the mode reflects the dominant value in a set.