

MEDIAN-(2)

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Calculation of Median for Different Types of Statistical Series.

(A) Individual Series and the Median.

Calculation of Median in individual series involves the following steps:

→ (i) Arrange all the value of different items of a series in the ascending or descending order.

(ii) Add up the number of items, indicated by N . Find out the median item as $\left(\frac{N+1}{2}\right)^{\text{th}}$ item. That is

$$M = \text{Size of } \left(\frac{N+1}{2}\right)^{\text{th}} \text{ item.}$$

(iii) If N of series happens to be an odd number, that is, not divisible by 2, it is easier to find out median with the help of the above formula. For example, if the series is 4, 5, 6, 7, 8 then median will be $\frac{5+1}{2}$, 3rd item.

4 5 6 7 8
1
Median

(14) If N of series happens to be an even number, $\frac{N+1}{2}$ will come in fractions.

Thus, if the series is 4, 10, 12 and 18 then the $\frac{N+1}{2}$ would not be a ~~complete~~^{complete} number, but it would be like 2.5th value. In such case, median value would be the arithmetic mean of the two middle value of the series. Thus, median value of the size of 2.5th item would be located as

Under,
$$\text{Median} = \frac{\text{Size of 2nd item} + \text{Size of 3rd item}}{2}$$

$$\frac{10+12}{2} = \frac{22}{2} = 11.$$

Thank you.