**The Median**

Median is the value which divides the data into two equal parts after arranging values in ascending or descending order.

**Example: Find the median of the numbers i) 4, 8, 6, 7, 3, 2, 10 and ii) 5, 6, 10, 4, 6, 9**

1. Arranging the observations from smallest to largest

2, 3, 4, 6, 7, 8, 10 n=7

1. 5, 6, 10, 4, 6, 9

Arranging the observations from smallest to largest

4, 5, 6, 6, 9, 10 n=6

**Method # 1** +1) =4th value=6

**Method # 2**

**Median for Grouped data**

Where

**Example**

|  |  |  |  |
| --- | --- | --- | --- |
| **Class limits** | **Class boundaries** | **Frequency (f)** | **Cumulative frequency** |
| 45-49 | 44.5-49.5 | 1 | 1 |
| 50-54 | 49.5-54.5 | 4 | 5 |
| 55-59 | 54.5-59.5 | 17 | 22 |
| 60-64 | 59.5-64.5 | 28 | 50 |
| 65-69 | 64.5-69.5 | 25 | 75 |
| 70-74 | 69.5-74.5 | 18 | 93 |
| 75-79 | 74.5-79.5 | 13 | 106 |
| 80-84 | 79.5-84.5 | 6 | 112 |
| 85-89 | 84.5-89.5 | 5 | 117 |
| 90-94 | 89.5-94.5 | 2 | 119 |
| 95-99 | 94.5-99.5 | 1 | 120 |
| **Sum** |  | **120** |  |

**Quantiles:** Quartiles, deciles, Percentiles

**Quartiles: Divide the data into four equal parts**

**For grouped data**

**Deciles: divide the data into ten equal parts**

**For Grouped data**

**Percentiles: Divide the data into 100 parts**

**For Grouped data**