# Mode

### **Understanding: Mode**

- Mode is the value that occurs most frequently in a data set
- A data set can have one mode, more than one mode, or no mode at all
- Mode is useful for identifying the most common or frequent data value in a set
- It is often used in real life to find the most popular items, such as the most sold product or most common test score

### **Important Points**

- A data set can have no mode if no number repeats
- A data set can have one mode if one value repeats more than others
- A data set can have multiple modes if two or more values repeat with the same highest frequency

#### **Examples with Solutions**

**Example:** Find the mode for each of the following distributions:

26,41,8,30,26,20,26,24,13,17,24

Solution: Arranging the observations in ascending order, we have

8,13,17,20,24,26,26,26,30,41

Here 26 occurs most frequently, i.e., three times.

Hence, the mode is 26.

Example: Data: 12, 15, 12, 10, 12, 17

The value 12 occurs most frequently (3 times)

Mode = 12

#### Example: Data: 4, 8, 6, 10, 15, 14

No value repeats

Mode = No mode

Example: Data: 7, 3, 7, 2, 8, 9, 7

The value 7 occurs most frequently (3 times)

Mode = 7

Example: Data: 5, 10, 5, 15, 10

The values 5 and 10 occur most frequently (2 times each)

Mode = 5 and 10 (Bimodal)

## **Summary Points**

- Mode is the most frequent value in a data set
- If one value repeats most, it is the mode
- A data set can have no mode, one mode, or multiple modes
- Mode is useful in finding the most common item or event
- It is easy to identify and does not involve calculations like the mean