

**RD SHARMA**

**Solutions**

**Class 9 Maths**

**Chapter 24**

**Ex 24.4**

**Q 1 . Find out the mode of the following marks obtained by 15 students in a class :**

**Marks : 4 , 6 , 5 , 7 , 9 , 8 , 10 , 4 , 7 , 6 , 5 , 9 , 8 , 7 , 7.**

**SOLUTION :**

|                       |          |          |          |          |          |          |           |
|-----------------------|----------|----------|----------|----------|----------|----------|-----------|
| <b>Marks</b>          | <b>4</b> | <b>5</b> | <b>6</b> | <b>7</b> | <b>8</b> | <b>9</b> | <b>10</b> |
| <b>No.of Students</b> | <b>2</b> | <b>2</b> | <b>2</b> | <b>4</b> | <b>2</b> | <b>2</b> | <b>1</b>  |

Since maximum frequency corresponds to the value 7 then mode = 7 marks.

**Q 2 . Find out the mode from the following data :**

**125 , 175 , 225 , 125 , 225 , 175 , 325 , 125 , 375 , 225 , 125**

**SOLUTION :**

|                  |            |            |            |            |            |
|------------------|------------|------------|------------|------------|------------|
| <b>Values</b>    | <b>125</b> | <b>175</b> | <b>225</b> | <b>325</b> | <b>375</b> |
| <b>Frequency</b> | <b>4</b>   | <b>2</b>   | <b>3</b>   | <b>1</b>   | <b>1</b>   |

Since maximum frequency 4 corresponds to the value 125 then mode = 125

**Q 3 . Find the mode for the following series :**

**7.5 , 7.3 , 7.2 , 7.2 , 7.4 , 7.7 , 7.7 , 7.5 , 7.3 , 7.2 , 7.6 , 7.2**

**SOLUTION :**

|                  |            |            |            |            |            |            |
|------------------|------------|------------|------------|------------|------------|------------|
| <b>Values</b>    | <b>7.2</b> | <b>7.3</b> | <b>7.4</b> | <b>7.5</b> | <b>7.6</b> | <b>7.7</b> |
| <b>Frequency</b> | <b>4</b>   | <b>2</b>   | <b>1</b>   | <b>2</b>   | <b>1</b>   | <b>2</b>   |

Since maximum frequency 4 corresponds to the value 7.2 then mode = 7.2

**Q 4 . Find the mode of the following data in each case :**

**(i) . 14 , 25 , 14 , 28 , 18 , 17 , 18 , 14 , 23 , 22 , 14 , 18**

**SOLUTION :**

Arranging the numbers in ascending order:

14 , 14 , 14 , 14 , 17 , 18 , 18 , 18 , 22 , 23 , 25 , 28

Here the observation 14 is having the highest frequency i . e , 4 in given data, so mode = 14.

**(ii) . 7 , 9 , 12 , 13 , 7 , 12 , 15 , 7 , 12 , 7 , 25 , 18 , 7**

**SOLUTION :**

|                  |          |          |           |           |           |           |           |
|------------------|----------|----------|-----------|-----------|-----------|-----------|-----------|
| <b>Values</b>    | <b>7</b> | <b>9</b> | <b>12</b> | <b>13</b> | <b>15</b> | <b>18</b> | <b>25</b> |
| <b>Frequency</b> | <b>5</b> | <b>1</b> | <b>3</b>  | <b>1</b>  | <b>1</b>  | <b>1</b>  | <b>1</b>  |

Since maximum frequency 5 corresponds to the value 7 then mode = 7

**Q 5 . The demand of different shirt sizes, as obtained by a survey, is given below :**

|                                   |           |           |           |           |           |           |           |              |
|-----------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--------------|
| <b>Size:</b>                      | <b>38</b> | <b>39</b> | <b>40</b> | <b>41</b> | <b>42</b> | <b>43</b> | <b>44</b> | <b>Total</b> |
| <b>No. of persons(wearing it)</b> | <b>26</b> | <b>39</b> | <b>20</b> | <b>15</b> | <b>13</b> | <b>7</b>  | <b>5</b>  | <b>125</b>   |

**Find the modal shirt sizes, as observed from the survey.**

**SOLUTION :**

|                                   |           |           |           |           |           |           |           |              |
|-----------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--------------|
| <b>Size:</b>                      | <b>38</b> | <b>39</b> | <b>40</b> | <b>41</b> | <b>42</b> | <b>43</b> | <b>44</b> | <b>Total</b> |
| <b>No. of persons(wearing it)</b> | <b>26</b> | <b>39</b> | <b>20</b> | <b>15</b> | <b>13</b> | <b>7</b>  | <b>5</b>  | <b>125</b>   |

Since, maximum frequency 39 corresponds to the value 39 then mode = 39