# Practice Challenge - Objective

Subject: Mathematics

Topic : Statistics Exam Prep 1                                    Class: X

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1. Find the median of the following data:

| Class interval | 25 − 35 | 35 − 45 | 45 − 55 | 55 − 65 | 65 − 75 | 75 − 85 | 85 − 95 |
|---|---|---|---|---|---|---|---|
| Frequency | 12 | 16 | 17 | 15 | 8 | 19 | 13 |

    **A.** 58.33

    **B.** 54.3

    **C.** 32.33

    **D.** 51.67

2. Consider the following distribution of the number of mangoes being packed in cardboard boxes where these boxes contain varying number of mangoes. Find the mean number of mangoes kept in a packing box using assumed mean method?

| Number of mangoes | 50 − 52 | 53 − 55 | 56 − 58 | 59 − 61 | 62 − 64 |
|---|---|---|---|---|---|
| Number of boxes | 15 | 110 | 135 | 115 | 25 |

    **A.** 53.87

    **B.** 59.95

    **C.** 57.18

    **D.** 54.99

3.

Find the mode from the given data.

1, 2, 3, 4, 1, 2, 3, 4, 1, 2, 3, 4, 1, 2, 3, 4, 1, 2 , 3, 4, 1, 2, 3, 4, 1 ,2 , 3, 4, 5, 5, 1, 5, 5, 5, 3, 5, 1, 2, 4, 5, 6, 1, 2, 4, 2, 1

    A.  1

    B.  2

    C.  3

    D.  4

4.

Find the mean age in years from the frequency distribution given below:

| Class interval of age in years | Frequency($f_i$) |
|---|---|
| $25 - 29$ | 4 |
| $30 - 34$ | 14 |
| $35 - 39$ | 22 |
| $40 - 44$ | 16 |
| $45 - 49$ | 6 |
| $50 - 54$ | 5 |
| $55 - 59$ | 3 |
| Total | 70 |

    A.  39.35

    B.  29.39

    C.  40.15

    D.  40.39

5.

The following data shows the warranty period of different components. Find the modal warranty period.

| Warranty period (years) | $0-1$ | $1-2$ | $2-3$ | $3-4$ | $4-5$ | $5-6$ |
|---|---|---|---|---|---|---|
| Number components | 6 | 10 | 16 | 25 | 16 | 20 |

**A.** 3

**B.** 3.25

**C.** 3.5

**D.** 4.5

6.

The marks obtained by 40 students in class X of a certain school in a math paper of maximum marks '100' are presented in the table. Find the mean using direct method.

| Class Interval | $0-10$ | $10-20$ | $20-30$ | $30-40$ | $40-50$ |
|---|---|---|---|---|---|
| Number of students | 3 | 4 | 13 | 15 | 5 |

**A.** 28.75

**B.** 25.2

**C.** 26.4

**D.** 29.9

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7.

If the mean of the data is 60, find the value of p

| Class mark | frequency |
|---|---|
| 25 − 35 | 12 |
| 35 − 45 | 16 |
| 45 − 55 | $p$ |
| 55 − 65 | 15 |
| 65 − 75 | 8 |
| 75 − 85 | 19 |
| 85 − 95 | 13 |

   **A.** 17

   **B.** 23

   **C.** 12

   **D.** 44

8.

The following data shows monthly savings of 100 families. Find the difference of modal and mean monthly savings in rupees.

| Monthly savings (₹) | Number of families |
|---|---|
| 1000 − 2000 | 14 |
| 2000 − 3000 | 15 |
| 3000 − 4000 | 21 |
| 4000 − 5000 | 27 |
| 5000 − 6000 | 25 |

   **A.** ₹ 916.67

   **B.** ₹ 600.77

   **C.** ₹ 945.55

   **D.** ₹ 840

9. If the median of the following data is 50, then find the value of $p$.

| Class | Frequency |
|---|---|
| 0 - 20 | 10 |
| 20 - 40 | 7 |
| 40 - 60 | 16 |
| 60 - 80 | $p$ |
| 80 - 100 | 8 |

A. 6

B. 7

C. 8

D. 9

10. Find the mode of the given data.

| Class | Frequency |
|---|---|
| $0-5$ | 200 |
| $5-10$ | 250 |
| $10-15$ | 225 |
| $15-20$ | 300 |
| $20-25$ | 275 |

A. 19

B. 18.75

C. 18.50

D. 18.25