

CLASS 10 · HOTS · OLYMPIAD PREPARATION · DPP SHEET

Chapter 13: HOTS: Statistics (Class 10)

Daily practice problems: 8 questions with an answer key

Try every question on your own first. The answer key is on the last page.

1. The mean of the data below is 8. Find p (the first row lists the values x and the second row their frequencies f : 3, 5, 7, 9, 11, 13 with frequencies 6, 8, 15, p , 8, 4).
2. Find the mode of the data in which the classes 0 - 20, 20 - 40, 40 - 60, 60 - 80 and 80 - 100 have frequencies 7, 12, 20, 14 and 6.
3. The mode of a data set is 20 and its mean is 17. Find the median.
4. The mean of 20 observations is 15. One observation, 25, is replaced by 5. Find the new mean.
5. The mean of 12 numbers is 9. Each is multiplied by 2 and then 3 is added. Find the new mean.
6. In a grouped data the median class is 20 - 30, with cumulative frequency 15 before it, class frequency 12 and $n = 50$. Find the median.
7. The sum of the deviations of 10 observations from 5 is 30. Find the mean.
8. Two data sets have 10 and 20 observations with means 12 and 18. Find the mean of all 30 observations.

Answer Key

1. $p = 25$ (here $\sum fx = 303 + 9p$ and $\sum f = 41 + p$, so $303 + 9p = 8(41 + p)$).

2. $40 + \frac{20 - 12}{40 - 12 - 14} \times 20 = 40 + \frac{160}{14} \approx 51.43$.

3. $\frac{54}{3} = 18$ (from 3 median = $20 + 34 = 54$).

4. 14.

5. 21.

6. $20 + \frac{25 - 15}{12} \times 10 \approx 28.33$.

7. 8.

8. 16.