CBSE CLASS 10 MATHS · CHAPTER 13 · 2026-27

Statistics Class 10 Important Questions

10 questions · 27 marks · no calculator · step-marked answers

Name _____ Date _____ Score / 27

- Original questions in the board paper's question types, from 1-mark MCQs to a case study. Try every question before you look at the answers.
- No calculator: as in the CBSE board exam, everything works by hand.
- Worked answers with step marks for 5 questions start after the questions. The other 5 open free on the chapter page with a free account (no card): the link is next to each one.
- Online, with more practice: cbsemathrevision.com/class-10/statistics

Section A · Multiple choice and assertion–reason (1 mark each)

1. **1 mark · Median of grouped data**

Using $3\,\text{Median} = \text{Mode} + 2\,\text{Mean}$, find the median of a distribution whose mode is 24 and whose mean is 30.

(a) 28 (b) 27

(c) 26 (d) 30

2. **1 mark · Mode of grouped data**

The classes 0–10, 10–20, 20–30, 30–40 have frequencies 4, 8, 12, 6. The modal class is

(a) 0–10 (b) 10–20

(c) 20–30 (d) 30–40

3. **1 mark · Mean of grouped data**

In the following question, a statement of Assertion (A) is followed by a statement of Reason (R). Choose the correct option.

Assertion (A): For any grouped data, the assumed-mean method gives the same mean as the direct method.

Reason (R): The assumed-mean method subtracts the same number a from every class mark and adds a back at the end.

(a) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).

(b) Both Assertion (A) and Reason (R) are true but Reason (R) is not the correct explanation of Assertion (A).

(c) Assertion (A) is true but Reason (R) is false.

(d) Assertion (A) is false but Reason (R) is true.

Section B · Short answer (2 marks each)

4. **2 marks · Mean of grouped data**

Find the mean of the data: values x: $2, 4, 6, 8, 10$ with frequencies f: $3, 5, 6, 4, 2$.

5. **2 marks · Mean of grouped data**

The mean of the data below is 13. Find p. Class marks x: $5, 10, 15, 20$; frequencies f: $2, p, 5, 3$.

Section C · Short answer (3 marks each)

6. **3 marks · Median of grouped data**

Find the median of the distribution: 0–10: 5, 10–20: 8, 20–30: 12, 30–40: 10, 40–50: 5.

7. **3 marks · Mode of grouped data**

Find the mode of the distribution: 0–10: 6, 10–20: 10, 20–30: 16, 30–40: 12, 40–50: 6.

Section D · Long answer (5 marks each)

8. **5 marks · Mean of grouped data**

The daily wages of 50 workers are: ₹100–120: 6, ₹120–140: 9, ₹140–160: 15, ₹160–180: 12, ₹180–200: 8. Find the mean wage by the step-deviation method, and the modal wage.

9. **5 marks · Median of grouped data**

The distribution below has 50 observations and median 36. Find x and y. Classes: 0–10: 4, 10–20: 6, 20–30: x, 30–40: 15, 40–50: y, 50–60: 5.

Section E · Case study (4 marks)

10. **4 marks · Mean of grouped data**

Screen-time survey. A class of 40 students recorded their daily screen time (hours): 0–2: 8 students, 2–4: 14, 4–6: 10, 6–8: 6, 8–10: 2.

i. Write the modal class. *[1 mark]*

ii. Write the median class. *[1 mark]*

iii. Find the mean daily screen time. *[2 marks]*

Answers and worked solutions

Question 1 — 1 mark

$3\,\text{Median} = \text{Mode} + 2\,\text{Mean} = 24 + 60 = 84 \Rightarrow \text{Median} = 28$ **A1**

Correct option: (a) 28

Question 2 — 1 mark

Worked answer: free with a free account (no card) on the chapter page: cbsemathrevision.com/class-10/statistics#iq-2

Question 3 — 1 mark

Worked answer: free with a free account (no card) on the chapter page: cbsemathrevision.com/class-10/statistics#iq-3

Question 4 — 2 marks

Answer: 5.7

$\sum f = 20$ and
$\sum fx = 6 + 20 + 36 + 32 + 20 = 114$ **M1**

Mean $= \dfrac{114}{20} = 5.7$ **A1**

Question 5 — 2 marks

Worked answer: free with a free account (no card) on the chapter page: cbsemathrevision.com/class-10/statistics#iq-5

Question 6 — 3 marks

Answer: $\dfrac{155}{6} \approx 25.83$

$n = 40$, $\dfrac{n}{2} = 20$; cumulative frequencies $5, 13, 25, 35, 40$, so the median class is 20–30 **M1**

Median
$= l + \dfrac{\frac{n}{2} - cf}{f} \times h = 20 + \dfrac{20 - 13}{12} \times 10$ **A1**
$= 20 + \dfrac{35}{6} = \dfrac{155}{6} \approx 25.83$ **A1**

Question 7 — 3 marks

Worked answer: free with a free account (no card) on the chapter page: cbsemathrevision.com/class-10/statistics#iq-7

Question 8 — 5 marks

Answer: Mean ₹152.80; mode ₹$\dfrac{460}{3} \approx 153.33$

Class marks $110, 130, 150, 170, 190$; with $a = 150$, $h = 20$: $u = -2, -1, 0, 1, 2$ **M1**
$\sum fu = -12 - 9 + 0 + 12 + 16 = 7$ **A1**
Mean $= 150 + 20 \times \dfrac{7}{50} =$ ₹152.80 **A1**
Modal class 140–160: Mode
$= 140 + \dfrac{15 - 9}{30 - 9 - 12} \times 20$ **M1**
$= 140 + \dfrac{40}{3} \approx$ ₹153.33 **A1**

Question 9 — 5 marks

Worked answer: free with a free account (no card) on the chapter page: cbsemathrevision.com/class-10/statistics#iq-9

Question 10 — 4 marks

i. 2–4 hours (highest frequency, 14) **A1**

ii. $\dfrac{n}{2} = 20$; cumulative frequencies $8, 22, \ldots$, so the median class is 2–4 **A1**

iii. Class marks $1, 3, 5, 7, 9$:
$\sum fx = 8 + 42 + 50 + 42 + 18 = 160$ **M1**
Mean $= \dfrac{160}{40} = 4$ hours **A1**

More on this chapter, free: revision notes, a Route to 95 and practice with instant feedback at cbsemathrevision.com/class-10/statistics
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