

CBSE Class 10 Maths Question Types

Six formats, five sections, 80 marks — what each one tests and how to answer it.

The paper in one line

3 hours · 80 theory marks (+20 internal) · **38 questions** · Sections A to E · no overall choice, but internal choices in Sections B, C, D and E.

Six question formats → three levels of demand: recall → working → application

Every format at a glance

Format	Section	Marks	How many	What it really tests
MCQ	A	1	18	Accuracy under speed
Assertion-Reason	A	1	2	Does R <i>explain</i> A?
Very Short Answer	B	2	5	One clean step
Short Answer	C	3	6	A few connected steps
Long Answer	D	5	4	Structure and proof
Case-Based	E	4	3	Translating a real scenario

Where the marks sit

Level	Formats	Marks
Objective	MCQ + Assertion-Reason (Section A)	20
Subjective (answer)	Very Short + Short + Long (Sections B, C, D)	48
Case-based	Real-world scenarios (Section E)	12

How to answer each one

MCQ	Read the full question <i>and</i> all four options. The plausible-looking wrong option is the trap.
Assertion-Reason	Test A, test R, then test the link. Both can be true with R not explaining A.
2-mark	One clear step and the answer. No padding.
3 & 5-mark	State the formula, substitute, solve, conclude. Method marks live in the lines you are tempted to skip.
Case-based	Read the whole scenario before the sub-questions. Then solve.

Key takeaways

- **Six formats, not endless variety.** Every question you meet is one of them.
- **48 of 80 marks reward shown working** — Sections B, C and D.
- **Method marks are real marks.** A right method with a slip still scores.
- **Case-based is not harder maths** — it is the same syllabus wrapped in a story.
- **Practise by format, not only by chapter.** Each has its own rhythm.

Same maths, six different questions

The AP **3, 7, 11, 15, ...** — here $a = 3$ and $d = 4$ — can appear in any section. Watch the maths stay still while the format moves.

$$a_n = a + (n - 1)d \quad \cdot \quad S_n = n/2 [2a + (n - 1)d]$$

Section A · MCQ · 1 mark

The 10th term of the AP 3, 7, 11, ... is: (a) 37 (b) 39 (c) 41 (d) 43

$a_{10} = 3 + (10 - 1) \times 4 = 3 + 36 = 39 \Rightarrow$ **option (b)**. One line of working, one mark — but only if the arithmetic is exact.

Section A · Assertion-Reason · 1 mark

A: The 10th term of the AP 3, 7, 11, ... is 39. **R:** In any AP, $a_n = a + (n - 1)d$.

A is true, R is true, and R is the rule that produces A $\Rightarrow$ **option (a)**. Test A, test R, then test the link.

Section B · Very Short Answer · 2 marks

The first term of an AP is 3 and its 10th term is 39. Find the common difference.

$39 = 3 + 9d \Rightarrow 9d = 36 \Rightarrow d = 4$. Same formula, run backwards.

Section C · Short Answer · 3 marks

Find the sum of the first 15 terms of the AP 3, 7, 11, ...

$S_{15} = 15/2 [2(3) + 14 \times 4] = 15/2 \times 62 = 465$. Formula stated, substituted, solved — three marked steps.

Section D · Long Answer · 5 marks

How many terms of the AP 3, 7, 11, ... must be taken so that their sum is 210?

$$S_n = n/2 [2(3) + (n - 1)4] = n/2 (4n + 2) = n(2n + 1)$$

$$n(2n + 1) = 210 \Rightarrow 2n^2 + n - 210 = 0$$

$$D = 1 + 1680 = 1681, \sqrt{1681} = 41 \Rightarrow n = (-1 + 41)/4 = 10 \quad (n = -10.5 \text{ rejected: } n \text{ must be a positive integer})$$

$$\text{Check: } S_{10} = 10/2 [6 + 36] = 5 \times 42 = 210 \quad \checkmark \quad \mathbf{10 \text{ terms}}$$

Section E · Case-Based · 4 marks

An auditorium has 3 seats in the first row, 7 in the second, 11 in the third, and so on. (i) How many seats are in the 10th row? (ii) How many seats are there in the first 10 rows?

(i) **39 seats** (ii) **210 seats** — the exact two calculations above. The only new skill was spotting “3, 7, 11, ...” inside a sentence about seats.

Now try this one

Which term of the AP 3, 7, 11, ... is 111? (Answer: $111 = 3 + (n - 1)4 \Rightarrow n - 1 = 27 \Rightarrow$ the **28th** term.)

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