

CBSE CLASS 10 STANDARD MATHEMATICS

OFFICIAL STEP-MARKING BLUEPRINT & POSTER

Based on NCERT Curriculum & CBSE Board Marking Schemes

Dear Students, in the CBSE Board Examination, every answer is graded step-by-step using a strict marking key. Even if your final answer has a calculation error, you can still secure **up to 80% of the marks** by satisfying the four core milestones below. Use this poster as your daily preparation and checklist guide!

THE 4 GOLDEN MILESTONES OF STEP-MARKING

MILESTONE 1: Setup & Given (0.5 Marks)

Extract all variables from the question, assign their correct algebraic symbols, and state what needs to be solved.

- **Example (Arithmetic Progressions):** If a question asks for the sum of an AP starting with 6 and decreasing by 3, write:

"Let first term $a = 6$, common difference $d = -3$. To find: S_{15} (for $n = 15$)."

MILESTONE 2: State the General Formula (0.5 Marks)

Before substituting any numbers, write down the general formula you intend to use. **Stating the formula is a mandatory grading checkpoint in the board evaluation scheme.**

- **High-Yield Formulas to Box:**

Quadratic Formula: $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$

Statistics Mean: $\bar{x} = a + h \left(\frac{\sum f_i u_i}{\sum f_i} \right)$

MILESTONE 3: Show Intermediate Calculations (1.0 to 2.0 Marks)

Show at least 2 to 3 lines of logical, sequential algebraic simplification. Never skip straight from formula substitution to the final answer.

- **Example (Quadratic Discriminant):** Show the intermediate calculation steps clearly:

$D = b^2 - 4ac \implies D = (-5)^2 - 4(1)(6) \implies D = 25 - 24 = 1$. Since $D > 0$, roots are real and distinct.

MILESTONE 4: Final Value & Units (0.5 Marks)

Write the final numerical answer clearly, underline it, and **always append the correct unit of measurement**.

- **Mandatory Units Rule:** Put cm^2 for areas, cm^3 for volumes, and degrees ($^\circ$) for angles.

WARNING: Failing to write units (or writing wrong units) results in a **mandatory 0.5-mark deduction** by the examiner.

DO'S FOR MAXIMUM MARKS

- **Underline the Final Answer:** Draw a neat box or underline around your final numeric answer to guide the examiner's eye immediately.
- **Use a Pencil for Diagrams:** Always sketch circles, triangles, or graphs using a pencil and ruler.
- **State the Theorem:** When using BPT, Pythagoras, or tangent properties, write the theorem name (e.g., "By Theorem 10.2...").
- **Write units at every final step:** Ensure cm^2 , cm^3 , or units are fully visible.

DON'TS: AVOID THESE SLIP-UPS

- **No Floating Numbers:** Never write calculations in the margin or leave numbers floating without equating them to a variable.
- **Do Not Skip Formula Boxes:** Never jump straight into numbers; missing the general formula costs 0.5 marks.
- **Avoid Sign Errors in Discriminants:** Double-check calculations of $D = b^2 - 4ac$ when c is negative (e.g., $-4ac$ becomes positive).
- **Don't Scratch Out Errors Heavily:** If you make a mistake, draw a single neat line through it.

EXAMINER'S KEY EMPIRICAL RELATIONSHIP:

$$3 \times \text{Median} = \text{Mode} + 2 \times \text{Mean}$$