

How to Study NCERT Maths Class 10

One repeatable cycle per chapter · 14 chapters · 7 units · $80 + 20 = 100$ marks

Learn the concept ▶ Study the examples ▶ Solve the exercises ▶ **Self-test with the book closed** ▶ Revisit weak spots

The five-step chapter cycle

Study **one** chapter well and you can study all fourteen – you just repeat the cycle.

Step	What you actually do	What it proves
1 · Learn	Understand <i>why</i> it works, not just the steps.	You are not building on a shaky base.
2 · Examples	Cover the solution, try it yourself, <i>then</i> check.	You can turn an idea into a question.
3 · Exercises	Solve by hand; when wrong, find <i>where</i> it broke.	Real learning. This is the marks step.
4 · Self-test	A few questions, book closed, no notes.	The honest check. Nothing replaces it.
5 · Revisit	Return to the types you struggled with, days later.	Shaky topics become solid ones.

The number-one trap: reading instead of solving. It feels like studying; it isn't. Maths marks come from your pen, not your eyes.

Where CBSE fits: the map behind the book

NCERT is the book CBSE writes the paper from, so “finish NCERT properly” is a complete plan. CBSE publishes the 80 theory marks **by unit, not by chapter**.

Unit	Marks	Share of paper
Algebra	20	25.0%
Geometry	15	18.75%
Trigonometry	12	15.0%
Statistics & Probability	11	13.75%
Mensuration	10	12.5%
Number Systems	6	7.5%
Coordinate Geometry	6	7.5%
Total	80	100%

The paper is **38 questions, 80 marks, three hours**, plus 20 internal marks. Chapter-level mark figures online are **unofficial estimates** – plan against units. Constructions is gone: the list is **14**, not 15.

Revision that actually sticks

Active recall, not re-reading. Close the book and write the method from memory – the struggle is what builds it. Space the passes: **Pass 1** day 0, closed-book self-test; **Pass 2** day 3–4, only what you got wrong; **Pass 3** day 10–14, a short mixed set with a pen, timed.

Key takeaways

- Effort is rarely the problem. **Method** is – one fixed cycle, repeated fourteen times.
- Step 4 is the one students skip.** Book closed, no notes: that is the only honest check.
- Aim for **roughly a chapter a week**, 40–60 focused minutes most days.
- Revise **with a pen**, spaced over days. CBSE sets marks **by unit**: Algebra 20 + Geometry 15 = 35 of the 80.
- Track **where** you go wrong, not just that you did – the pattern is the fix.

The cycle, run once — Chapter 1: Real Numbers

Number Systems · 6 marks · the same five steps you will repeat thirteen more times

$HCF \times LCM = \text{product of the two numbers}$ · true for exactly two numbers

STEPS 1-2 · LEARN, THEN WORK THE EXAMPLE

Concept. Every composite number factorises into primes in exactly one way (Fundamental Theorem of Arithmetic). HCF takes the *lowest* power of each shared prime; LCM takes the *highest* power of every prime.

Example. Find the HCF and LCM of 336 and 54.

$$336 = 2^4 \times 3 \times 7 \cdot 54 = 2 \times 3^3$$

$$HCF = 2^1 \times 3^1 = 6 \cdot LCM = 2^4 \times 3^3 \times 7 = 16 \times 27 \times 7 = 3024$$

Check: $6 \times 3024 = 18144$, and $336 \times 54 = 18144$. Equal, so both answers are right.

STEP 3 · SOLVE THE EXERCISE BY HAND

Question. Find the largest number that divides 245 and 1029, leaving remainder 5 in each case.

Step 1. A remainder of 5 means the number divides $245 - 5 = 240$ and $1029 - 5 = 1024$ exactly.

Step 2. Largest such number = $HCF(240, 1024)$.

Step 3. $240 = 2^4 \times 3 \times 5 \cdot 1024 = 2^{10} \Rightarrow HCF = 2^4 = 16$

Check: $245 = 16 \times 15 + 5$ and $1029 = 16 \times 64 + 5$. Both leave 5. ✓

Where the marks leak here: subtracting the remainder is the whole question. Students who jump straight to $HCF(245, 1029)$ get 7, and lose every mark that follows.

STEP 4 · SELF-TEST, BOOK CLOSED — IN CBSE'S SIX FORMATS

Set your closed-book test as a **mix of formats**, not five questions of the same shape. One concept, six ways:

Format · marks	Asked as
MCQ · 1	HCF of 336 and 54 is: (a) 2 (b) 6 (c) 18 (d) 54
Assertion-Reason · 1	A: $HCF(336, 54) = 6$. R: $HCF \times LCM = \text{product}$. Both true; R does not explain A on its own.
Very Short Answer · 2	Write 336 as a product of its prime factors.
Short Answer · 3	Find the LCM of 336 and 54 given their HCF is 6.
Long Answer · 5	Prove $\sqrt{5}$ is irrational, then show $3 + 2\sqrt{5}$ is irrational too.
Case-based · 4	Two bells ring every 336 s and 54 s. When do they next ring together? ($LCM = 3024$ s)

STEP 5 · REVISIT — AND NOW TRY THIS ONE

Do not re-read the chapter. Return in three days to *only* the question types you got wrong, book closed.

Try this: Find the HCF and LCM of 26 and 91, and verify that $HCF \times LCM = 26 \times 91$.

Answer: $26 = 2 \times 13$, $91 = 7 \times 13 \Rightarrow HCF = 13$, $LCM = 2 \times 7 \times 13 = 182$. Check: $13 \times 182 = 2366 = 26 \times 91$. ✓

Turn the method into marks — with examfront

- **Chapter 1 is free.** Start on Real Numbers today and run the full cycle with no card needed.
- **Mistake identification** — we name the *pattern* behind your wrong answers, not just the answer.
- **Anytime tests** — your step-4 closed-book self-test, ready the moment you finish a chapter.
- **Weekly tests** — the built-in catch-up-and-revisit slot that keeps the rhythm honest.
- **Mock tests before the exam** — full papers under real timing, so nothing on the day is new.

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