🗓️ **Day-Wise 60-Day CP Roadmap (Free Resources Only)**

✅ **Daily Commitment: 5–6 hours**

Split as:

- 1–1.5 hrs learning
- 3–4 hrs practice
- 30 min of review/upsolve/log mistakes

🔹 **Phase 1: Core Concepts + Speed (Days 1–14)**

Day	Topics	Free Resources	Practice
1	Setup, Brute Force, Fast I/O	CP Handbook Ch.1	5 CSES Intro problems
2	Sorting + Binary Search	Codeforces EDU Binary Search	4 CF A/B problems
3	Prefix Sums + Arrays	CP Handbook Ch.2	4 CSES problems
4	Sets, Maps	STL Tutorial (Errichto)	4 CF A/B problems
5	Recursion Basics	Take U Forward Recursion	3 recursion problems
6	Bit Manipulation	Bitwise Tricks (Aditya Verma)	CSES Bit Manipulation section
7	Math + Primes	CP-Algorithms Math	3 CF B/C math-tagged
8	Two Pointers	Codeforces EDU Two Pointers	3–4 problems
9	Sliding Window	Aditya Verma Playlist	4 problems
10	Greedy Algorithms	CP-Algorithms Greedy	3 CF Greedy-tagged
11	Binary Search on Answer	CP-Algorithms	3 problems
12	Practice Contest (Div 3 Virtual)	Codeforces → Virtual Contest	Upsolve + review
13	Mock Test + Upsolve	Do any past Div 3 virtual	Log mistakes
14	Weak Areas + Recap	Revisit weak topics	Solve 4 more from CSES

🔸 **Phase 2: Intermediate Concepts + Contest Flow (Days 15–35)**

Day(s)	Topics	Resources	Practice
15–17	Dynamic Programming (Basics)	Codeforces EDU DP	AtCoder DP Contest A–F
18–20	Trees: DFS, Subtree, Height	Take U Forward Trees	CSES Tree Problems

Day(s)	Topics	Resources	Practice
21–23	Graphs: BFS, DFS, Components	CP-Algorithms Graphs	CF Graph-tagged 1100–1300
24–25	Disjoint Set Union (DSU)	CP Handbook Ch.9	3 DSU problems
26–28	DP Advanced (Knapsack, LIS)	AtCoder DP (G–N)	3–4/day
29–30	Number Theory (GCD, mod, power)	GCD, Modulo Math – CP Algorithms	3–4 math problems
31	Mock CF Div 2 Contest (Virtual)	Codeforces → Gym or Past Contests	Upsolve
32–33	Review Mistakes + Specialize	Return to weak tags	4 targeted problems
34–35	Upsolve old contests	Reattempt unsolved past problems	Build mistake notes

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🔹 **Phase 3: Mastery + Competitive Grinding (Days 36–60)**

Day(s)	Topics	Resources	Practice
36–38	Segment Trees	Segment Tree – CP Handbook Ch. 27	2–3 CF Segment Tree
39–41	Toposort, Dijkstra	Graphs – CP Algorithms	3–4 graph problems
42–43	Fenwick Trees (BIT)	Binary Indexed Tree – CPH	2–3 problems
44–47	Full Contest Days	Take 4 full CF virtual contests	Full review after
48–51	Practice: CF C/D Problems	Filter by rating 1400–1600	Solve 4/day
52–53	AtCoder Beginner Contests	Take 2 ABC contests (virtual)	Upsolve everything
54–56	Timed Solving (Speed Focus)	Pick random 4 problems, set timer	90 mins max
57	Weak Area Focus	Redo old errors	Solve 5
58	Practice Contest + Upsolve	Codeforces Virtual	Analyze rating jumps
59	Final Review of Logs & Notes	Go over mistakes + revisit theory	Light solving
60	Final Mock Contest + Retrospective	Simulate real contest conditions	Celebrate 🎉

🧰 Your Free Resource Toolkit

Type	Resource
📘 Textbook	Competitive Programmer's Handbook
📺 Videos	Take U Forward, Errichto, Aditya Verma
🧪 Practice	Codeforces, CSES, AtCoder, VJudge
💡 Concepts	CP-Algorithms
📝 Track Errors	Google Docs / Notion (optional: I can help you make one)

⚡ Final Notes

- **Upsolve religiously**: Every contest should be followed by review and solving unsolved problems.
- **Track your mistakes**: Build your own "Mistake Bible."
- **Join CP communities**: Reddit r/competitiveprogramming, Codeforces, CP Discords.
- **Optional Challenge**: Start a Codeforces blog to share what you learn weekly.
