# Ultimate Math Mastery Path (No Repetition)

1. How to Prove It - Daniel J. Velleman

-> Foundations of logic, proofs, and mathematical thinking.

2. Naive Set Theory - Paul R. Halmos

-> Basic set theory - the building blocks of all mathematics.

3. Introduction to Mathematical Logic - Elliott Mendelson

-> Deep logic: formal systems, truth, and completeness.

4. Linear Algebra Done Right - Sheldon Axler

-> Pure linear algebra with clean logic - a core tool for all STEM.

5. Abstract Algebra - Dummit & Foote

-> Groups, rings, fields - the backbone of modern algebra.

6. Calculus - Michael Spivak

-> Rigorous, elegant calculus - a bridge from algebra to analysis.

7. Principles of Mathematical Analysis - Walter Rudin (Baby Rudin)

-> Real analysis: limits, continuity, convergence - hardcore precision.

8. Topology - James Munkres

-> Explore spaces and continuity on a higher level.

9. Differential Geometry of Curves and Surfaces - Manfredo Do Carmo

-> Learn how geometry bends - curves, surfaces, manifolds.

10. Visual Complex Analysis - Tristan Needham

-> See complex numbers like never before - intuitive and deep.

11. Real and Complex Analysis - Walter Rudin (Big Rudin)

-> Advanced topics in both real and complex spaces.

12. Measure Theory - Paul R. Halmos

-> Measure, integration, and probability foundations.

13. Categories for the Working Mathematician - Saunders Mac Lane

-> The language of modern mathematics - abstraction beyond abstraction.

14. Gödel, Escher, Bach - Douglas Hofstadter

-> Self-reference, recursion, and the edge of logic and mind.

15. The Princeton Companion to Mathematics - Timothy Gowers (ed.)

-> Survey of entire math universe - discover what to master next.

16. An Introduction to the Theory of Numbers - Hardy & Wright

-> Classic number theory - patterns, primes, and proofs.

17. Algebraic Topology - Allen Hatcher

-> Topology + Algebra = extreme abstraction and spatial reasoning.