

Paresh — this is 100% possible.

Even if you start from **Class-1 level**, in **3 months** you can reach **intermediate math**, enough for:

- ✓ Statistics for Data Engineering
- ✓ Probability
- ✓ ML basics (mean, variance, derivatives intuition)
- ✓ Logical reasoning
- ✓ Word problems
- ✓ Quantitative aptitude

I'll give you a **clear 3-month roadmap**, starting literally from Class-1 math (numbers, counting), and slowly rising to statistics + ML-level math.

This plan is for someone who feels **weak in math**, but is serious about becoming strong.

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3-MONTH MATH ROADMAP

From Class-1 Level → Intermediate → ML-ready math

- ◆ Daily study time: 1–1.5 hours
 - ◆ Weekly test + revision included
 - ◆ Fully beginner-friendly
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MONTH 1 — CLASS 1 TO CLASS 5 LEVEL (FOUNDATION)

⌚ Goal: Become strong in the basics (numbers → arithmetic → fractions → decimals)

WEEK 1 — Class 1–2 Basics

- Counting (1–1000)
- Place value: units, tens, hundreds, thousands
- Greater than / less than
- Number line
- Odd & even numbers
- Basic addition & subtraction

Outcome: You understand numbers confidently.

WEEK 2 — Class 3 Basics

- Addition with carry
- Subtraction with borrowing
- Multiplication (2×1, 2×2, 3×2)
- Division basics (long division)
- Word problems (very easy)

Outcome: You become stable with $+$ $-$ \times \div

WEEK 3 — Class 4 Basics

- Fractions
 - Proper / improper
 - Equivalent fractions
 - Converting fractions \leftrightarrow decimals
- Basic decimals
 - 0.25, 0.10, etc
- Multiplying decimals
- Dividing decimals

Outcome: You understand the core of all math: **fractions + decimals**

WEEK 4 — Class 5 Basics

- Percentage
 - 10%, 20%, 30%, 50%, 100%
 - Convert % \leftrightarrow fraction \leftrightarrow decimal
- Ratio & proportion
- Basic average
- Speed–distance–time (simple version)

Outcome: You reach *everyday math level*, strong enough for analytics.

MONTH 2 — CLASS 6 TO CLASS 10 LEVEL (UPPER FOUNDATION)

⌚ Goal: Prepare for statistics + ML foundation

WEEK 5 — Arithmetic Mastery

- Factors & multiples
- LCM / HCF
- Prime numbers
- More division, word problems

WEEK 6 — Pre-Algebra

- Introduction to algebra
 - what is x ?
 - solving simple equations
- Basics of expressions
- Simple linear equations
 - $2x + 5 = 15$

- $3x - 4 = 8$

Outcome: You start logical mathematical thinking.

WEEK 7 — Geometry Basics

(ONLY the parts needed for ML/statistics)

- Area
 - Perimeter
 - Coordinate plane (x, y basics)
 - Distance between 2 points (very basic)
- No heavy geometry.
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WEEK 8 — Statistics Foundation (Class 8–9 level)

THIS IS IMPORTANT FOR ML + DATA ENGINEERING:

- Mean
- Median
- Mode
- Range
- Frequency tables
- Basic graphs: bar, line, histogram

Outcome: You are ready to enter real statistics.

MONTH 3 — ML MATH LEVEL (INTERMEDIATE)

Goal: Learn math needed for Machine Learning & Analytics

This is where real growth happens.

WEEK 9 — Probability Basics

- Experiment, sample space
- Outcomes
- Simple probability
 - e.g., dice, coins
- Independent vs. dependent events

Outcome: Probability intuition.

WEEK 10 — Algebra for ML

- Linear equations
- Systems of equations
- Basics of functions
 - $f(x)$ notation

- Slope of a line (very important in ML)
- Intercept
- Graph intuition

Outcome: Understanding line equations → needed for Linear Regression.

WEEK 11 — Statistics for ML

- Variance
- Standard deviation
- Z-score
- Outliers
- Normal distribution
- Skewness
- Sample vs population
- Covariance
- Correlation

Outcome: Real ML foundation is built here.

WEEK 12 — ML Math Basics

(You don't need heavy calculus — only intuition)

- Gradient (concept only)
- Derivative meaning (simple explanation)
- Optimization: what is minimization?
- Cost function concept
- Linear Regression math
- Logistic Regression basics
- Matrix basics (used in ML)
 - rows, columns
 - matrix addition
 - matrix multiplication (small examples)

Outcome: You reach **intermediate math**, fully ready for ML basics & data engineering logic.



AFTER 3 MONTHS YOU WILL ACHIEVE

- ✓ Confident with all basic math
- ✓ Ready for statistics and ML
- ✓ Can solve average/percentage/fractions fast
- ✓ Understand probability
- ✓ Comfortable with algebra
- ✓ Strong for Data Engineering logic
- ✓ Ready for SQL + ETL + analytics interview math
- ✓ Can study ML without fear