

MathsBuddy | Math Solver AI – Multi-Page Notes

Page 1 – Concept

1. Concept

- **Purpose:** AI-powered platform to solve math problems step by step.
 - **Target Users:** Students (Class 6-12), educators, self-learners.
 - **USP:**
 - Instant solutions with explanations.
 - Graphical & interactive visualizations.
 - Step-by-step solutions.
 - Free and premium features.
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Page 2 – Features

2. Features

2.1 Math Problem Solver

- Algebra, Calculus, Geometry, Trigonometry, Statistics.
- Step-by-step solutions for equations, derivatives, integrals, word problems.

2.2 Interactive Graphs / 3D Visualization

- Pie charts, functions, parametric equations.
- Mouse hover interactivity (scale, rotate).

- Modern glass/neon effects.

2.3 AI Chat Assistant

- Natural language Q&A.
- Explains concepts & formulas.
- Suggests exercises based on performance.

2.4 Practice & Quizzes

- Random problem generator.
- Track progress & leaderboard.
- Gamification: points, achievements.

2.5 User Account & Premium Features

- Free tier: limited AI & problem-solving.
 - Premium tier: unlimited solving, detailed explanations, interactive 3D features.
 - Rewards/giveaways for engagement.
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Page 3 – Tech Stack

3. Tech Stack

- **Frontend:** Next.js (SPA), React, Tailwind CSS, GSAP, Three.js, ShadCN/UI.
 - **Backend:** Node.js + Express, MongoDB, OpenAI API integration.
 - **Payments:** Razorpay for premium subscriptions.
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Page 4 – Single-Page Platform Structure

4. Single-Page Platform Structure

1. Hero / Intro – 3D interactive element, CTA button.
 2. Math Solver – Input box, problem type dropdown, step-by-step output.
 3. Interactive Graphs – 3D graphs, smooth animations.
 4. Practice / Quiz – Random problems, leaderboard, gamification.
 5. Premium / AI Assistant – AI chat, subscription promo.
 6. About / Footer – Branding, social links, contact info.
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Page 5 – Advantages of SPA

5. Advantages of SPA

- Fast, smooth user experience.
 - Easy integration of 3D and AI components.
 - All features accessible in one scroll.
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Page 6 – MVP for SPA

6. MVP for SPA

- Hero + solver section functional.
 - Step-by-step solutions.
 - One interactive 3D visualization.
 - Optional: basic AI assistant.
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Page 7 – Logo / Branding Ideas

7. Logo / Branding Ideas

- Short & memorable: MB or MathsBuddy.
- Modern, clean, techy feel.
- Optional: animated logo.