Technical Project Overview

ozmath.com

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Purpose, Aim, Audience

- Platform for QCAA mathematics students to prepare for exams & solidify content through problem-based learning
- A way for me to present and build on my two interests – mathematics and full-stack development
- Platform with potential to expand into assisting IB, VCE & HSC students

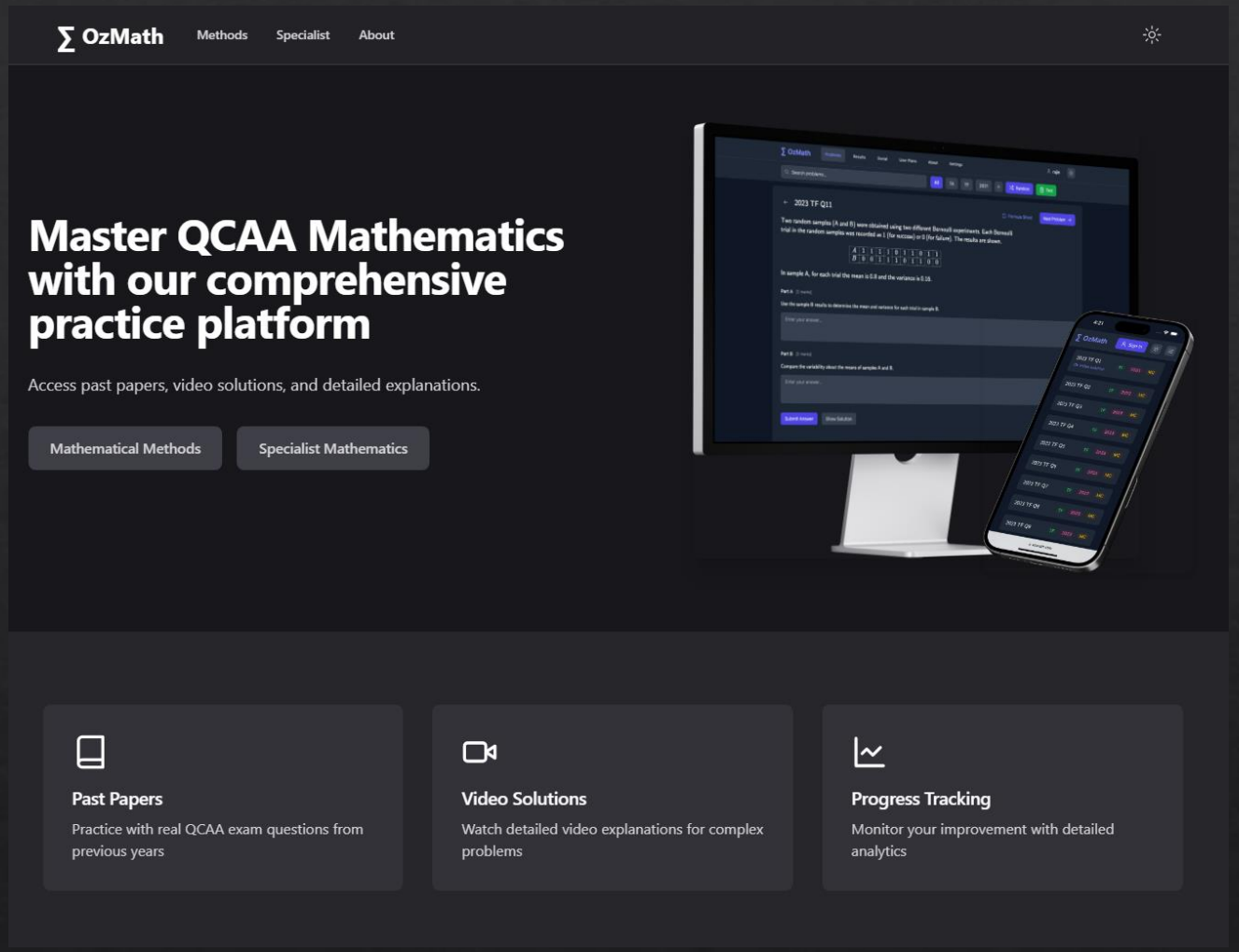


Fig. 1: Home Page, Desktop POV

Intuitive, device-compatible UI

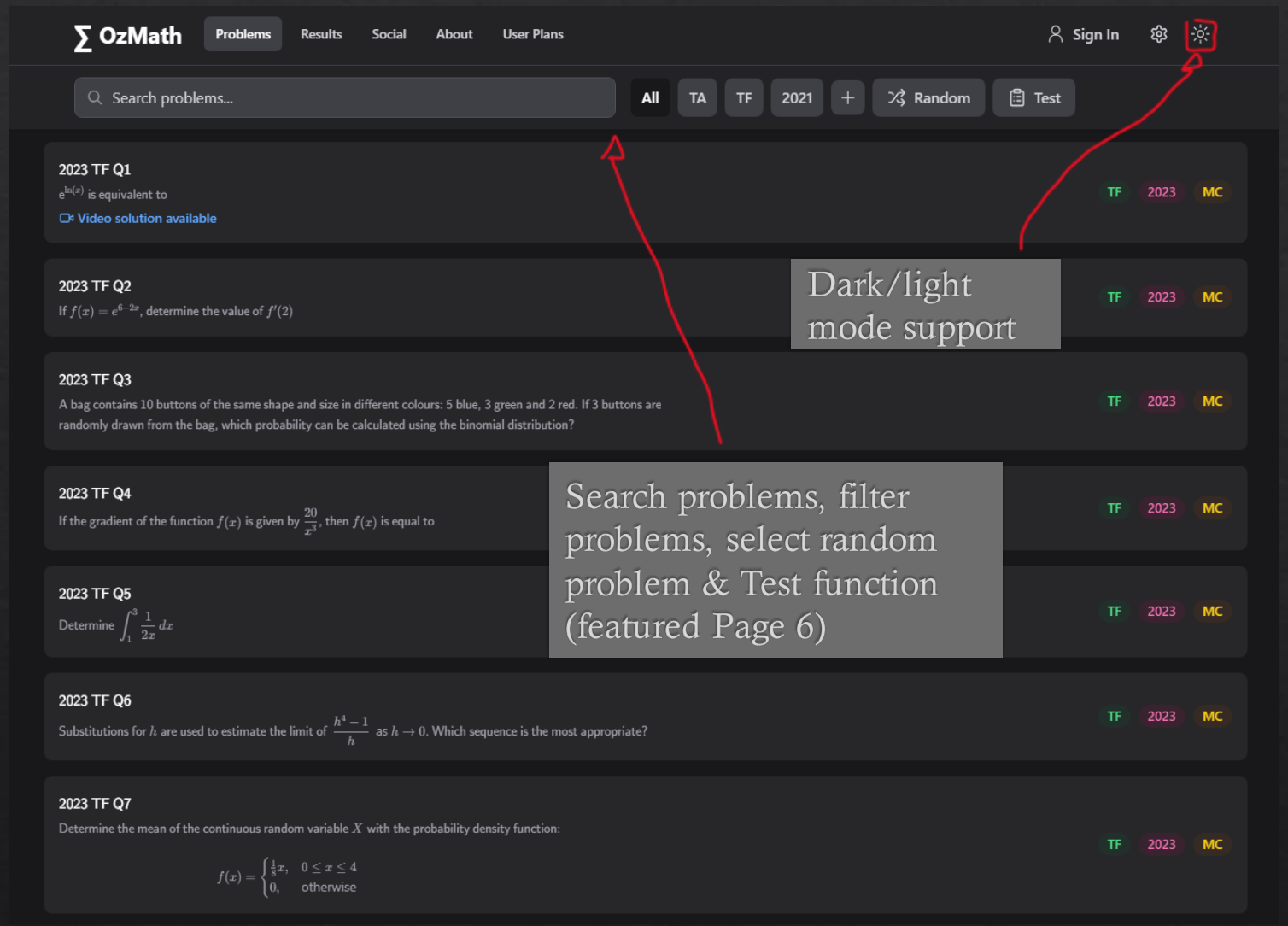


Fig. 2: Methods Home Page, Desktop POV

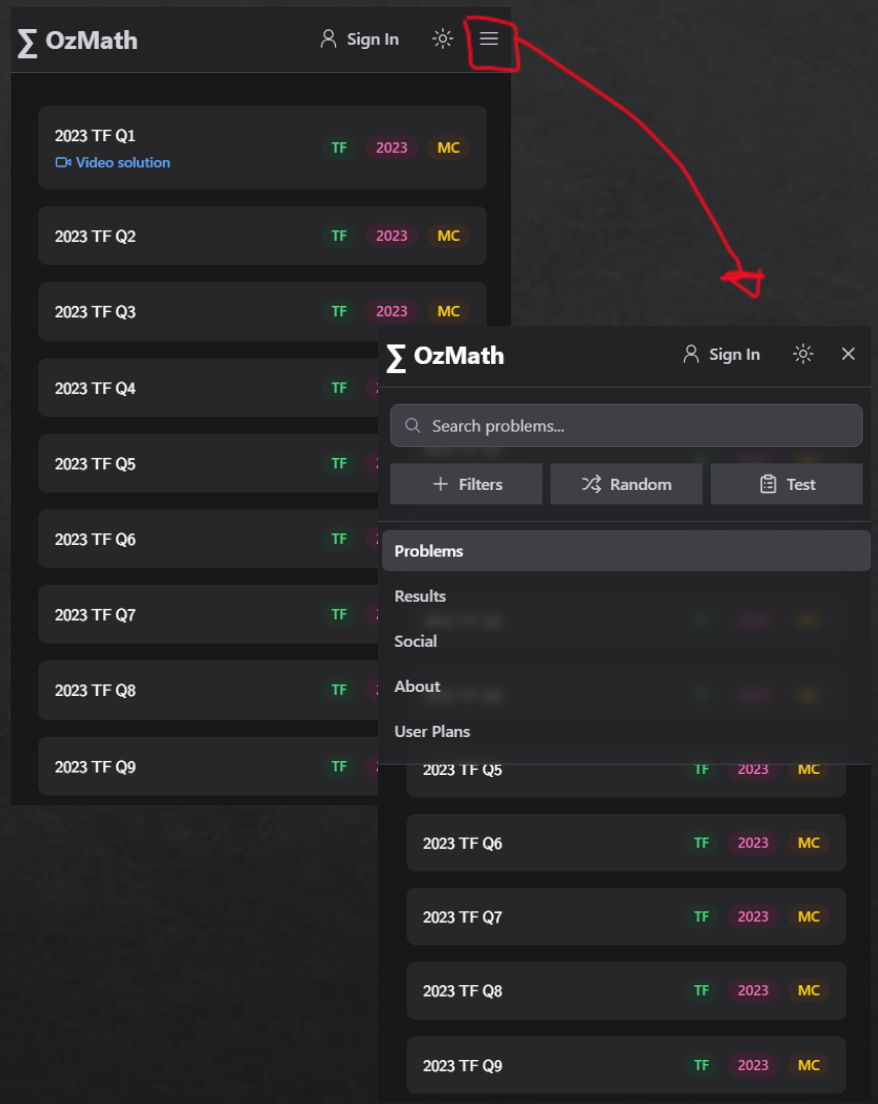


Fig. 3: Methods Home Page + TopBar Dropdown, Mobile POV

Accurate answering & grading system (1)

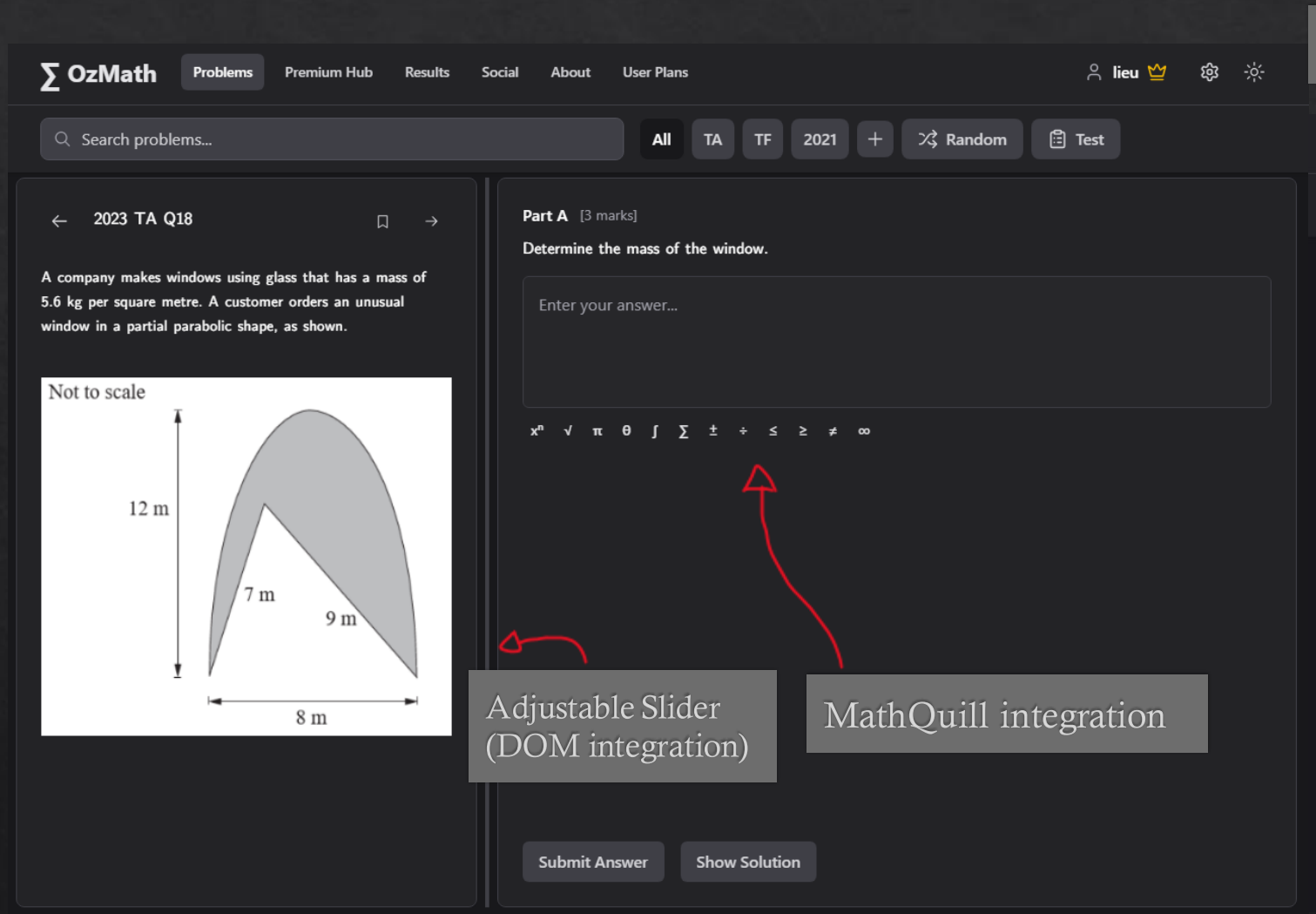


Fig. 4: Problem view, Desktop POV

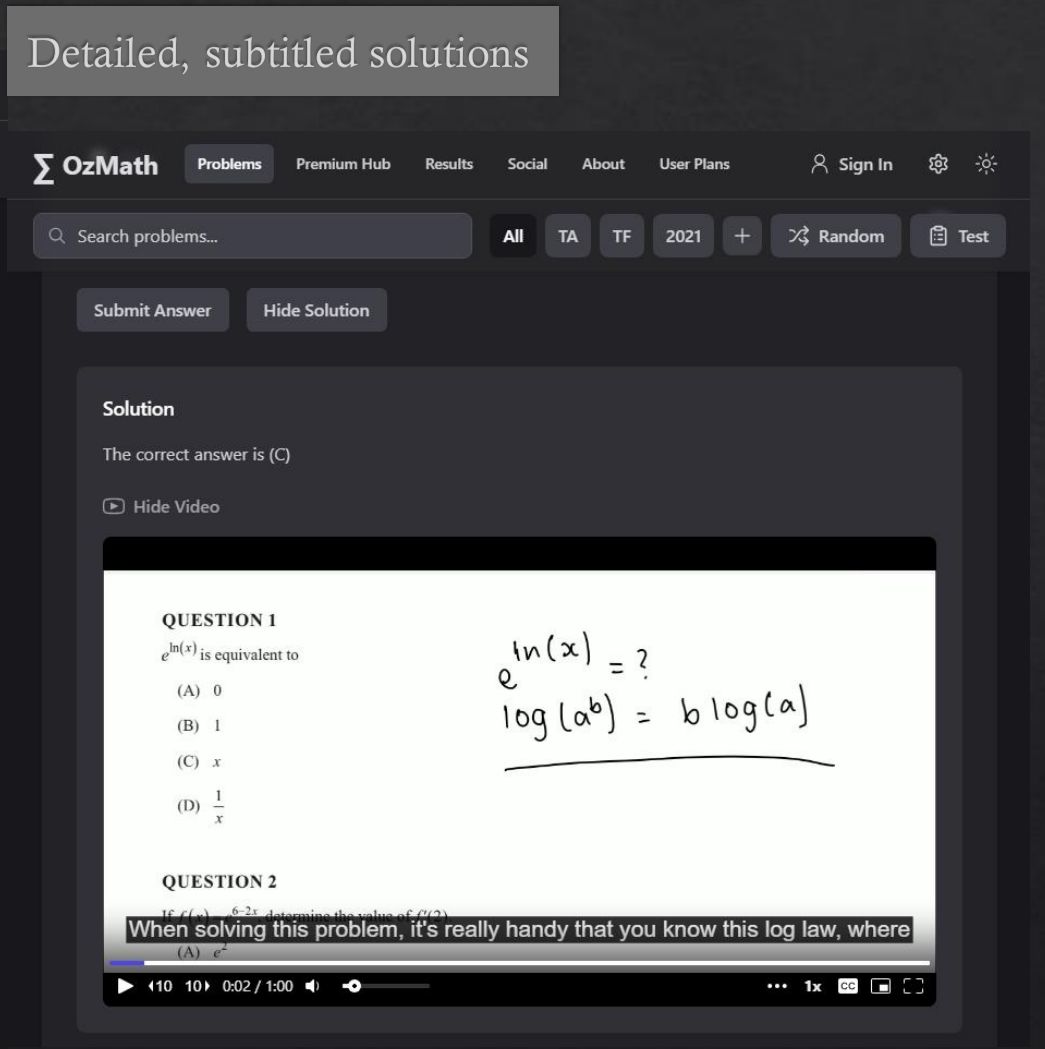


Fig. 5: Methods Home Page, Mobile POV

Accurate answering & grading system (2)

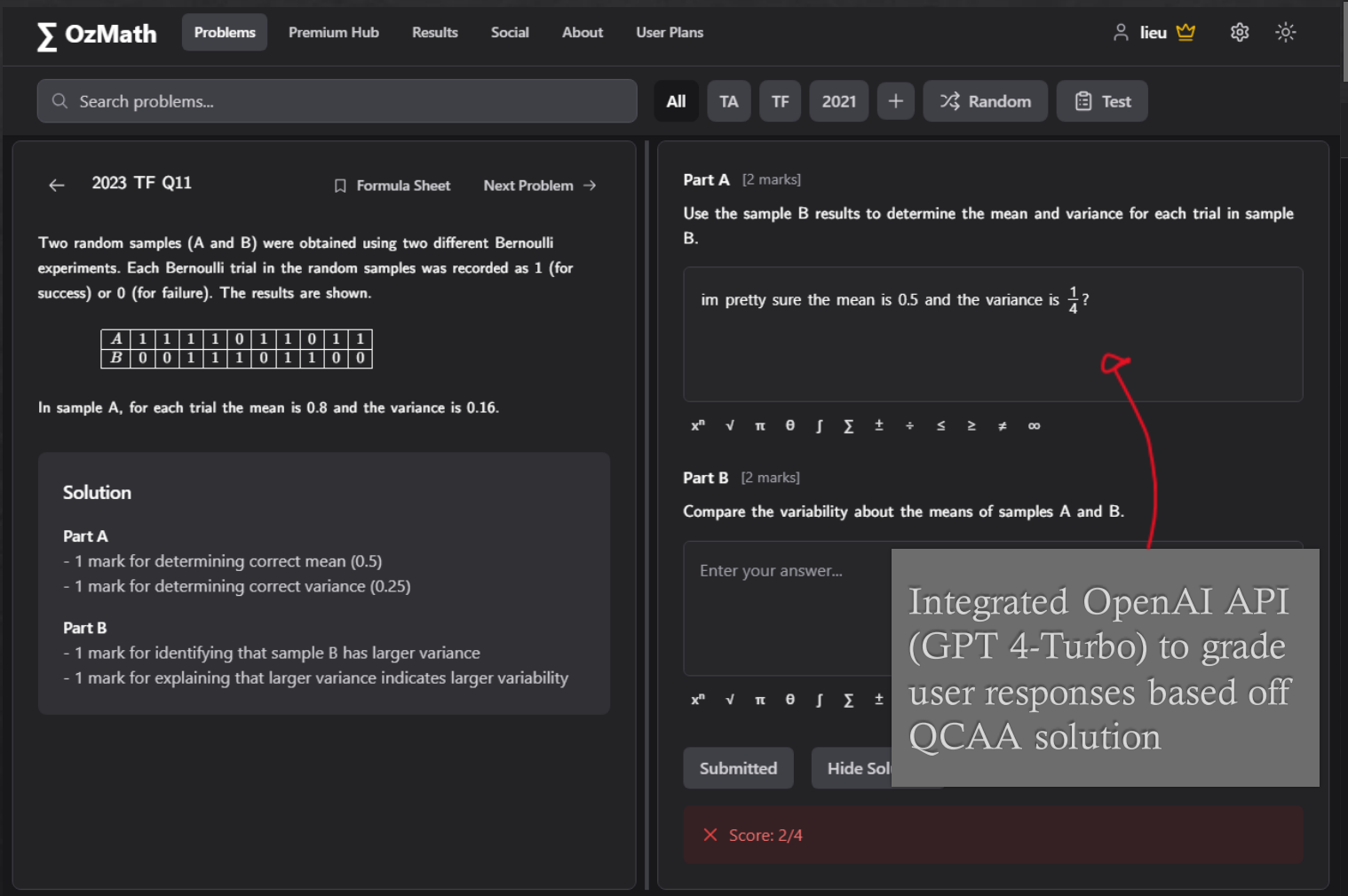


Fig. 6: Problem view, Desktop POV

Limited API requests – mitigating spam & misuse

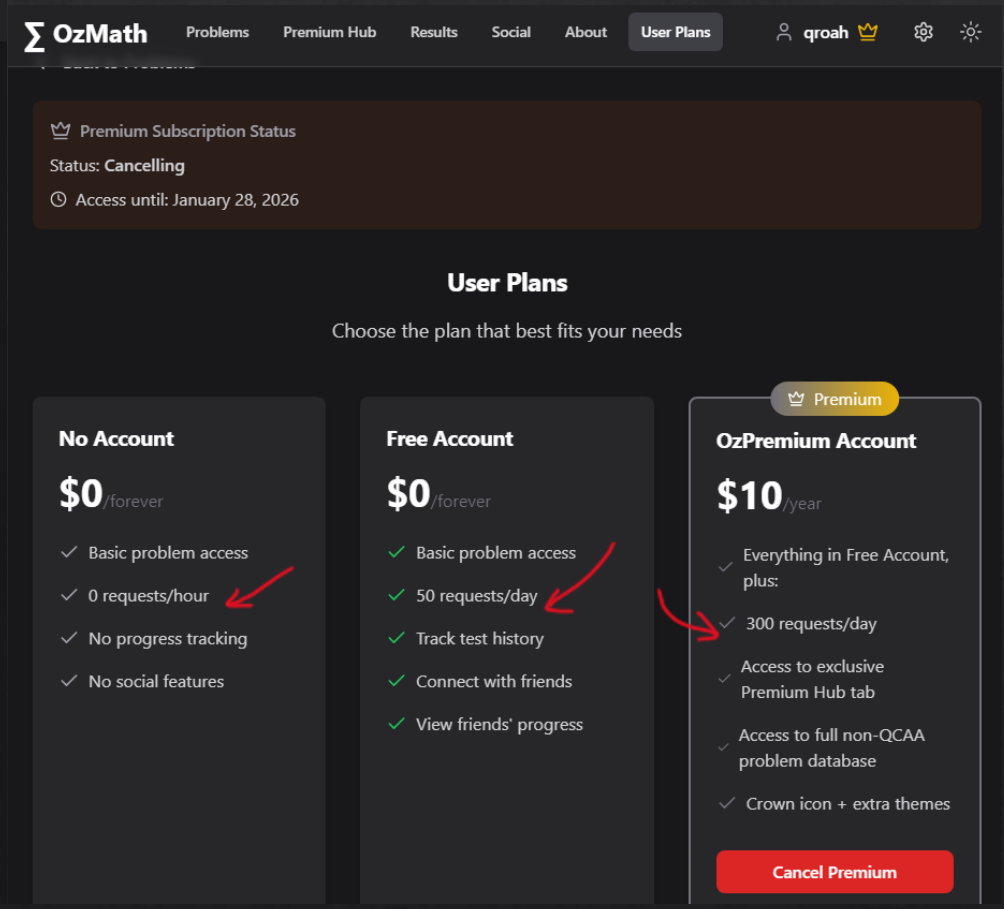


Fig. 7: User Plans Page, Tablet POV

Testing system (1)

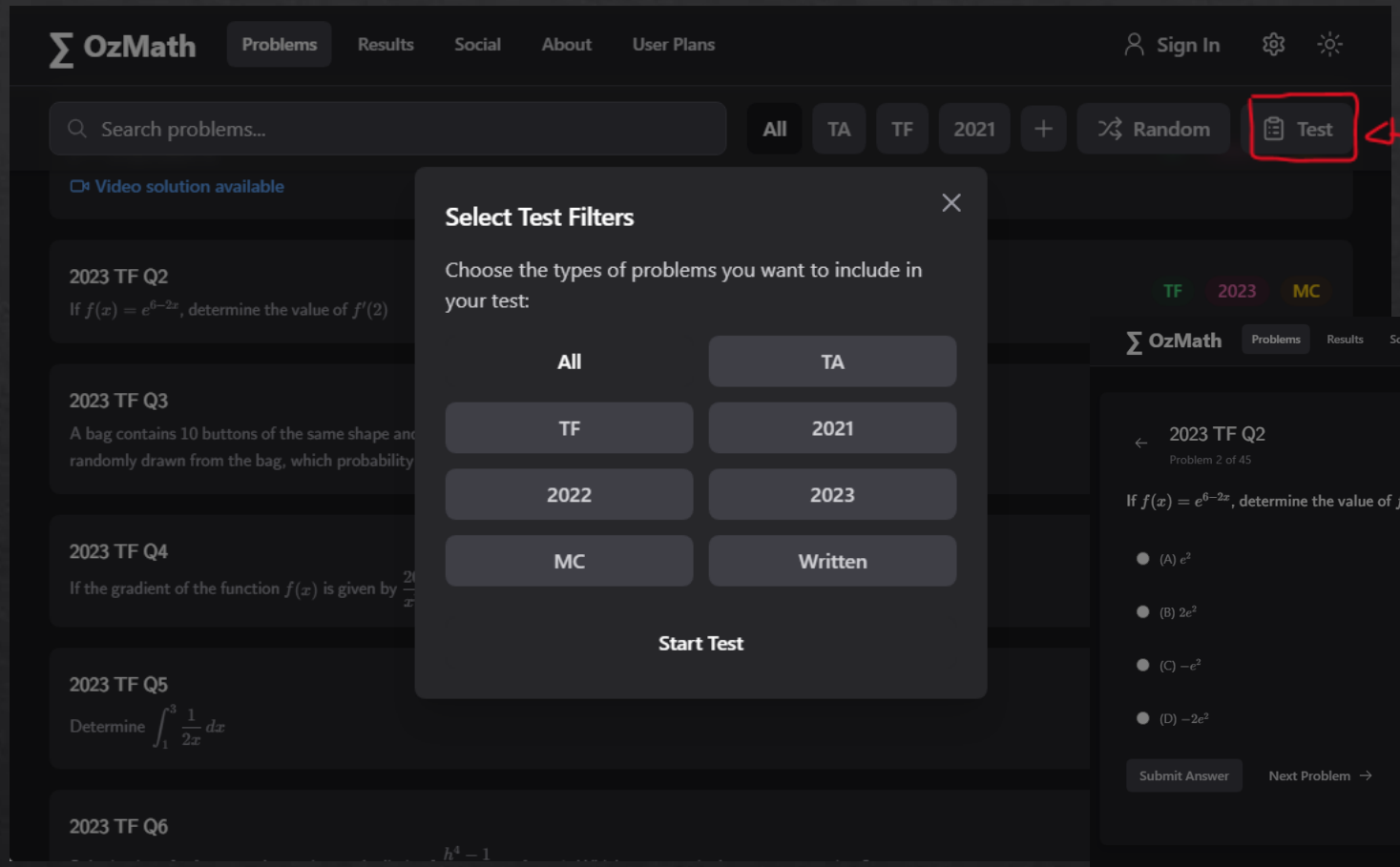


Fig. 8: Test Modal, Tablet POV

Practice using Test function, filter problems before testing

Navigate problems during test

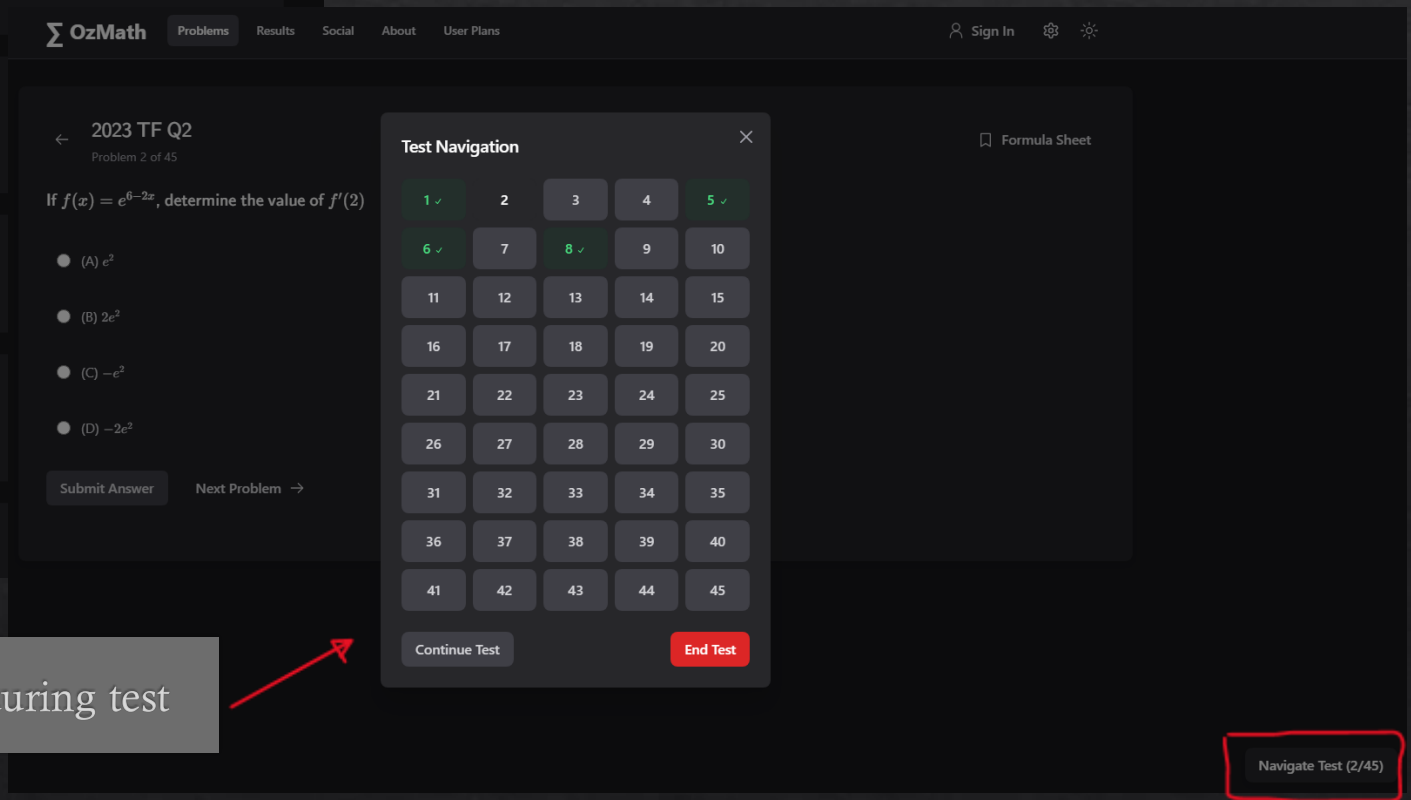
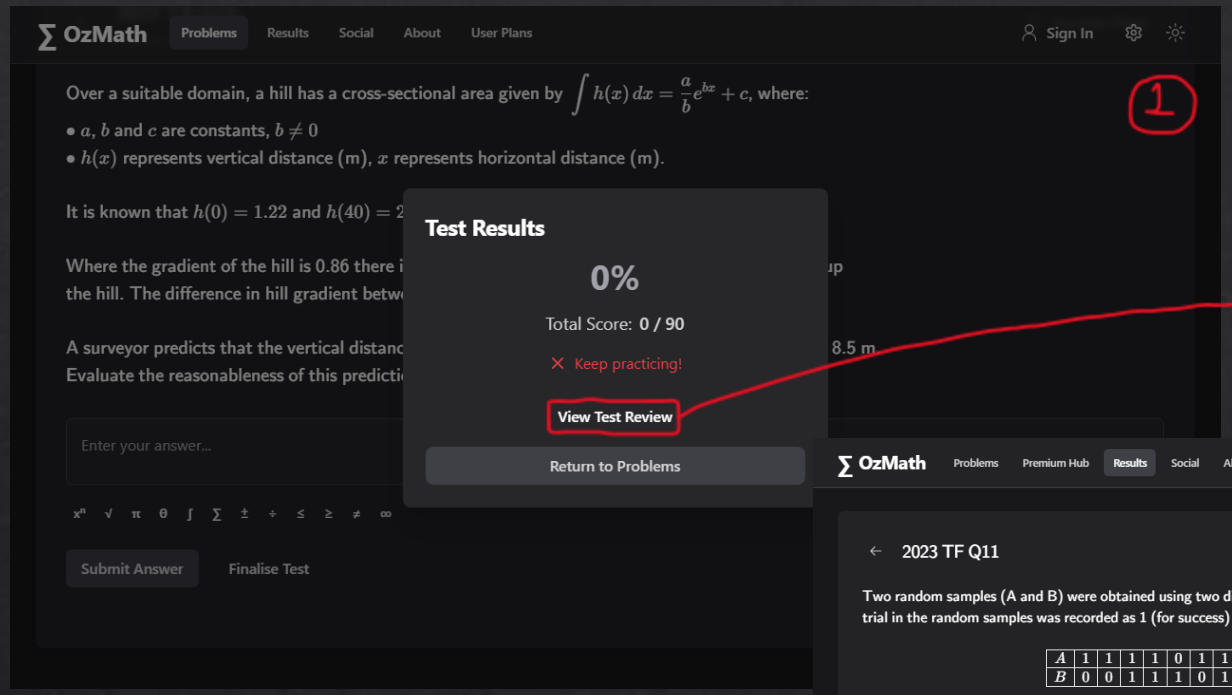


Fig. 9: Test Navigation Modal, Desktop POV

Testing system (2)



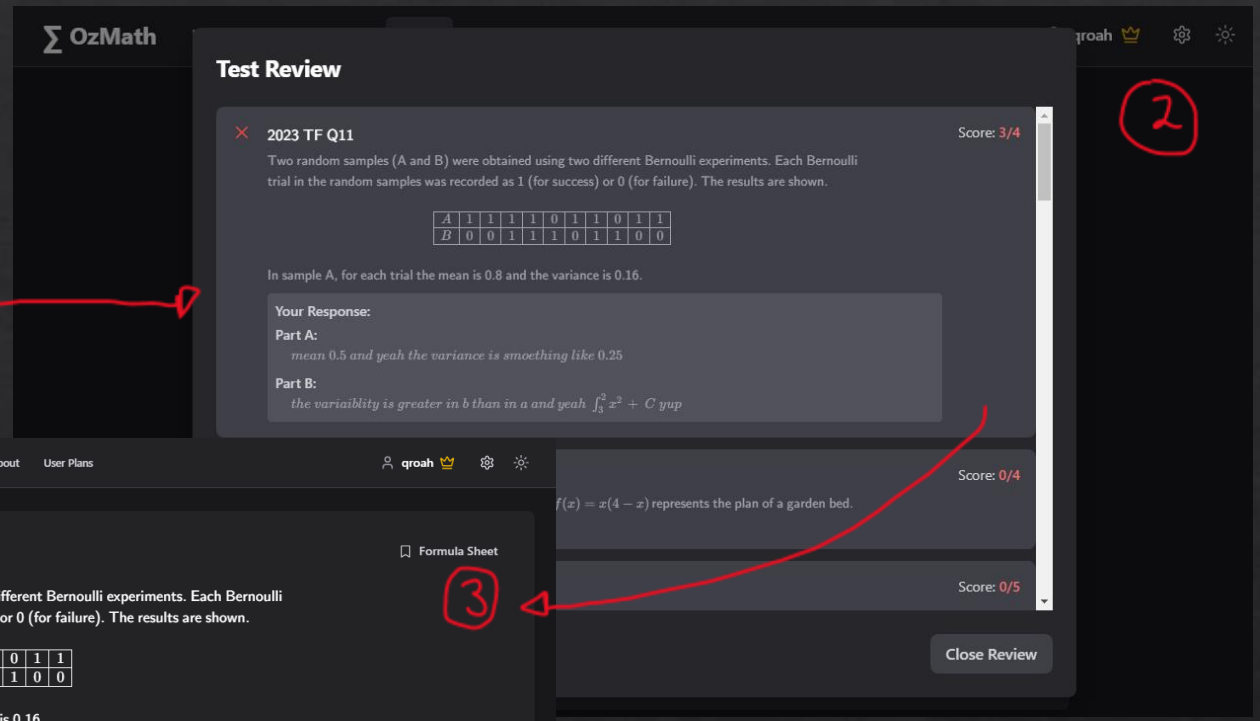
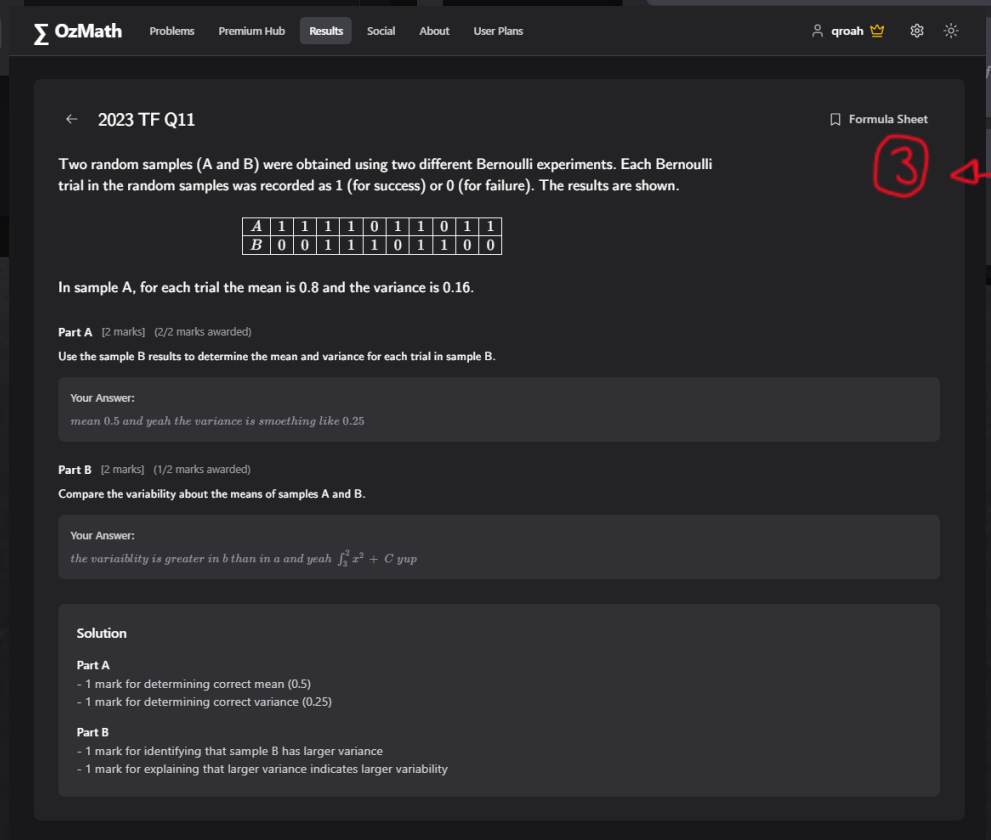


Fig. 10: Test Results Modal, Desktop POV

Fig. 11: Test Review Modal, Desktop POV



View results, review test see awarded marks & part marks

Fig. 12: Problem Review, Desktop POV

Testing system (3)

If a test is finalised by a registered user, tests can be reviewed again at any time in results tab

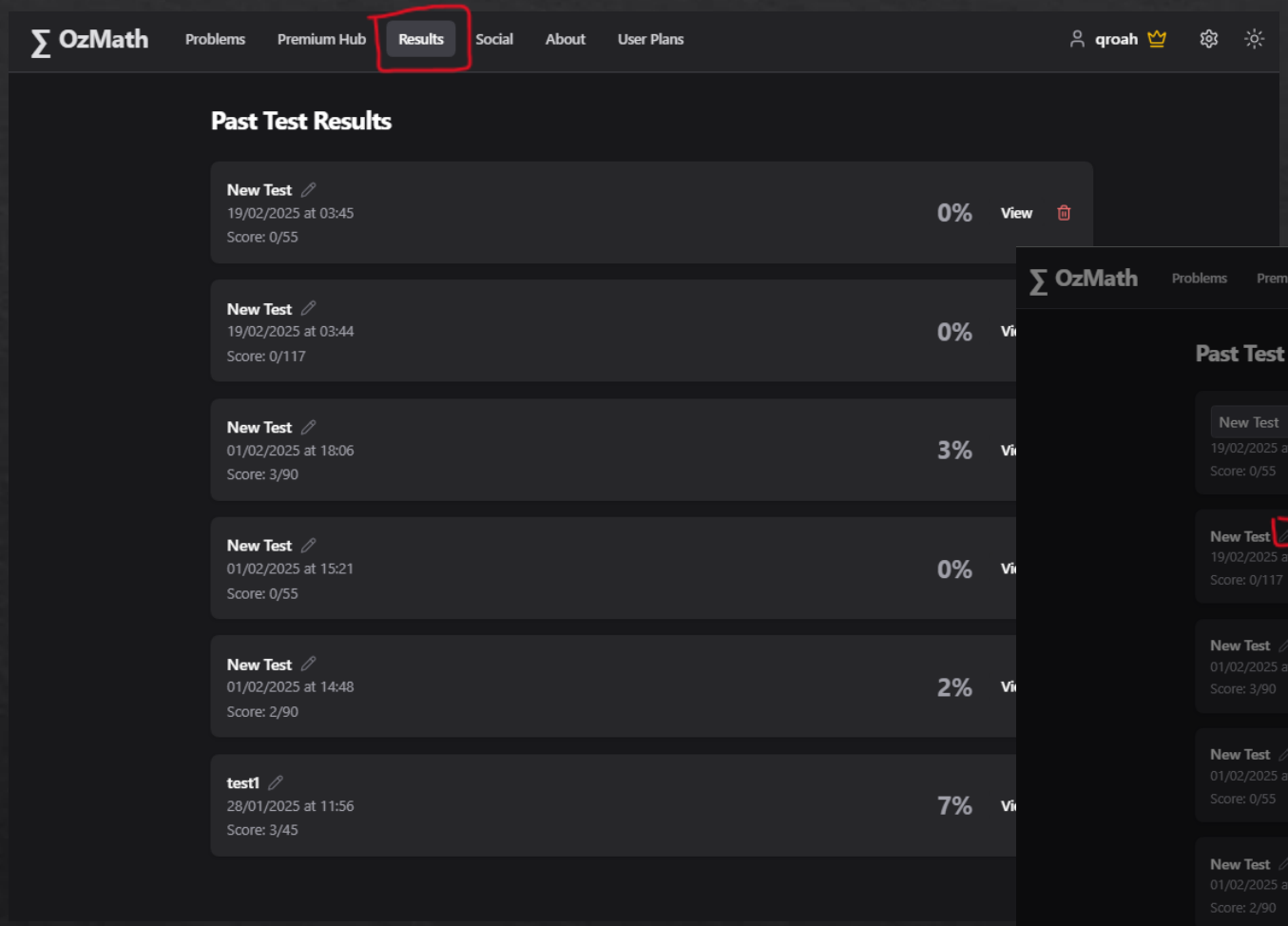


Fig. 13: Results Page, Tablet POV

Able to rename, delete past tests

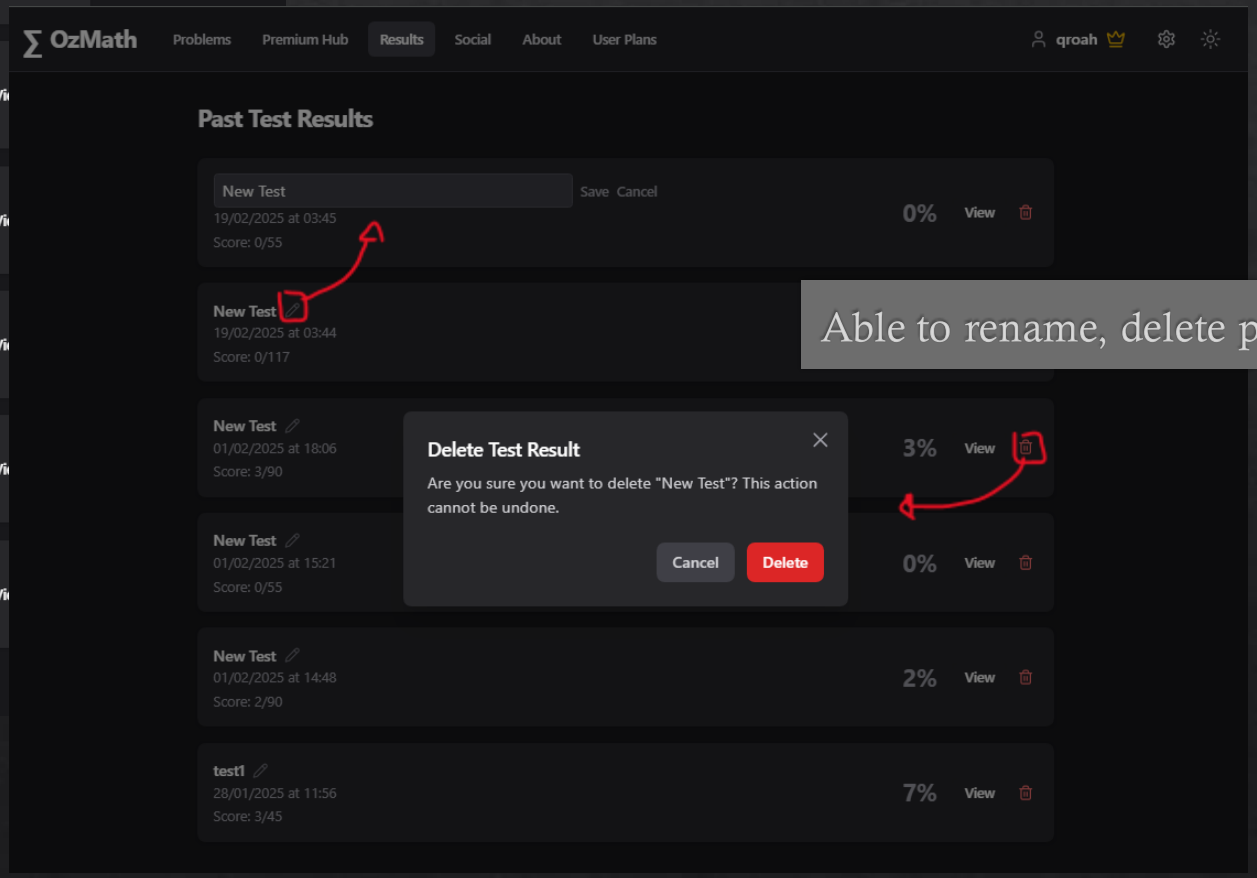
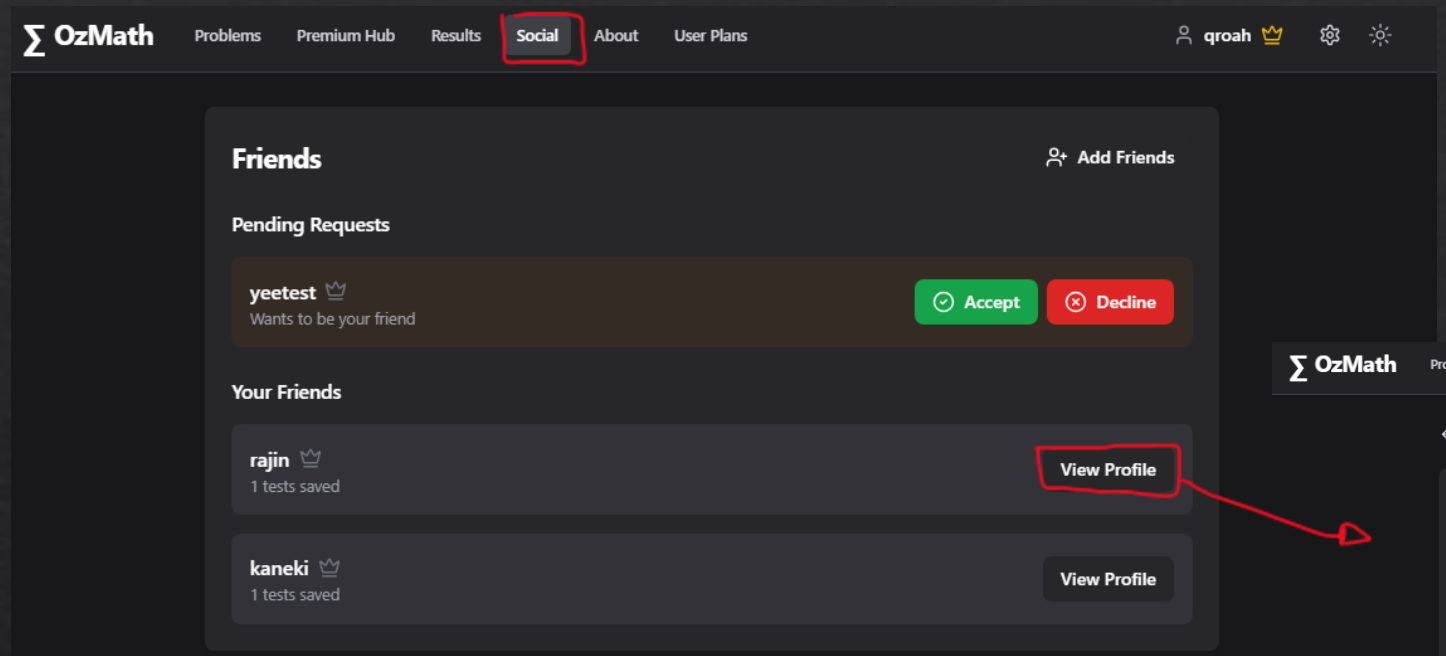
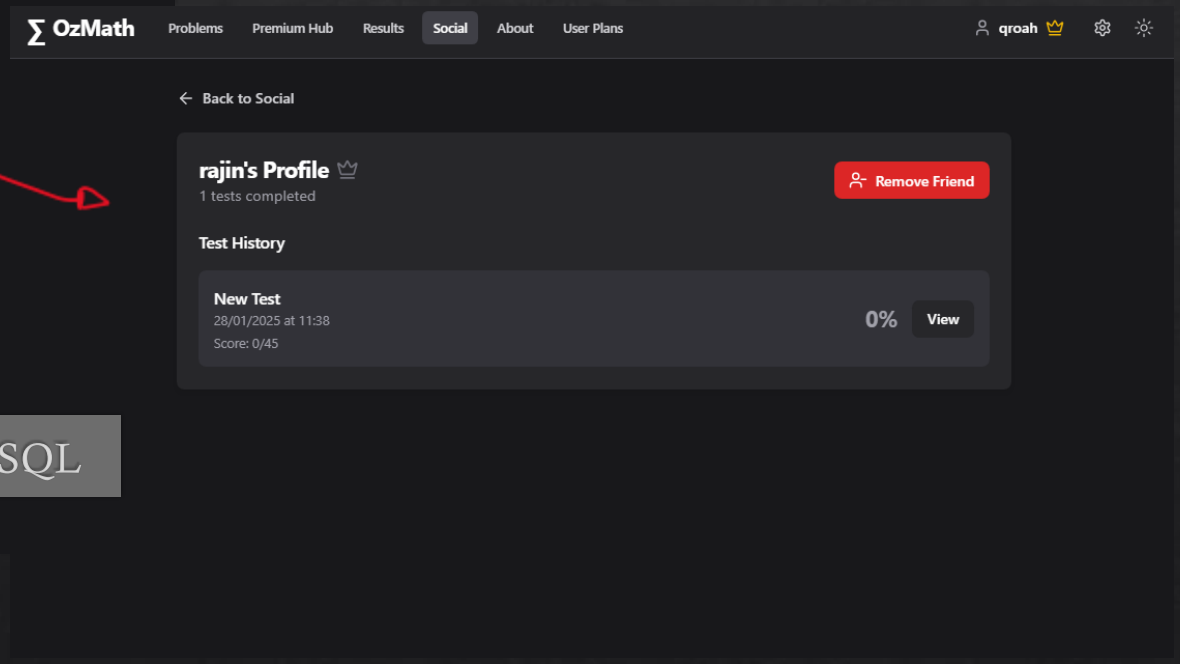


Fig. 14: Results Page, Tablet POV

User & Social System

Registered users can add friends as well as view all their saved test results & answers





Database handling via Supabase in PostgreSQL

Fig. 15, Social Page, Desktop POV

Fig. 16: Social Profile View, Desktop POV

Premium Users & Features

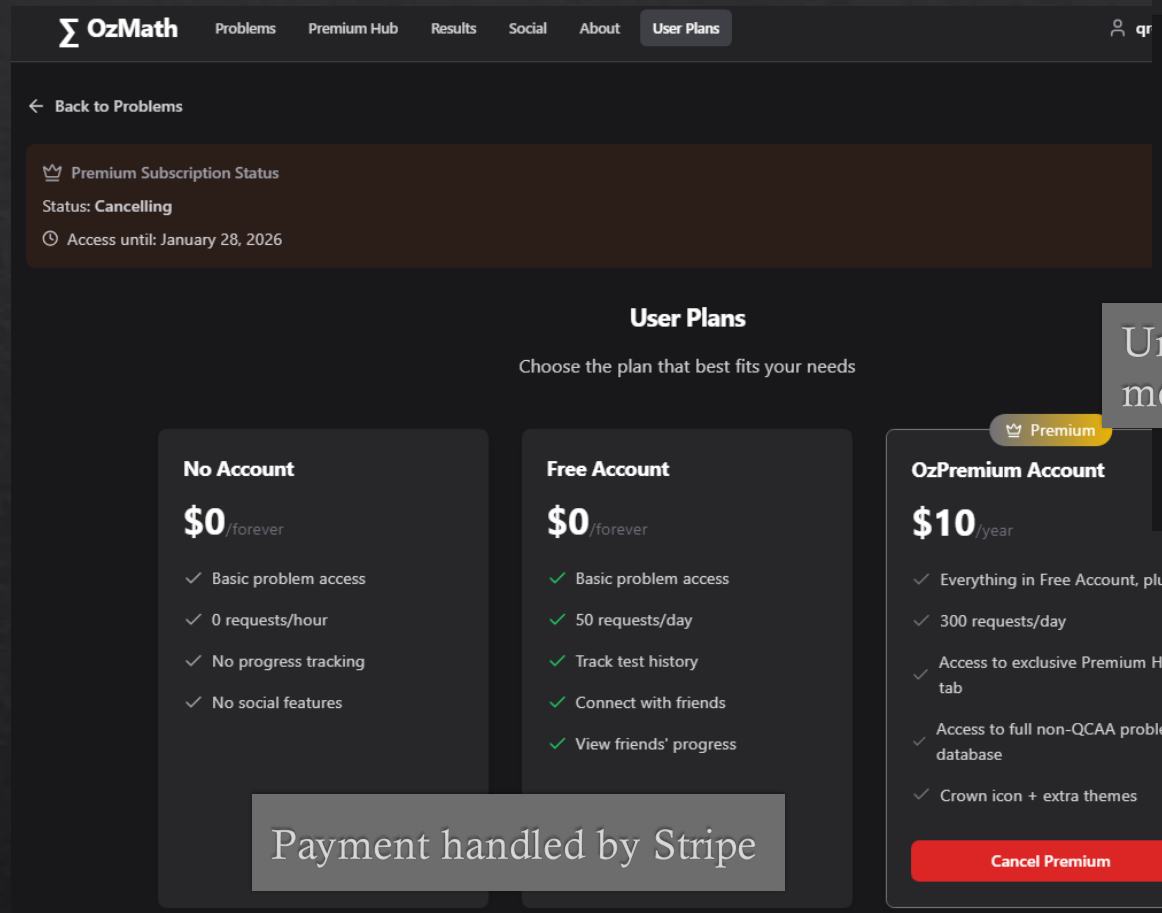


Fig. 17: User Plans Page, Desktop POV

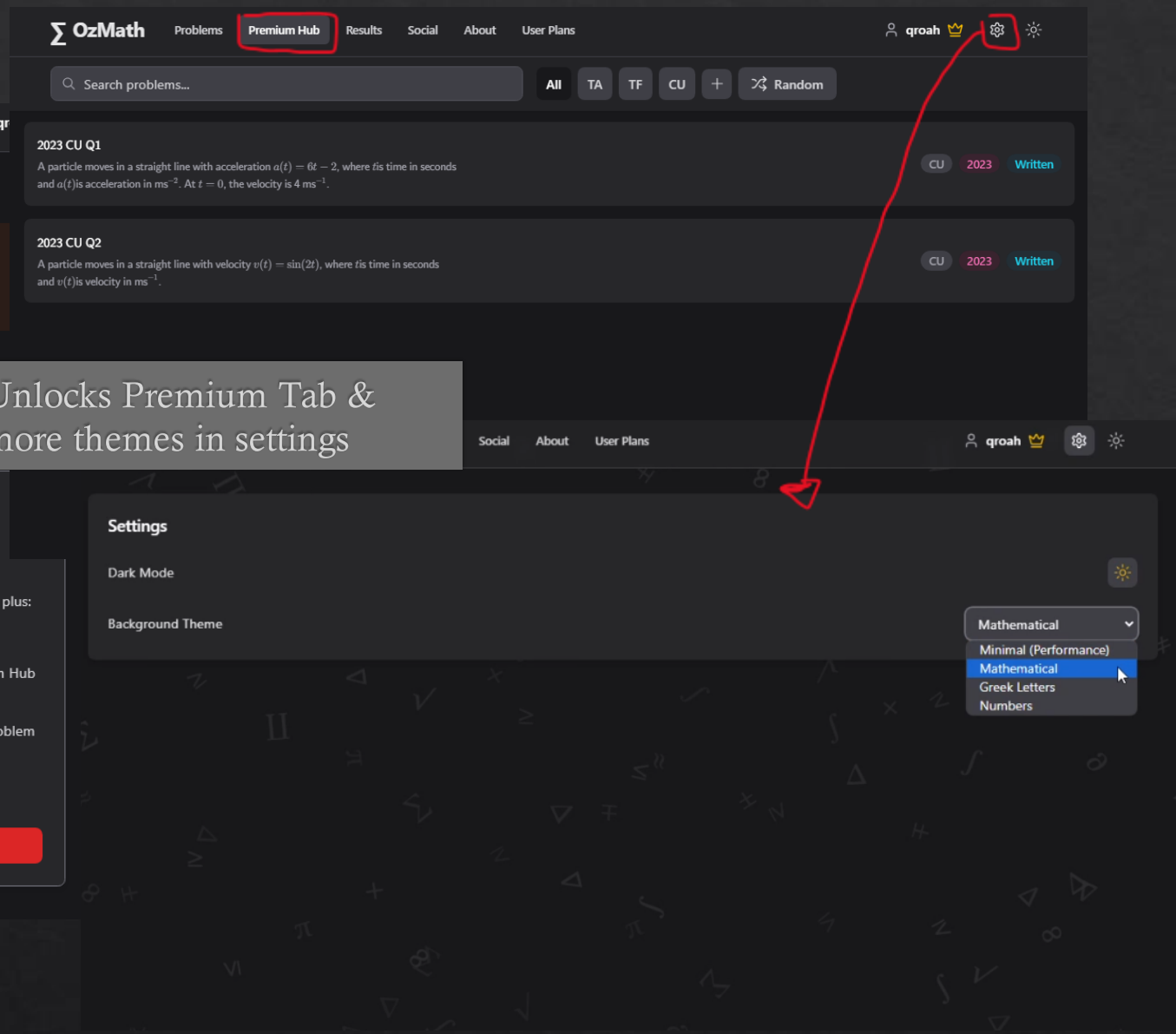


Fig. 18: Premium Hub + Settings Pages, Desktop POV

I originally began building OzMath in an effort to familiarise myself with new skills in web and full-stack development. However, as the project evolved with each new iteration, I found myself increasingly passionate and excited about its potential. This drive is explanatory of OzMath's rapid development, and I've learnt a lot about entrepreneurial and development/revenue operations as a result.

I'm still working on OzMath and brainstorming new ideas every day, with plans to extend to other states, subjects and programs across Australia.

Stack/Languages/Technologies:

Typescript, React, MUX Video, Supabase, PostgreSQL, LaTeX, Tailwind CSS, HTML, Stackblitz, ESLint, GitHub Copilot, ChatGPT API, Radix/ui, Stripe, MathQuill, Netlify (deployment), Squarespace (domain host)

Inspirations:

Shadcn/ui (website layout, design, colour theme), MathMaster (mockups, layout), Leetcode (learning system, design), Math Videos Australia Joel Speranza (inspiration)

GitHub: @chaubenn

Website: ozmath.com