Math 29: Computability Theory **Spring 2024**

PSET 0 — 03/29/2024

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Problem 1.

Which two times are most convenient as office hours?

1. Monday 3:30-4:30pm
2. Wednesday 3:30-4:30pm

Problem 2.

Give one hour which would be your most ideal time to visit office hours.

Any time Wednesday afternoon (after class) works best for me, including 3:30-4:30pm.

Problem 3.

How familiar are you with proof-based math?

I am very familiar with proof-based math, having done a lot of it in some of my previous courses.

1. MATH 22 (Linear Algebra)
2. MATH 63 (Real Analysis)
3. MATH 69 (Logic)
4. MATH 71 (Algebra)
5. MATH 75 (Cryptography)
6. MATH 100 (Game Theory)
7. COSC 30 (Discrete Mathematics)
8. COSC 31 (Algorithms)
9. COSC 39 (Theory of Computation)
10. COSC 83 (Computer Vision) — linear algebra proofs

Problem 4.

How comfortable are you with proof-based math?

I feel comfortable with proof-based math. The only caveat I feel is that it always takes me a while to learn how to efficiently articulate proofs in a new context especially if there is a lot of notation involved.

Problem 5.

Are there any specific proof techniques or writing strategies you'd like to improve on throughout the course?

I am not sure yet about specific proof techniques, but I am most excited to learn new ideas, especially having some context around computability (coming from ***decidability*** in Logic and ***NP completeness*** in Algorithms & Automata Theory).

I am particularly interested in ***λ-calculus*** and functional programming (I have some experience with Haskell) — I am thinking of them as potential directions for the final project if I can find a connection with computability.