Math 29: Computability Theory

Spring 2024

# PSET 0 - 03/29/2024

Prof. Miller

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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.

Wednesday 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 my previous courses.

- MATH 22 (Linear Algebra)
- MATH 63 (Real Analysis)
- MATH 69 (Logic)
- MATH 71 (Algebra)
- MATH 75 (Cryptography)
- MATH 100 (Game Theory)
- COSC 30 (Discrete Mathematics)
- COSC 31 (Algorithms)
- COSC 39 (Theory of Computation)

### 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 write 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 P/NP in Algorithms & Automata/Language Theory).

I am also trying to explore  $\lambda$ -calculus and functional programming (I have some experience with Haskell), so I am hoping to find some interesting ways to explore them in the context of computability—especially since the final project is open-ended.