Topics   proof, implication, contrapositive, modus ponens, bi-implication, divisibility, congruence, universal quantification, equality, conjunction, existential quantification, unique existence

Core questions

1. Write step-by-step proofs for the following statements or their falsification.

   - Suppose n is a natural number larger than 2, and n is not a prime number. Then $2n + 13$ is not a prime number.
   - If $x^2 + y = 13$ and $y \neq 4$ then $x \neq 3$.
   - For an integer n, n^2 is even if and only if n is even.
   - For all real numbers x and y there is a real number z such that $x + z = y - z$.
   - For all integers x and y there is an integer z such that $x + z = y - z$.
   - The addition of two rational numbers is a rational number.
   - For every real number x, if $x \neq 2$ then there is a unique real number y such that $2y/(y + 1) = x$.
   - For all integers m and n, if mn is even, then either m is even or n is even.

Tryhard questions (optional)

1. TODO

Survey Questions (optional)

1. How long did it take to complete the core questions?

2. How do you rate your understanding of the topics of this week's supervision?

   - I have little clue
   - I understand some of the topics
   - I understand most of the topics
   - Take me to the exam hall