New Problems

Discrete Structures
Due Sometime

Submit each question separately in .pdf format (except question 5)

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1. Draw an Euler diagram representing the classes of sequences represented in the homework 4, problem 4. Show examples of sequences that fall in various strange places on this diagram (sequences that have unusual combinations of properties).

2. Suggest that the participants demonstrate some set identity that can only be disproved by analyzing elements that are outside all the sets.

3. Draw some diagrams in the Cartesian product between the sets A,B,C (on a rectangular grid). Ask the participants to describe - what is inside or outside the shaded regions in the rectangle.

4. Create functions (surjective? with infinite preimages?) between $\mathbf{Z}$ and some Cartesian products on remainder sets.