CSL 105: Discrete Mathematical Structures
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1. Discuss Minor-1 and Homework-1.

2. Show that if A is an infinite set, then it contains a countably infinite subset.

3. Show that there is no infinite set A such that $|A| < |Z^+|$.

4. Explain why the set A is countable if and only if $|A| \leq |Z^+|$.

5. Show that if A and B are sets, A is uncountable, and $A \subseteq B$, then B is uncountable.

6. Show that a subset of a countable set is also countable.

7. Suppose that A is a countable set. Show that the set B is also countable if there is an onto function f from A to B.

8. Show that the union of a countable number of countable sets is countable.

9. Show that if A and B are invertible matrices such that AB exists, then $(AB)^{-1} = B^{-1}A^{-1}$.