

For full credit, you must clearly show all work, and upload the solutions as a PDF before 11:59 pm on the due date.

1. Prove that the empty set is a subset of every set.
2. Prove the Theorem 2.12.
3. Prove the Theorem 2.13.
4. Prove the corollary: The set of all rational numbers is countable.
5. Prove the Theorem 2.14.