

Math 221-001 201710
Assignment # 10

This assignment is not to be handed in, but its topics do go into the final

1. Prove that the relation between sets given by $|A| = |B|$ is an equivalence relation.
2. Let $A \subset \mathbb{N}$ be an infinite set. Show that A is countable.
3. Write a proof that $|\mathbb{R}| \neq |\mathbb{N}|$.
4. Show that $|\mathbb{Q}| \neq |\mathbb{R}|$.