

Homework 13, Math 215

1. Show that $\sqrt{3}$ is irrational
2. Find the rational number that is represented by the infinite decimal $0.156565656\dots$
3. Use the Cantor-Schroder-Bernstein theorem to prove that if $|X| \leq |Y|$ and $|Y| \leq |X|$ then $|X| = |Y|$.