

Math 215. Homework 7

due 03/10/08

1. Use Peano axioms and the definition of addition to show that $1 + n = n + 1$.
2. Prove that $f : X \rightarrow Y$ is injective $\Leftrightarrow \vec{f}$ is injective $\Leftrightarrow \overleftarrow{f}$ is surjective.
3. Let $\mathbf{N}_9^\circ \subset \mathbf{N}_9 \times \mathbf{N}_9 \times \mathbf{N}_9$ be the subset of triples having no equal components. Find cardinality of \mathbf{N}_9° .
4. Write a proof of Corollary 10.2.2