

Math 2001 - Assignment 14

Due December 9, 2015

- (1) Is $f: \mathbb{Z} \rightarrow \mathbb{Z} \times \mathbb{Z}$, $x \mapsto (x^2, 2x)$ injective, surjective?
- (2) Find the inverse for $f: \mathbb{R}^2 \rightarrow \mathbb{R}^2$, $(x, y) \mapsto (3x + y, x - 2y)$.
- (3) Let $f: A \rightarrow B$ and $g: B \rightarrow C$ be surjective. Show that $g \circ f$ is surjective.