

Homework

due on Monday, January 31

Read carefully sections 2.1 and 2.2 in the book.

Problem 1. Using only the results from Chapter 1, from section 2.1, and the properties proved in class prove that:

- a) $1 \in \mathbf{N}$.
- b) $a + 1 > a$ for any a .
- c) If $a \leq b$ and $b \leq a$ then $a = b$.
- d) If $m \neq 0$ then $m \cdot m \in \mathbf{N}$.

Explain in details each step of your reasoning.