

# Computability Assignment

## Year 2012/13 - Number 1

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More information about assignments at <http://disi.unitn.it/~zunino/teaching/computability/assignments>

### 1 Question

Define a binary property  $p(x, y)$  over natural numbers such that we have both

1.  $\forall x \in \mathbb{N}. \exists y \in \mathbb{N}. p(x, y)$
2.  $\neg \exists y \in \mathbb{N}. \forall x \in \mathbb{N}. p(x, y)$

Provide a definition for  $p$ , and a proof for the above claims.

#### 1.1 Answer

Write your answer here.