# Computability Assignment Year 2012/13 - Number 1 

Please keep this file anonymous: do not write your name inside this file.
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

This is a test submission.
This is a test submission.
This is a test note. - RZ
This is a test submission.
Random formula:

$$
f(n)=\#\left(\lambda x \cdot\left\{\begin{array}{ll}
1+x & \text { if } x \text { is even } \\
3 \cdot x+1 & \text { otherwise }
\end{array}\right)\right.
$$

This is a test submission.
This is a test submission.
This is another test note. Blah $f(x)=5$ blah.- RZ
This is a test submission.

