

Logic 1, WS 2016. Homework 1, given Oct 13, due Oct 20

1. Give an example of a mathematical result which has a important impact on real life.
2. Give an example of a software failure which had an important negative impact in real life.
3. Define the meta-function $V[\varphi]$ which gives set of propositional variables of the propositional formula φ .
4. Prove that the cardinality of $V[\varphi]$ is smaller or equal $L[\varphi]$ (the length).
Hint: use the induction principle suggested by the definition of propositional logic formulae.