Verification

Problem 1: LTL to GNBA [5 Points]

Consider the LTL formula $\varphi = \square \lozenge p$.

a) Convert φ into an equivalent formula ψ containing only $p, true, \neg, \wedge, \; \mathcal{U}$. [1 Point]

b) Give the elementary sets wrt. *closure*(ψ). [1 Point]

c) Construct the GNBA $\mathcal{G}_\psi$ using the algorithm given in the lecture. [3 Points]

Problem 2: LTL to NBA [2 Points]

Prove that there is an LTL formula φ over $AP = \{p\}$ such that no NBA $\mathcal{A}$ with only a *single* accepting state satisfies $\mathcal{L}(\mathcal{A}) = Words(\varphi)$.