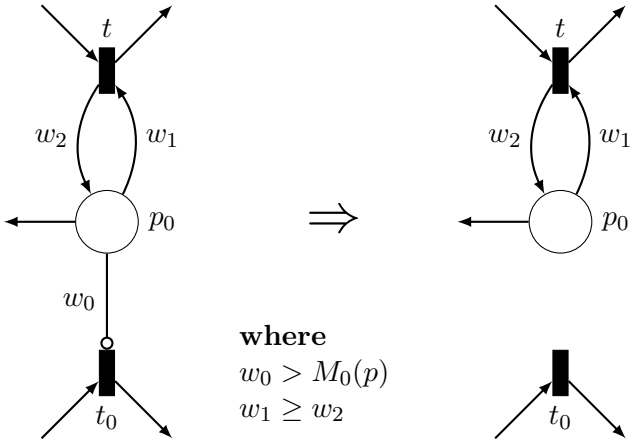
Rule P: Redundant inhibitor arc

We can find an upper bound on the number of tokens at a place p_0. This upper bound is given by the initial marking if all transitions have a non-positive effect on p_0. Any inhibitor arc from p_0 with a weight higher than the upper bound of p_0 therefore never inhibits, which means the inhibitor arc can be removed. See Figure 1 for a formal description of Rule P.



Precondition	Update
Fix place p_0 and transition t_0 s.t.: P1) $t_0 \in p_0^\circ$ P2) $I(p_0, t_0) > M_0(p_0)$ P3) ${}^\boxplus p_0 = \emptyset$	UP1) $I(p_0, t_0) = \infty$.

Figure 1: Rule P: Redundant inhibitor arc

Theorem 1 *Rule P in Figure 1 is correct for CTL*.*