Complexité avancée - Homework 4

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October 14, 2020
Due at 8.30 a.m., October 21, 2020

Closure under morphims   Given a finite alphabet Σ, a function $f : \Sigma^* \to \Sigma^*$ is a morphism if $f(\Sigma) \subseteq \Sigma$ and for all $a = a_1 \cdots a_n \in \Sigma^*$, $f(a) = f(a_1) \cdots f(a_n)$ (f is uniquely determined by the value it takes on Σ).

Show that $\mathsf{P} = \mathsf{NP}$ if and only if P is closed under morphism.