

$$\forall t = t_1 \dots t_i \dots t_n \in \Sigma^+. \forall i \leq n \in \mathbb{N}.$$

$$matches_{\mathcal{L}(\mathcal{M})}(t_1 \dots t_{i-1} t_i t_{i+1} \dots t_n) \neq matches_{\mathcal{L}(\mathcal{M})}(t_1 \dots t_{i-1} t_{i+1} \dots t_n)$$

$$\implies necessaryShadow(t_i, t, i)$$