Proposition 1. *For every LTL formula φ, the following holds:*

(a) $\sigma \models \mathbf{F}\varphi \iff \exists i\ \sigma^i \models \varphi$,

(b) $\sigma \models \mathbf{G}\varphi \iff \forall i\ \sigma^i \models \varphi$,

(c) $\mathbf{XF}\varphi = \mathbf{FX}\varphi$,

(d) $\mathbf{XG}\varphi = \mathbf{GX}\varphi$,

(e) $\mathbf{FF}\varphi = \mathbf{F}\varphi$,

(f) $\mathbf{GG}\varphi = \mathbf{G}\varphi$,

(g) $\mathbf{FGF}\varphi = \mathbf{GF}\varphi$,

(h) $\mathbf{GFG}\varphi = \mathbf{FG}\varphi$.