

$$1) \text{ LI } V = \perp$$

$$2) \text{ LI } \lambda V.T = \text{ LI } T, \text{ if } \text{ LI } T \neq \perp$$

$$3) \text{ LI } \lambda V.T = \lambda V.T, \text{ if } T = \perp \wedge (\text{is\_etaredex}(\lambda V.T) \vee \text{is\_betaredex}(\lambda V.T))$$

$$4) \text{ LI } \lambda V.T = \perp, \text{ if } T = \perp \wedge (\neg \text{is\_etaredex}(\lambda V.T) \wedge \neg \text{is\_betaredex}(\lambda V.T))$$

$$5) \text{ LI } (T1 \ T2) = \text{ LI } T1, \text{ if } T1 \neq \perp$$

$$6) \text{ LI } (T1 \ T2) = \text{ LI } T2 \text{ if } T1 = \perp \wedge T2 \neq \perp$$

$$7) \text{ LI } (T1 \ T2) = \perp, \text{ if } T1 = \perp \wedge T2 = \perp \wedge (\neg \text{is\_etaredex}(T1 \ T2) \wedge \neg \text{is\_betaredex}(T1 \ T2))$$

$$8) \text{ LI } (T1 \ T2) = (T1 \ T2), \text{ if } T1 = \perp \wedge T2 = \perp \wedge (\text{is\_etaredex}(T1 \ T2) \vee \text{is\_betaredex}(T1 \ T2))$$