

t19_gate_1
(TMbUUBH8kjVSbpzxtDrGTraX2yE5kC1X7wr)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k13_gate_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k1_gate_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$v1_xboole_0 \ k1_xboole_0 \tag{1}$$

Assume the following.

$$\forall X0.(v1_xboole_0 \ X0) \Rightarrow (\neg v1_xboole_0 \ (k1_gate_1 \ X0)) \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(\neg(v1_xboole_0 \ X0) \wedge ((v1_xboole_0 \ X1) \wedge ((v1_xboole_0 \ X2) \wedge (k13_gate_1 \ X0 \ X1 \ X2 \neq k1_gate_1 \ k1_xboole_0)))) \wedge \\ & ((\neg(v1_xboole_0 \ X0) \wedge ((v1_xboole_0 \ X1) \wedge (v1_xboole_0 \ X2))) \Rightarrow (\\ & \quad k13_gate_1 \ X0 \ X1 \ X2 = k1_xboole_0)) \end{aligned} \tag{3}$$

Theorem 1

$$\forall X0.\forall X1.\forall X2.(\neg v1_xboole_0 \ (k13_gate_1 \ X0 \ X1 \ X2)) \Leftrightarrow ((v1_xboole_0 \ X0) \wedge ((v1_xboole_0 \ X1) \wedge (v1_xboole_0 \ X2)))$$