t17_gate_1 (TMMv2RQBcwMoP8c9MnHPuJMDvEPuUEYbbby)

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Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $k11\_gate\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1\_xboole\_0\ X0) \wedge (v1\_xboole\_0\ X1)) \Rightarrow (v1\_xboole\_0\ (k11\_gate\_1\ X2\ X0\ X1)) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1\_xboole\_0\ X0) \wedge (v1\_xboole\_0\ X1)) \Rightarrow (v1\_xboole\_0\ (k11\_gate\_1\ X0\ X2\ X1)) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1\_xboole\_0\ X0) \wedge (v1\_xboole\_0\ X1)) \Rightarrow (v1\_xboole\_0\ (k11\_gate\_1\ X0\ X1\ X2)) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1\_xboole\_0\ X0) \wedge (\neg v1\_xboole\_0\ X1)) \Rightarrow (\neg v1\_xboole\_0\ (k11\_gate\_1\ X2\ X0\ X1)) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1\_xboole\_0\ X0) \wedge (\neg v1\_xboole\_0\ X1)) \Rightarrow (\neg v1\_xboole\_0\ (k11\_gate\_1\ X0\ X2\ X1)) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1\_xboole\_0\ X0) \wedge (\neg v1\_xboole\_0\ X1)) \Rightarrow (\neg v1\_xboole\_0\ (k11\_gate\_1\ X0\ X1\ X2)) \tag{6}$$

Theorem 1

$$\forall X0.\forall X1.\forall X2.(\neg(\neg v1\_xboole\_0\ (k11\_gate\_1\ X0\ X1\ X2)) \wedge ((\neg(\neg v1\_xboole\_0\ X0) \wedge (\neg v1\_xboole\_0\ X1)) \wedge ((\neg(\neg v1\_xboole\_0\ X1) \wedge (\neg v1\_xboole\_0\ X2)) \wedge (\neg(\neg v1\_xboole\_0\ X2) \wedge (\neg v1\_xboole\_0\ X0))))) \wedge (\neg(\neg(\neg(\neg v1\_xboole\_0\ X0) \wedge (\neg v1\_xboole\_0\ X1)) \wedge ((\neg(\neg v1\_xboole\_0\ X1) \wedge (\neg v1\_xboole\_0\ X2)) \wedge (\neg(\neg v1\_xboole\_0\ X2) \wedge (\neg v1\_xboole\_0\ X0))))) \wedge (v1\_xboole\_0\ (k11\_gate\_1\ X0\ X1\ X2)))$$