t26_gate_1 (TMT72w4yKm4XxVMCeeagDASZADtVBX7Sawq)

October 27, 2020

Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $k20\_gate\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.((\neg(\neg v1\_xboole\_0\ X0) \wedge ((\neg v1\_xboole\_0\ X1) \wedge ((\neg v1\_xboole\_0\ X2) \wedge ((\neg v1\_xboole\_0\ X3) \wedge (\neg v1\_xboole\_0\ X4))))) \Rightarrow (k20\_gate\_1\ X0\ X1\ X2\ X3\ X4 = k1\_gate\_1\ k1\_xboole\_0)) \wedge (\neg(\neg v1\_xboole\_0\ X0) \wedge ((\neg v1\_xboole\_0\ X1) \wedge ((\neg v1\_xboole\_0\ X2) \wedge ((\neg v1\_xboole\_0\ X3) \wedge ((\neg v1\_xboole\_0\ X4) \wedge (k20\_gate\_1\ X0\ X1\ X2\ X3\ X4 \neq k1\_xboole\_0))))))) \tag{3}$$

Theorem 1

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.(\neg(\neg v1\_xboole\_0\ (k20\_gate\_1\ X0\ X1\ X2\ X3\ X4)) \wedge ((\neg v1\_xboole\_0\ X0) \wedge ((\neg v1\_xboole\_0\ X1) \wedge ((\neg v1\_xboole\_0\ X2) \wedge ((\neg v1\_xboole\_0\ X3) \wedge (\neg v1\_xboole\_0\ X4)))))) \wedge (\neg(\neg(\neg v1\_xboole\_0\ X0) \wedge ((\neg v1\_xboole\_0\ X1) \wedge ((\neg v1\_xboole\_0\ X2) \wedge ((\neg v1\_xboole\_0\ X3) \wedge (\neg v1\_xboole\_0\ X4))))) \wedge (v1\_xboole\_0\ (k20\_gate\_1\ X0\ X1\ X2\ X3\ X4)))$$