

t16_gate_1 (TMSsCCRP- SaQ2AJNDLF27sRqXDwwAKnLUXLP)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k10_gate_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge (\neg v1_xboole_0 X2))) \Rightarrow (\neg v1_xboole_0 (k10_gate_1 X0 X1 X2)) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge (v1_xboole_0 X2))) \Rightarrow (v1_xboole_0 (k10_gate_1 X2 X0 X1)) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge (v1_xboole_0 X2))) \Rightarrow (v1_xboole_0 (k10_gate_1 X0 X2 X1)) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge (v1_xboole_0 X2))) \Rightarrow (v1_xboole_0 (k10_gate_1 X0 X1 X2)) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((v1_xboole_0 X0) \wedge ((v1_xboole_0 X1) \wedge (\neg v1_xboole_0 X2))) \Rightarrow (\neg v1_xboole_0 (k10_gate_1 X2 X0 X1)) \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((v1_xboole_0 X0) \wedge ((v1_xboole_0 X1) \wedge (\neg v1_xboole_0 X2))) \Rightarrow (\neg v1_xboole_0 (k10_gate_1 X0 X2 X1)) \quad (6)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((v1_xboole_0 X0) \wedge ((v1_xboole_0 X1) \wedge (\neg v1_xboole_0 X2))) \Rightarrow (\neg v1_xboole_0 (k10_gate_1 X0 X1 X2)) \quad (7)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((v1_xboole_0 X0) \wedge ((v1_xboole_0 X1) \wedge (v1_xboole_0 X2))) \Rightarrow (v1_xboole_0 (k10_gate_1 X0 X1 X2)) \quad (8)$$

Theorem 1

$$\forall X0.\forall X1.\forall X2.(\neg(\neg v1_xboole_0 (k10_gate_1 X0 X1 X2))\wedge(\neg(((\neg v1_xboole_0 X0)\wedge(v1_xboole_0 X1))\vee((v1_xboole_0 X0)\wedge(\neg v1_xboole_0 X1))))\wedge(v1_xboole_0 X2))\wedge(\neg(\neg(\neg v1_xboole_0 X0)\wedge(v1_xboole_0 X1))\wedge(\neg(v1_xboole_0 X0)\wedge(\neg v1_xboole_0 X1))\wedge(\neg v1_xboole_0 X2))))\wedge(\neg(((\neg v1_xboole_0 X0)\wedge(v1_xboole_0 X1))\vee((v1_xboole_0 X0)\wedge(\neg v1_xboole_0 X1))))\wedge(v1_xboole_0 X2))\vee(((\neg(\neg v1_xboole_0 X0)\wedge(v1_xboole_0 X1))\wedge(\neg(v1_xboole_0 X0)\wedge(\neg v1_xboole_0 X1))\wedge(\neg v1_xboole_0 X2))))\wedge(v1_xboole_0 (k10_gate_1 X0 X1 X2)))$$