t4_gate_1 (TMUikA-GaFB3pd5gNoEsgJVELzpezonGQUma)

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Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $k2\_gate\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.(v1\_xboole\_0\ X0) \Rightarrow (v1\_xboole\_0\ (k2\_gate\_1\ X0\ X1)) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0) \wedge (\neg v1\_xboole\_0\ X1)) \Rightarrow (\neg v1\_xboole\_0\ (k2\_gate\_1\ X0\ X1)) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.k2\_gate\_1\ X0\ X1 = k2\_gate\_1\ X1\ X0 \tag{3}$$

Theorem 1

$$\forall X0.\forall X1.(\neg v1\_xboole\_0\ (k2\_gate\_1\ X0\ X1)) \Leftrightarrow ((\neg v1\_xboole\_0\ X0) \wedge (\neg v1\_xboole\_0\ X1))$$