t38_group_9 (TMa72hFwbJFufPeUENKFNZCBSKB35ERQfbB)

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Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $v2\_group\_1 : \iota \Rightarrow o$ be given. Let $v3\_group\_1 : \iota \Rightarrow o$ be given. Let $v3\_group\_9 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1\_group\_9 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1\_group\_9 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2\_group\_9 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k19\_group\_9 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.((\neg v2\_struct\_0\ X1) \wedge ((v2\_group\_1\ X1) \wedge ((v3\_group\_1\ X1) \wedge ((v3\_group\_9\ X1\ X0) \wedge (l1\_group\_9\ X1\ X0))))) \Rightarrow (\forall X2.(m1\_group\_9\ X2\ X0\ X1) \Rightarrow (\forall X3.(m1\_group\_9\ X3\ X0\ X1) \Rightarrow (\forall X4.((v2\_group\_9\ X4\ X0) \wedge (m1\_group\_9\ X4\ X0\ X1)) \Rightarrow ((m1\_group\_9\ X2\ X0\ X4) \wedge (m1\_group\_9\ X3\ X0\ X4)) \Rightarrow (m1\_group\_9\ (k19\_group\_9\ X0\ X1\ X2\ X3)\ X0\ X4)))))) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v2\_struct\_0\ X1) \wedge ((v2\_group\_1\ X1) \wedge ((v3\_group\_1\ X1) \wedge ((v3\_group\_9\ X1\ X0) \wedge (l1\_group\_9\ X1\ X0))))) \Rightarrow (\forall X2.(m1\_group\_9\ X2\ X0\ X1) \Rightarrow (\forall X3.(m1\_group\_9\ X3\ X0\ X1) \Rightarrow ((m1\_group\_9\ X2\ X0\ (k19\_group\_9\ X0\ X1\ X2\ X3)) \wedge (m1\_group\_9\ X3\ X0\ (k19\_group\_9\ X0\ X1\ X2\ X3))))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v2\_struct\_0\ X1) \wedge ((v2\_group\_1\ X1) \wedge ((v3\_group\_1\ X1) \wedge ((v3\_group\_9\ X1\ X0) \wedge (l1\_group\_9\ X1\ X0))))) \Rightarrow (\forall X2.((\neg v2\_struct\_0\ X2) \wedge ((v2\_group\_1\ X2) \wedge ((v3\_group\_1\ X2) \wedge ((v3\_group\_9\ X2\ X0) \wedge (l1\_group\_9\ X2\ X0))))) \Rightarrow (\forall X3.((\neg v2\_struct\_0\ X3) \wedge ((v2\_group\_1\ X3) \wedge ((v3\_group\_1\ X3) \wedge ((v3\_group\_9\ X3\ X0) \wedge (l1\_group\_9\ X3\ X0))))) \Rightarrow (((m1\_group\_9\ X1\ X0\ X2) \wedge (m1\_group\_9\ X2\ X0\ X3)) \Rightarrow (m1\_group\_9\ X1\ X0\ X3)))) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v2\_struct\_0\ X1)\wedge((v2\_group\_1\ X1)\wedge((v3\_group\_1\ X1)\wedge((v3\_group\_9\ X1\ X0)\wedge(l1\_group\_9\ X1\ X0)))))\Rightarrow(\forall X2.(m1\_group\_9\ X2\ X0\ X1)\Rightarrow((\neg v2\_struct\_0\ X2)\wedge((v2\_group\_1\ X2)\wedge((v3\_group\_1\ X2)\wedge((v3\_group\_9\ X2\ X0)\wedge(l1\_group\_9\ X2\ X0))))))) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(((\neg v2\_struct\_0\ X1)\wedge((v2\_group\_1\ X1)\wedge((v3\_group\_1\ X1)\wedge((v3\_group\_9\ X1\ X0)\wedge(l1\_group\_9\ X1\ X0)))))\wedge((m1\_group\_9\ X2\ X0\ X1)\wedge(m1\_group\_9\ X3\ X0\ X1)))\Rightarrow((v2\_group\_9\ (k19\_group\_9\ X0\ X1\ X2\ X3)\ X0)\wedge(m1\_group\_9\ (k19\_group\_9\ X0\ X1\ X2\ X3)\ X0\ X1)) \tag{5}$$

Theorem 1

$$\forall X0.\forall X1.((\neg v2\_struct\_0\ X1)\wedge((v2\_group\_1\ X1)\wedge((v3\_group\_1\ X1)\wedge((v3\_group\_9\ X1\ X0)\wedge(l1\_group\_9\ X1\ X0)))))\Rightarrow(\forall X2.(m1\_group\_9\ X2\ X0\ X1)\Rightarrow(\forall X3.((v2\_group\_9\ X3\ X0)\wedge(m1\_group\_9\ X3\ X0\ X1))\Rightarrow(\forall X4.((v2\_group\_9\ X4\ X0)\wedge(m1\_group\_9\ X4\ X0\ X1))\Rightarrow((m1\_group\_9\ X2\ X0\ X3)\Rightarrow(m1\_group\_9\ (k19\_group\_9\ X0\ X1\ X2\ X4)\ X0\ (k19\_group\_9\ X0\ X1\ X3\ X4))))))$$