t1_group_5 (TMbPBX61KQZEn8Fcp54G1w7rCbUkk8ovfDG)

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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 $l3\_algstr\_0 : \iota \Rightarrow o$ be given. Let $r1\_struct\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6\_group\_2 : \iota \Rightarrow \iota$ be given. Let $k1\_group\_1 : \iota \Rightarrow \iota$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6\_domain\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_tarski : \iota \Rightarrow \iota$ be given. Let $v15\_algstr\_0 : \iota \Rightarrow o$ be given. Let $v1\_gr\_cy\_1 : \iota \Rightarrow o$ be given. Let $l1\_struct\_0 : \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $m1\_group\_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0) \wedge (m1\_subset\_1\ X1\ X0)) \Rightarrow (k6\_domain\_1\ X0\ X1 = k1\_tarski\ X1) \tag{1}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v2\_group\_1\ X0) \wedge ((v3\_group\_1\ X0) \wedge (l3\_algstr\_0\ X0)))) \Rightarrow ((v15\_algstr\_0\ (k6\_group\_2\ X0)) \wedge (v1\_gr\_cy\_1\ (k6\_group\_2\ X0))) \tag{2}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge (l1\_struct\_0\ X0)) \Rightarrow (\neg v1\_xboole\_0\ (u1\_struct\_0\ X0)) \tag{3}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v2\_group\_1\ X0) \wedge (l3\_algstr\_0\ X0))) \Rightarrow (\forall X1.(m1\_group\_2\ X1\ X0) \Rightarrow ((\neg v2\_struct\_0\ X1) \wedge ((v2\_group\_1\ X1) \wedge (l3\_algstr\_0\ X1)))) \tag{4}$$

Assume the following.

$$\forall X0.(l3\_algstr\_0\ X0) \Rightarrow (l1\_struct\_0\ X0) \tag{5}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v2\_group\_1\ X0)\wedge((v3\_group\_1\ X0)\wedge(l3\_algstr\_0\ X0))))\Rightarrow((v15\_algstr\_0\ (k6\_group\_2\ X0))\wedge(m1\_group\_2\ (k6\_group\_2\ X0)\ X0)) \tag{6}$$

Assume the following.

$$\forall X0.(l3\_algstr\_0\ X0)\Rightarrow(m1\_subset\_1\ (k1\_group\_1\ X0)\ (u1\_struct\_0\ X0)) \tag{7}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v2\_group\_1\ X0)\wedge((v3\_group\_1\ X0)\wedge(l3\_algstr\_0\ X0))))\Rightarrow(\forall X1.((v15\_algstr\_0\ X1)\wedge(m1\_group\_2\ X1\ X0))\Rightarrow((X1 = k6\_group\_2\ X0)\Leftrightarrow(u1\_struct\_0\ X1 = k6\_domain\_1\ (u1\_struct\_0\ X0)\ (k1\_group\_1\ X0)))) \tag{8}$$

Assume the following.

$$\forall X0.(l1\_struct\_0\ X0)\Rightarrow(\forall X1.(r1\_struct\_0\ X0\ X1)\Leftrightarrow(X1 \in u1\_struct\_0\ X0)) \tag{9}$$

Assume the following.

$$\forall X0.\forall X1.(X1 = k1\_tarski\ X0)\Leftrightarrow(\forall X2.(X2 \in X1)\Leftrightarrow(X2 = X0)) \tag{10}$$

Theorem 1

$$\forall X0.\forall X1.((\neg v2\_struct\_0\ X1)\wedge((v2\_group\_1\ X1)\wedge((v3\_group\_1\ X1)\wedge(l3\_algstr\_0\ X1))))\Rightarrow((r1\_struct\_0\ (k6\_group\_2\ X1)\ X0)\Leftrightarrow(X0 = k1\_group\_1\ X1))$$