

t4_msualg_8
(TMNj7aQvL2MtKbAC2RoAMccUruVFsKCNFhi)

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Let $k6_lattices : \iota \Rightarrow \iota$ be given. Let $k2_msualg_5 : \iota \Rightarrow \iota$ be given. Let $k1_eqrel_1 : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $r3_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $v3_relat_2 : \iota \Rightarrow o$ be given. Let $v8_relat_2 : \iota \Rightarrow o$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v10_lattices : \iota \Rightarrow o$ be given. Let $v14_lattices : \iota \Rightarrow o$ be given. Let $l3_lattices : \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $v3_lattices : \iota \Rightarrow o$ be given. Let $v15_lattices : \iota \Rightarrow o$ be given. Let $l1_lattices : \iota \Rightarrow o$ be given. Let $l2_lattices : \iota \Rightarrow o$ be given. Let $v13_lattices : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1_subset_1 X1 (u1_struct_0 (k2_msualg_5 \\ & X0))) \Rightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 (k2_msualg_5 \\ & X0))) \Rightarrow ((r3_lattices (k2_msualg_5 X0) X1 X2) \Leftrightarrow (r1_tarski X1 X2))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. (v3_relat_2 (k1_eqrel_1 X0)) \wedge ((v8_relat_2 (k1_eqrel_1 \\ & X0)) \wedge ((v1_partfun1 (k1_eqrel_1 X0) X0) \wedge (m1_subset_1 (k1_eqrel_1 \\ & X0) (k1_zfmisc_1 (k2_zfmisc_1 X0 X0)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 (k1_zfmisc_1 X1)) \Leftrightarrow (r1_tarski X0 X1) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in u1_struct_0 (k2_msualg_5 X1)) \Leftrightarrow ((v1_partfun1 X0 X1) \wedge ((v3_relat_2 X0) \wedge ((v8_relat_2 X0) \wedge (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 X1 X1)))))$$
(6)

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((v10_lattices X0) \wedge ((v14_lattices X0) \wedge (l3_lattices X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (r3_lattices X0 X1 (k6_lattices X0)))$$
(7)

Assume the following.

$$\forall X0.\forall X1.r1_tarski X0 X0$$
(8)

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\neg v1_xboole_0 (u1_struct_0 X0))$$
(9)

Assume the following.

$$\forall X0.(\neg v2_struct_0 (k2_msualg_5 X0)) \wedge ((v3_lattices (k2_msualg_5 X0)) \wedge ((v10_lattices (k2_msualg_5 X0)) \wedge (v15_lattices (k2_msualg_5 X0))))$$
(10)

Assume the following.

$$\forall X0.(l3_lattices X0) \Rightarrow ((l1_lattices X0) \wedge (l2_lattices X0))$$
(11)

Assume the following.

$$\forall X0.(l1_lattices X0) \Rightarrow (l1_struct_0 X0)$$
(12)

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge (l2_lattices X0)) \Rightarrow (m1_subset_1 (k6_lattices X0) (u1_struct_0 X0))$$
(13)

Assume the following.

$$\forall X0.(\neg v2_struct_0 (k2_msualg_5 X0)) \wedge ((v3_lattices (k2_msualg_5 X0)) \wedge ((v10_lattices (k2_msualg_5 X0)) \wedge (l3_lattices (k2_msualg_5 X0))))$$
(14)

Assume the following.

$$\forall X0.k1_eqrel_1 X0 = k2_zfmisc_1 X0 X0$$
(15)

Assume the following.

$$\forall X0.\forall X1.(X0 = X1)\Leftrightarrow((r1_tarski\ X0\ X1)\wedge(r1_tarski\ X1\ X0)) \quad (16)$$

Assume the following.

$$\begin{aligned} \forall X0.(l3_lattices\ X0)\Rightarrow(((\neg v2_struct_0\ X0)\wedge(v15_lattices \\ X0))\Rightarrow((\neg v2_struct_0\ X0)\wedge((v13_lattices\ X0)\wedge(v14_lattices\ X0)))) \end{aligned} \quad (17)$$

Theorem 1 $\forall X0.k6_lattices\ (k2_msualg_5\ X0) = k1_eqrel_1\ X0.$