

t11_grnilp_1 (TM- LXjGC4FbhbMXiHwHA5PCvRPw8sfjBLQQZ)

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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 $m1_group_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_group_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_grnilp_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_group_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_group_5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_group_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_group_5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v15_algstr_0 : \iota \Rightarrow o$ be given. Let $k7_group_5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_group_5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\ & X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge ((v2_group_1 \\ & X1) \wedge ((v3_group_1 X1) \wedge (l3_algstr_0 X1)))) \Rightarrow (\forall X2.((\neg v2_struct_0 \\ & X2) \wedge ((v2_group_1 X2) \wedge ((v3_group_1 X2) \wedge (l3_algstr_0 X2)))) \Rightarrow \\ & (((m1_group_2 X0 X1) \wedge (m1_group_2 X1 X2)) \Rightarrow (m1_group_2 X0 X2)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\ & X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 \\ & (u1_struct_0 X0))) \Rightarrow (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\ & (u1_struct_0 X0))) \Rightarrow ((r1_tarski X1 X2) \Rightarrow (m1_group_2 (k5_group_4 \\ & X0 X1) (k5_group_4 X0 X2)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\ & X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1.(m1_group_2 X1 X0) \Rightarrow (\forall X2. \\ & (m1_group_2 X2 X0) \Rightarrow ((m1_group_6 X1 X0 X2) \Rightarrow (r1_tarski (k5_group_5 \\ & X0 X2 X1) (k8_group_2 X0 X2)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge \\ & ((v3_group_1 X0) \wedge (l3_algstr_0 X0)))) \wedge (m1_group_2 X1 X0)) \Rightarrow (\forall X2. \\ & (m1_group_6 X2 X0 X1) \Leftrightarrow (m1_group_2 X2 X1)) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0)\wedge((v2_group_1 X0)\wedge((v3_group_1 X0)\wedge(l3_algstr_0 X0))))\wedge((m1_group_2 X1 X0)\wedge(m1_group_2 X2 X0)))\Rightarrow(k1_grnilp_1 X0 X1 X2 = k8_group_5 X0 X1 X2) \quad (5)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0)\wedge((v2_group_1 X0)\wedge((v3_group_1 X0)\wedge(l3_algstr_0 X0))))\Rightarrow(\forall X1.(m1_group_2 X1 X0)\Rightarrow(m1_group_6 (k5_group_4 X0 (k8_group_2 X0 X1)) X0 X1)) \quad (6)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0)\wedge((v2_group_1 X0)\wedge(l3_algstr_0 X0)))\Rightarrow(\forall X1.(m1_group_2 X1 X0)\Rightarrow((\neg v2_struct_0 X1)\wedge((v2_group_1 X1)\wedge(l3_algstr_0 X1)))) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2_struct_0 X0)\wedge((v2_group_1 X0)\wedge((v3_group_1 X0)\wedge(l3_algstr_0 X0))))\wedge(m1_group_2 X1 X0))\Rightarrow(m1_subset_1 (k8_group_2 X0 X1) (k1_zfmisc_1 (u1_struct_0 X0))) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0)\wedge((v2_group_1 X0)\wedge((v3_group_1 X0)\wedge(l3_algstr_0 X0))))\wedge((m1_group_2 X1 X0)\wedge(m1_group_2 X2 X0)))\Rightarrow(m1_subset_1 (k5_group_5 X0 X1 X2) (k1_zfmisc_1 (u1_struct_0 X0))) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2_struct_0 X0)\wedge((v2_group_1 X0)\wedge((v3_group_1 X0)\wedge(l3_algstr_0 X0))))\wedge(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))))\Rightarrow((v15_algstr_0 (k5_group_4 X0 X1))\wedge(m1_group_2 (k5_group_4 X0 X1) X0)) \quad (10)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0)\wedge((v2_group_1 X0)\wedge((v3_group_1 X0)\wedge(l3_algstr_0 X0))))\Rightarrow(\forall X1.(m1_group_2 X1 X0)\Rightarrow(k8_group_2 X0 X1 = u1_struct_0 X1)) \quad (11)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0)\wedge((v2_group_1 X0)\wedge((v3_group_1 X0)\wedge(l3_algstr_0 X0))))\Rightarrow(\forall X1.(m1_group_2 X1 X0)\Rightarrow(\forall X2.(m1_group_2 X2 X0)\Rightarrow(k8_group_5 X0 X1 X2 = k7_group_5 X0 (k8_group_2 X0 X1) (k8_group_2 X0 X2)))) \quad (12)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\ X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 \\ (u1_struct_0 X0))) \Rightarrow (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\ (u1_struct_0 X0))) \Rightarrow (k7_group_5 X0 X1 X2 = k5_group_4 X0 (k4_group_5 \\ X0 X1 X2)))) \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\ X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1.(m1_group_2 X1 X0) \Rightarrow (\forall X2. \\ (m1_group_2 X2 X0) \Rightarrow (k5_group_5 X0 X1 X2 = k4_group_5 X0 (k8_group_2 \\ X0 X1) (k8_group_2 X0 X2)))) \end{aligned} \quad (14)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\ X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1.(m1_group_2 X1 X0) \Rightarrow (v3_group_1 \\ X1)) \end{aligned} \quad (15)$$

Theorem 1

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\ X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1.(m1_group_2 X1 X0) \Rightarrow (\forall X2. \\ (m1_group_2 X2 X0) \Rightarrow ((m1_group_6 X1 X0 X2) \Rightarrow (m1_group_6 (k1_grnilp_1 \\ X0 X2 X1) X0 X2)))) \end{aligned}$$