

t28_grnilp_1

(TMMv8mr3LyQYrUu28XW7ogDZ8Me7YjuaC8s)

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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 $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_grnilp_1 : \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k7_group_2 : \iota \Rightarrow \iota$ be given. Let $k6_group_2 : \iota \Rightarrow \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k4_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v15_algstr_0 : \iota \Rightarrow o$ be given. Let $v1_group_3 : \iota \Rightarrow \iota \Rightarrow o$ 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 $k5_group_6 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v5_group_1 : \iota \Rightarrow o$ be given. Let $v1_grnilp_1 : \iota \Rightarrow o$ be given. Let $k10_group_5 : \iota \Rightarrow \iota$ be given. Let $k1_group_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0. (&(\neg v2_struct_0 X0) \wedge ((v15_algstr_0 X0) \wedge ((v2_group_1 \\ &X0) \wedge ((v3_group_1 X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (((\neg v2_struct_0 \\ &X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 X0) \wedge ((v5_group_1 X0) \wedge (l3_algstr_0 \\ &X0)))))) \Leftrightarrow (k10_group_5 X0 = X0)) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. (&(\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\ &X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1. (m1_group_2 X1 X0) \Rightarrow (\forall X2. \\ &((v15_algstr_0 X2) \wedge ((v1_group_3 X2 X0) \wedge (m1_group_2 X2 X0)))) \Rightarrow \\ &((m1_group_6 X2 X0 X1) \Rightarrow (m1_group_2 (k5_group_6 X1 (k1_group_6 \\ &X0 X1 X2)) (k5_group_6 X0 X2)))))) \end{aligned} \quad (2)$$

Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge (v2_group_1 X0) \wedge \\ & ((v3_group_1 X0) \wedge (l3_algstr_0 X0)))) \wedge ((v1_group_3 X1 X0) \wedge (m1_group_2 \\ & X1 X0)) \Rightarrow ((\neg v2_struct_0 (k5_group_6 X0 X1)) \wedge (v15_algstr_0 (k5_group_6 \\ & X0 X1))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge (v2_group_1 X0) \wedge \\ & ((v3_group_1 X0) \wedge (l3_algstr_0 X0)))) \wedge (m1_group_2 X1 X0) \Rightarrow (\forall X2. \quad (5) \\ & (m1_group_6 X2 X0 X1) \Rightarrow (m1_group_2 X2 X0)) \end{aligned}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge (v2_group_1 X0) \wedge (v3_group_1 \\ & X0) \wedge (l3_algstr_0 X0)) \Rightarrow ((v15_algstr_0 (k10_group_5 X0)) \wedge (\quad (6) \\ & m1_group_2 (k10_group_5 X0) X0)) \end{aligned}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge (v2_group_1 X0) \wedge (v3_group_1 \\ & X0) \wedge (l3_algstr_0 X0)) \Rightarrow ((v1_grnilp_1 X0) \Leftrightarrow (\exists X1. (m2_finseq_1 \\ & X1 (k2_grnilp_1 X0)) \wedge ((\neg r1_xxreal_0 (k3_finseq_1 X1) k6_numbers) \wedge \\ & ((k1_funct_1 X1 np_1 = k7_group_2 X0) \wedge ((k1_funct_1 X1 (k3_finseq_1 \\ & X1) = k6_group_2 X0) \wedge (\forall X2. (m2_subset_1 X2 k1_numbers k5_numbers) \Rightarrow \\ & (((X2 \in k4_finseq_1 X1) \wedge (k2_xcmplx_0 X2 np_1 \in k4_finseq_1 X1)) \Rightarrow \\ & (\forall X3. ((v15_algstr_0 X3) \wedge ((v1_group_3 X3 X0) \wedge (m1_group_2 \\ & X3 X0)) \Rightarrow (\forall X4. ((v15_algstr_0 X4) \wedge ((v1_group_3 X4 X0) \wedge \\ & (m1_group_2 X4 X0)) \Rightarrow (((X3 = k1_funct_1 X1 X2) \wedge (X4 = k1_funct_1 \\ & X1 (k2_xcmplx_0 X2 np_1)))) \Rightarrow ((m1_group_6 X4 X0 X3) \wedge (m1_group_6 \\ & (k5_group_6 X3 (k1_group_6 X0 X3 X4)) (k5_group_6 X0 X4) (k10_group_5 \\ & (k5_group_6 X0 X4)))))))))) \end{aligned} \quad (7)$$

Theorem 1

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge (v2_group_1 X0) \wedge (v3_group_1 \\ & X0) \wedge (l3_algstr_0 X0)) \Rightarrow ((\exists X1. (m2_finseq_1 X1 (k2_grnilp_1 \\ & X0)) \wedge ((\neg r1_xxreal_0 (k3_finseq_1 X1) k6_numbers) \wedge ((k1_funct_1 \\ & X1 np_1 = k7_group_2 X0) \wedge ((k1_funct_1 X1 (k3_finseq_1 X1) = k6_group_2 \\ & X0) \wedge (\forall X2. (m2_subset_1 X2 k1_numbers k5_numbers) \Rightarrow (((X2 \in \\ & k4_finseq_1 X1) \wedge (k2_xcmplx_0 X2 np_1 \in k4_finseq_1 X1)) \Rightarrow (\forall X3. \\ & ((v15_algstr_0 X3) \wedge ((v1_group_3 X3 X0) \wedge (m1_group_2 X3 X0)) \Rightarrow \\ & (\forall X4. ((v15_algstr_0 X4) \wedge ((v1_group_3 X4 X0) \wedge (m1_group_2 \\ & X4 X0)) \Rightarrow (((X3 = k1_funct_1 X1 X2) \wedge (X4 = k1_funct_1 X1 (k2_xcmplx_0 \\ & X2 np_1)))) \Rightarrow ((m1_group_6 X4 X0 X3) \wedge ((\neg v2_struct_0 (k5_group_6 \\ & X0 X4)) \wedge (v2_group_1 (k5_group_6 X0 X4)) \wedge (v3_group_1 (k5_group_6 \\ & X0 X4)) \wedge ((v5_group_1 (k5_group_6 X0 X4)) \wedge (l3_algstr_0 (k5_group_6 \\ & X0 X4)))))))))) \Rightarrow (v1_grnilp_1 X0)) \end{aligned}$$