

t25_gr_cy_2 (TMXcqDHqWT- dLx5bN5RreuwJztQNj4HfEUnD)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v8_struct_0 : \iota \Rightarrow o$ be given. Let $v15_algstr_0 : \iota \Rightarrow o$ be given. Let $v2_group_1 : \iota \Rightarrow o$ be given. Let $v3_group_1 : \iota \Rightarrow o$ be given. Let $v1_gr_cy_1 : \iota \Rightarrow o$ be given. Let $l3_algstr_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $k7_group_1 : \iota \Rightarrow \iota$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $m1_group_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k6_group_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_group_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0. (&(\neg v2_struct_0 X0) \wedge ((v8_struct_0 X0) \wedge ((v2_group_1 \\ &X0) \wedge ((v3_group_1 X0) \wedge (l3_algstr_0 X0)))))) \Rightarrow (\forall X1. (m1_subset_1 \\ &X1 (u1_struct_0 X0)) \Rightarrow (k6_group_1 X0 X1 = k7_group_1 (k5_group_4 \\ &X0 (k6_domain_1 (u1_struct_0 X0) X1)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} \forall X0. (&(\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\ &X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 \\ &X0)) \Rightarrow ((\neg v2_struct_0 (k5_group_4 X0 (k6_domain_1 (u1_struct_0 \\ &X0) X1))) \wedge ((v2_group_1 (k5_group_4 X0 (k6_domain_1 (u1_struct_0 \\ &X0) X1))) \wedge ((v3_group_1 (k5_group_4 X0 (k6_domain_1 (u1_struct_0 \\ &X0) X1))) \wedge ((v1_gr_cy_1 (k5_group_4 X0 (k6_domain_1 (u1_struct_0 \\ &X0) X1))) \wedge (l3_algstr_0 (k5_group_4 X0 (k6_domain_1 (u1_struct_0 \\ &X0) X1)))))))))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v8_struct_0 X0) \wedge ((v15_algstr_0 \\ & X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 X0) \wedge ((v1_gr_cy_1 X0) \wedge (l3_algstr_0 \\ & X0)))))) \Rightarrow (\neg(\exists X1.(m1_subset_1 X1 k5_numbers) \wedge (k7_group_1 \\ & X0 = k3_xcmplx_0 np_2 X1)) \wedge (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ & X0)) \Rightarrow (\neg(k6_group_1 X0 X1 = np_2) \wedge (\forall X2.(m1_subset_1 X2 \\ & (u1_struct_0 X0)) \Rightarrow ((k6_group_1 X0 X2 = np_2) \Rightarrow (X1 = X2)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\neg v1_xboole_0 (u1_struct_0 X0)) \quad (4)$$

Assume the following.

$$\forall X0.(l3_algstr_0 X0) \Rightarrow (l1_struct_0 X0) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge (m1_subset_1 X1 X0)) \Rightarrow (m1_subset_1 (k6_domain_1 X0 X1) (k1_zfmisc_1 X0)) \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge \\ & ((v3_group_1 X0) \wedge (l3_algstr_0 X0)))) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ & (u1_struct_0 X0)))) \Rightarrow ((v15_algstr_0 (k5_group_4 X0 X1)) \wedge (m1_group_2 \\ & (k5_group_4 X0 X1) X0)) \end{aligned} \quad (7)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v8_struct_0 X0) \wedge ((v15_algstr_0 \\ & X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 X0) \wedge ((v1_gr_cy_1 X0) \wedge (l3_algstr_0 \\ & X0)))))) \Rightarrow (\neg(\exists X1.(m1_subset_1 X1 k5_numbers) \wedge (k7_group_1 \\ & X0 = k3_xcmplx_0 np_2 X1)) \wedge (\forall X1.(m1_group_2 X1 X0) \Rightarrow (\neg(\\ & k7_group_1 X1 = np_2) \wedge ((\neg v2_struct_0 X1) \wedge ((v2_group_1 X1) \wedge \\ & (v3_group_1 X1) \wedge ((v1_gr_cy_1 X1) \wedge (l3_algstr_0 X1)))))) \end{aligned}$$