

l44_group_1

(TMX7mBozp5rzXRWaXZmoh8Rxb8VKQNqer8u)

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Let $v7_ordinal1 : \iota \Rightarrow o$ be given. 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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k5_group_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k6_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ 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 $k4_ordinal1 : \iota$ be given. Let $k23_binop_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0. ((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\ X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 \\ X0)) \Rightarrow (k5_group_1 X0 np_1 X1 = X1)) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} ((v2_xxreal_0 np_1) \wedge (m2_subset_1 np_1 k1_numbers k5_numbers)) \wedge \\ ((m1_subset_1 np_1 k5_numbers) \wedge (m1_subset_1 np_1 k1_numbers)) \end{aligned} \quad (2)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0. (v7_ordinal1 X0) \Rightarrow (\forall X1. (v7_ordinal1 X1) \Rightarrow (\forall X2. \\ ((\neg v2_struct_0 X2) \wedge ((v2_group_1 X2) \wedge ((v3_group_1 X2) \wedge (l3_algstr_0 \\ X2)))) \Rightarrow (\forall X3. (m1_subset_1 X3 (u1_struct_0 X2)) \Rightarrow (k5_group_1 \\ X2 (k23_binop_2 X0 X1) X3 = k6_algstr_0 X2 (k5_group_1 X2 X0 X3) (k5_group_1 \\ X2 X1 X3)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0. (v7_ordinal1 X0) \Rightarrow (\forall X1. ((\neg v2_struct_0 X1) \wedge \\ ((v2_group_1 X1) \wedge ((v3_group_1 X1) \wedge (l3_algstr_0 X1)))) \Rightarrow (\forall X2. \\ (m1_subset_1 X2 (u1_struct_0 X1)) \Rightarrow (k5_group_1 X1 (k1_nat_1 X0 \\ np_1) X2 = k6_algstr_0 X1 (k5_group_1 X1 X0 X2) X2))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1\ X0)\wedge(v7_ordinal1\ X1))\Rightarrow(k23_binop_2\ X0\ X1 = k23_binop_2\ X1\ X0) \quad (6)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ k4_ordinal1)\Rightarrow(v7_ordinal1\ X0) \quad (7)$$

Theorem 1

$$\begin{aligned} &\forall X0.(v7_ordinal1\ X0)\Rightarrow(\forall X1.((\neg v2_struct_0\ X1)\wedge \\ &((v2_group_1\ X1)\wedge((v3_group_1\ X1)\wedge(l3_algstr_0\ X1))))\Rightarrow(\forall X2. \\ &(m1_subset_1\ X2\ (u1_struct_0\ X1))\Rightarrow((k5_group_1\ X1\ (k1_nat_1\ X0 \\ &np_1)\ X2 = k6_algstr_0\ X1\ (k5_group_1\ X1\ X0\ X2)\ X2)\wedge(k5_group_1 \\ &X1\ (k1_nat_1\ X0\ np_1)\ X2 = k6_algstr_0\ X1\ X2\ (k5_group_1\ X1\ X0\ X2)))))) \end{aligned}$$