

t15_group_1 (TM-
GYy9e1BPX2bok9cMNCKeFTBgMQ4KRDtUL)

October 27, 2020

Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_int_2 : \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v8_struct_0 : \iota \Rightarrow o$ 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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v2_group_10 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_struct_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_group_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_group_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $k1_newton : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\ X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1.(m1_group_2 X1 X0) \Rightarrow (\forall X2. \\ (m1_subset_1 X2 (u1_struct_0 X1)) \Rightarrow (\forall X3.(m1_subset_1 X3 \\ (u1_struct_0 X0)) \Rightarrow (((X2 = X3) \wedge (v8_struct_0 X0)) \Rightarrow (k6_group_1 \\ X1 X2 = k6_group_1 X0 X3)))))) \end{aligned} \quad (1)$$

Assume the following.

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

Assume the following.

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

Assume the following.

$$\forall X0. (l3_algstr_0 X0) \Rightarrow (l1_struct_0 X0) \quad (4)$$

Assume the following.

$$\forall X0. (l1_struct_0 X0) \Rightarrow (\forall X1. (r1_struct_0 X0 X1) \Leftrightarrow (X1 \in u1_struct_0 X0)) \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.((\neg v2_struct_0\ X1) \wedge \\ & ((v2_group_1\ X1) \wedge ((v3_group_1\ X1) \wedge (l3_algstr_0\ X1)))) \Rightarrow (\forall X2. \\ & (m1_subset_1\ X2\ (u1_struct_0\ X1)) \Rightarrow ((v1_grouppp_1\ X2\ X0\ X1) \Leftrightarrow (\exists X3. \\ & (v7_ordinal1\ X3) \wedge (k6_group_1\ X1\ X2 = k1_newton\ X0\ X3)))))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0\ X0) \wedge ((v8_struct_0\ X0) \wedge ((v2_group_1 \\ & X0) \wedge ((v3_group_1\ X0) \wedge (l3_algstr_0\ X0)))))) \Rightarrow (\forall X1.(m1_group_2 \\ & X1\ X0) \Rightarrow (v8_struct_0\ X1)) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(((v7_ordinal1\ X0) \wedge (v1_int_2\ X0)) \wedge ((\neg \\ & v2_struct_0\ X1) \wedge ((v8_struct_0\ X1) \wedge ((v2_group_1\ X1) \wedge ((v3_group_1 \\ & X1) \wedge ((v2_group_10\ X1\ X0) \wedge (l3_algstr_0\ X1))))))) \Rightarrow (\forall X2. \\ & (m1_subset_1\ X2\ (u1_struct_0\ X1)) \Rightarrow (v1_grouppp_1\ X2\ X0\ X1)) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0\ X0) \wedge ((v2_group_1\ X0) \wedge ((v3_group_1 \\ & X0) \wedge (l3_algstr_0\ X0)))) \Rightarrow (\forall X1.(m1_group_2\ X1\ X0) \Rightarrow (v3_group_1 \\ & X1)) \end{aligned} \quad (9)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v7_ordinal1\ X0) \wedge (v1_int_2\ X0)) \Rightarrow (\forall X1.((\neg \\ & v2_struct_0\ X1) \wedge ((v8_struct_0\ X1) \wedge ((v2_group_1\ X1) \wedge ((v3_group_1 \\ & X1) \wedge (l3_algstr_0\ X1)))))) \Rightarrow (\forall X2.(m1_group_2\ X2\ X1) \Rightarrow (\forall X3. \\ & (m1_subset_1\ X3\ (u1_struct_0\ X1)) \Rightarrow (((v2_group_10\ X2\ X0) \wedge (r1_struct_0 \\ & X2\ X3)) \Rightarrow (v1_grouppp_1\ X3\ X0\ X1)))))) \end{aligned}$$