

t31_group_1

(TMMe5y3PC4xpEyMRzsf6ddQVSkXo89xGuTnT)

October 27, 2020

Let $v1_int_1 : \iota \Rightarrow o$ 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 $k5_group_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_group_1 : \iota \Rightarrow \iota$ be given. Let $k2_group_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_binop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_binop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k4_group_1 : \iota \Rightarrow \iota$ be given. Let $k1_int_2 : \iota \Rightarrow \iota$ be given. Let $r1_xreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (k2_group_1 X0 (k1_group_1 X0) = k1_group_1 X0) \tag{1}$$

Assume the following.

$$k5_numbers = k4_ordinal1 \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. \forall X3. \forall X4. \forall X5. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge (((v1_funct_1 X3) \wedge ((v1_funct_2 X3 (k2_zfmisc_1 X0 X1) X2) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 X0 X1) X2)))))) \wedge ((m1_subset_1 X4 X0) \wedge (m1_subset_1 X5 X1)))))) \Rightarrow (k2_binop_1 X0 X1 X2 X3 X4 X5 = k1_binop_1 X3 X4 X5) \tag{3}$$

Assume the following.

$$\forall X0. (v7_ordinal1 X0) \Rightarrow (\forall X1. ((\neg v2_struct_0 X1) \wedge ((v2_group_1 X1) \wedge ((v3_group_1 X1) \wedge (l3_algstr_0 X1)))) \Rightarrow (k5_group_1 X1 X0 (k1_group_1 X1) = k1_group_1 X1)) \tag{4}$$

Assume the following.

$$(\neg v1_xboole_0 \ k4_ordinal1) \wedge (v3_ordinal1 \ k4_ordinal1) \quad (5)$$

Assume the following.

$$\forall X0. ((\neg v2_struct_0 \ X0) \wedge (l1_struct_0 \ X0)) \Rightarrow (\neg v1_xboole_0 \ (u1_struct_0 \ X0)) \quad (6)$$

Assume the following.

$$\forall X0. (l3_algstr_0 \ X0) \Rightarrow (l1_struct_0 \ X0) \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0. ((\neg v2_struct_0 \ X0) \wedge (l3_algstr_0 \ X0)) \Rightarrow ((v1_funct_1 \ (k4_group_1 \ X0)) \wedge (v1_funct_2 \ (k4_group_1 \ X0) \ (k2_zfmisc_1 \ (u1_struct_0 \ X0) \ k5_numbers) \ (u1_struct_0 \ X0)) \wedge (m1_subset_1 \ (k4_group_1 \ X0) \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ (k2_zfmisc_1 \ (u1_struct_0 \ X0) \ k5_numbers) \ (u1_struct_0 \ X0)))))) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0. (v1_int_1 \ X0) \Rightarrow (m1_subset_1 \ (k1_int_2 \ X0) \ k5_numbers) \quad (9)$$

Assume the following.

$$\forall X0. (l3_algstr_0 \ X0) \Rightarrow (m1_subset_1 \ (k1_group_1 \ X0) \ (u1_struct_0 \ X0)) \quad (10)$$

Assume the following.

$$\begin{aligned} \forall X0. ((\neg v2_struct_0 \ X0) \wedge ((v2_group_1 \ X0) \wedge ((v3_group_1 \ X0) \wedge (l3_algstr_0 \ X0)))) \Rightarrow (\forall X1. (v7_ordinal1 \ X1) \Rightarrow (\forall X2. (m1_subset_1 \ X2 \ (u1_struct_0 \ X0)) \Rightarrow (k5_group_1 \ X0 \ X1 \ X2 = k1_binop_1 \ (k4_group_1 \ X0) \ X2 \ X1))) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} \forall X0. ((\neg v2_struct_0 \ X0) \wedge ((v2_group_1 \ X0) \wedge ((v3_group_1 \ X0) \wedge (l3_algstr_0 \ X0)))) \Rightarrow (\forall X1. (v1_int_1 \ X1) \Rightarrow (\forall X2. (m1_subset_1 \ X2 \ (u1_struct_0 \ X0)) \Rightarrow (((r1_xxreal_0 \ k6_numbers \ X1) \Rightarrow (k5_group_1 \ X0 \ X1 \ X2 = k2_binop_1 \ (u1_struct_0 \ X0) \ k5_numbers \ (u1_struct_0 \ X0) \ (k4_group_1 \ X0) \ X2 \ (k1_int_2 \ X1))) \wedge ((\neg r1_xxreal_0 \ k6_numbers \ X1) \Rightarrow (k5_group_1 \ X0 \ X1 \ X2 = k2_group_1 \ X0 \ (k2_binop_1 \ (u1_struct_0 \ X0) \ k5_numbers \ (u1_struct_0 \ X0) \ (k4_group_1 \ X0) \ X2 \ (k1_int_2 \ X1))))))) \end{aligned} \quad (12)$$

Assume the following.

$$\forall X0. (m1_subset_1 \ X0 \ k4_ordinal1) \Rightarrow (v7_ordinal1 \ X0) \quad (13)$$

Theorem 1

$$\forall X0.(v1_int_1 X0) \Rightarrow (\forall X1. ((\neg v2_struct_0 X1) \wedge ((v2_group_1 X1) \wedge (v3_group_1 X1) \wedge (l3_algstr_0 X1)))) \Rightarrow (k5_group_1 X1 X0 (k1_group_1 X1) = k1_group_1 X1))$$