

l42_group_10
(TMLEzjsRC4zcyjfrQRQoX2qSEFvcHv5W3jRQ)

October 27, 2020

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 $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_int_2 : \iota \Rightarrow o$ be given. Let $m1_group_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r3_group_10 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_nat_d : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k18_group_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_group_10 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.(v7_ordinal1\ X1) \Rightarrow (\forall X2. \\ & (v7_ordinal1\ X2) \Rightarrow ((r1_nat_d\ X0\ X1) \Rightarrow (r1_nat_d\ X0\ (k3_xcmplx_0 \\ & \quad X1\ X2)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0\ X0) \wedge ((v8_struct_0\ X0) \wedge ((v2_group_1 \\ & X0) \wedge ((v3_group_1\ X0) \wedge (l3_algstr_0\ X0)))))) \Rightarrow (\forall X1.(m1_group_2 \\ & X1\ X0) \Rightarrow (\forall X2.(m1_group_2\ X2\ X0) \Rightarrow (\forall X3.(m1_group_2 \\ & X3\ X2) \Rightarrow ((X1 = X3) \Rightarrow (k18_group_2\ X0\ X1 = k4_nat_1\ (k18_group_2\ X2\ X3) \\ & \quad (k18_group_2\ X0\ X2)))))) \end{aligned} \quad (2)$$

Assume the following.

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

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1\ X0\ k5_numbers) \wedge (v7_ordinal1\ X1)) \Rightarrow (k4_nat_1\ X0\ X1 = k3_xcmplx_0\ X0\ X1) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(((\neg v2_struct_0\ X0) \wedge ((v2_group_1\ X0) \wedge \\ & ((v3_group_1\ X0) \wedge (l3_algstr_0\ X0)))) \wedge (m1_group_2\ X1\ X0)) \Rightarrow (m1_subset_1 \\ & \quad (k18_group_2\ X0\ X1)\ k5_numbers) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.((\neg v2_struct_0\ X1) \wedge \\ ((v2_group_1\ X1) \wedge ((v3_group_1\ X1) \wedge (l3_algstr_0\ X1)))) \Rightarrow (\forall X2. \\ (m1_group_2\ X2\ X1) \Rightarrow ((r3_group_10\ X0\ X1\ X2) \Leftrightarrow ((v2_group_10\ X2\ X0) \wedge \\ (\neg r1_nat_d\ X0\ (k18_group_2\ X1\ X2)))))) \end{aligned} \quad (6)$$

Assume the following.

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

Theorem 1

$$\begin{aligned} \forall X0.((\neg v2_struct_0\ X0) \wedge ((v8_struct_0\ X0) \wedge ((v2_group_1 \\ X0) \wedge ((v3_group_1\ X0) \wedge (l3_algstr_0\ X0)))) \Rightarrow (\forall X1.((\neg v2_struct_0 \\ X1) \wedge ((v8_struct_0\ X1) \wedge ((v2_group_1\ X1) \wedge ((v3_group_1\ X1) \wedge (l3_algstr_0 \\ X1)))) \Rightarrow (\forall X2.((v7_ordinal1\ X2) \wedge (v1_int_2\ X2)) \Rightarrow (\forall X3. \\ (m1_group_2\ X3\ X0) \Rightarrow (\forall X4.(m1_group_2\ X4\ X1) \Rightarrow (((X3 = X4) \wedge \\ ((r3_group_10\ X2\ X0\ X3) \wedge (m1_group_2\ X1\ X0)) \Rightarrow (r3_group_10\ X2\ X1 \\ X4)))))) \end{aligned}$$