

t3_group_6
(TMY9KCiPZAr5YCZPSpeLcJDuh35xtHC4rhM)

October 27, 2020

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 $m1_group_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_group_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10_group_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_group_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k3_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v15_algstr_0 : \iota \Rightarrow o$ be given. Let $r1_group_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_finsub_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k8_group_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\ & X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1.(m1_group_2 X1 X0) \Rightarrow (\forall X2. \\ & (m1_group_2 X2 X0) \Rightarrow ((\forall X3.(m1_group_2 X3 X0) \Rightarrow ((X3 = k9_group_2 \\ & X0 X1 X2) \Rightarrow (u1_struct_0 X3 = k3_xboole_0 (u1_struct_0 X1) (u1_struct_0 \\ & X2)))) \wedge (\forall X3.((v15_algstr_0 X3) \wedge (m1_group_2 X3 X0)) \Rightarrow (\\ & (u1_struct_0 X3 = k3_xboole_0 (u1_struct_0 X1) (u1_struct_0 X2)) \Rightarrow \\ & (r1_group_2 X0 X3 (k9_group_2 X0 X1 X2)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge \\ & ((v3_group_1 X0) \wedge (l3_algstr_0 X0)))) \wedge (m1_group_2 X1 X0)) \Rightarrow (\forall X2. \\ & (m1_group_6 X2 X0 X1) \Leftrightarrow (m1_group_2 X2 X1)) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge ((v2_group_1 \\ & X0) \wedge ((v3_group_1 X0) \wedge (l3_algstr_0 X0)))) \wedge ((m1_group_2 X1 X0) \wedge \\ & (m1_group_2 X2 X0))) \Rightarrow (k10_group_2 X0 X1 X2 = k9_group_2 X0 X1 X2) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge \\ & ((v3_group_1 X0) \wedge (l3_algstr_0 X0)))) \wedge (m1_group_2 X1 X0)) \Rightarrow (\forall X2. \\ & (m1_group_6 X2 X0 X1) \Rightarrow (m1_group_2 X2 X0)) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge (l3_algstr_0 X0))) \Rightarrow (\forall X1.(m1_group_2 X1 X0) \Rightarrow ((\neg v2_struct_0 X1) \wedge ((v2_group_1 X1) \wedge (l3_algstr_0 X1)))) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 X0) \wedge (l3_algstr_0 X0)))) \wedge ((m1_group_2 X1 X0) \wedge (m1_group_2 X2 X0))) \Rightarrow ((v15_algstr_0 (k10_group_2 X0 X1 X2)) \wedge (m1_group_2 (k10_group_2 X0 X1 X2) X0)) \quad (6)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1.(m1_group_2 X1 X0) \Rightarrow (\forall X2.(m1_group_2 X2 X0) \Rightarrow (\forall X3.((v15_algstr_0 X3) \wedge (m1_group_2 X3 X0) \Rightarrow ((X3 = k9_group_2 X0 X1 X2) \Leftrightarrow (u1_struct_0 X3 = k3_finsub_1 (k1_zfmisc_1 (u1_struct_0 X0) (k8_group_2 X0 X1) (k8_group_2 X0 X2)))))))) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 X0) \wedge (l3_algstr_0 X0)))) \wedge ((m1_group_2 X1 X0) \wedge (m1_group_2 X2 X0))) \Rightarrow (k10_group_2 X0 X1 X2 = k10_group_2 X0 X2 X1) \quad (8)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1.(m1_group_2 X1 X0) \Rightarrow (v3_group_1 X1)) \quad (9)$$

Theorem 1

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1.(m1_group_2 X1 X0) \Rightarrow (\forall X2.(m1_group_6 X2 X0 X1) \Rightarrow (\forall X3.(m1_group_6 X3 X0 X1) \Rightarrow (k10_group_2 X0 X2 X3 = k10_group_2 X1 X2 X3))))$$