

t18_group_7 (TMWrHyKUd- FcRDSY34N1vPMQjnPbLabQaoaL)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v3_group_1 : \iota \Rightarrow o$ be given. Let $l3_algstr_0 : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $k10_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $np_2 : \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_group_7 : \iota \Rightarrow o$ be given. Let $v3_group_7 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_group_7 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_finseq_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((v1_relat_1 X2) \wedge ((v1_funct_1 X2) \wedge (v1_finseq_1 X2))) \Rightarrow ((X2 = k10_finseq_1 X0 X1) \Leftrightarrow ((k3_finseq_1 X2 = np_2) \wedge ((k1_funct_1 X2 np_1 = X0) \wedge (k1_funct_1 X2 np_2 = X1)))) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((\neg v1_xboole_0 X0) \wedge (((v1_relat_1 X1) \wedge ((v4_relat_1 X1 X0) \wedge ((v1_funct_1 X1) \wedge ((v1_partfun1 X1 X0) \wedge (v1_group_7 X1)))))) \wedge (m1_subset_1 X2 X0))) \Rightarrow (k1_group_7 X0 X1 X2 = k1_funct_1 X1 X2) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (v1_relat_1 (k10_finseq_1 X0 X1)) \wedge (v1_funct_1 (k10_finseq_1 X0 X1)) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. \neg v1_xboole_0 (k2_tarski X0 X1) \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge (l3_algstr_0 X0)) \wedge \\ & ((\neg v2_struct_0 X1) \wedge (l3_algstr_0 X1))) \Rightarrow ((v1_partfun1 (k10_finseq_1 \\ & X0 X1) (k2_tarski np_1 np_2)) \wedge (v1_group_7 (k10_finseq_1 X0 X1))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge (l3_algstr_0 X0)) \wedge \\ & ((\neg v2_struct_0 X1) \wedge (l3_algstr_0 X1))) \Rightarrow (v4_relat_1 (k10_finseq_1 \\ & X0 X1) (k2_tarski np_1 np_2)) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0. \forall X1. v1_finseq_1 (k10_finseq_1 X0 X1) \quad (8)$$

Assume the following.

$$\forall X0. \forall X1. k10_finseq_1 X0 X1 = k7_finseq_1 (k9_finseq_1 X0) (k9_finseq_1 X1) \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((v1_relat_1 X1) \wedge (\\ & (v4_relat_1 X1 X0) \wedge ((v1_funct_1 X1) \wedge ((v1_partfun1 X1 X0) \wedge (v1_group_7 \\ & X1)))))) \Rightarrow ((v3_group_7 X1 X0) \Leftrightarrow (\forall X2. (m1_subset_1 X2 X0) \Rightarrow \\ & (v3_group_1 (k1_group_7 X0 X1 X2)))))) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (X2 = k2_tarski X0 X1) \Leftrightarrow (\forall X3. \\ & (X3 \in X2) \Leftrightarrow ((X3 = X0) \vee (X3 = X1))) \end{aligned} \quad (11)$$

Theorem 1

$$\begin{aligned} & \forall X0. (((\neg v2_struct_0 X0) \wedge ((v3_group_1 X0) \wedge (l3_algstr_0 \\ & X0))) \Rightarrow (\forall X1. ((\neg v2_struct_0 X1) \wedge ((v3_group_1 X1) \wedge (l3_algstr_0 \\ & X1)))) \Rightarrow ((v1_relat_1 (k10_finseq_1 X0 X1)) \wedge ((v4_relat_1 (k10_finseq_1 \\ & X0 X1) (k2_tarski np_1 np_2)) \wedge ((v1_funct_1 (k10_finseq_1 X0 \\ & X1) \wedge ((v1_partfun1 (k10_finseq_1 X0 X1) (k2_tarski np_1 np_2)) \wedge \\ & ((v1_group_7 (k10_finseq_1 X0 X1)) \wedge (v3_group_7 (k10_finseq_1 \\ & X0 X1) (k2_tarski np_1 np_2)))))))))) \end{aligned}$$