

l7_gr_cy_1
(TMS8h6DzarMqX4CdK94quhN4V3qemgtCpmk)

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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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k3_group_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_group_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k4_numbers : \iota$ be given. Let $k5_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k5_group_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_gr_cy_1 : \iota \Rightarrow \iota$ be given. Let $v1_group_1 : \iota \Rightarrow o$ be given. Let $k1_group_1 : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k6_numbers : \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k2_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $k1_card_1 : \iota \Rightarrow \iota$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $v3_card_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $v1_card_1 : \iota \Rightarrow o$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((v1_group_1 X0) \wedge (l3_algstr_0 X0))) \Rightarrow (k3_group_4 X0 (k6_finseq_1 (u1_struct_0 X0)) = k1_group_1 X0) \quad (1)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (2)$$

Assume the following.

$$k1_gr_cy_1 (k6_finseq_1 k4_numbers) = k6_numbers \quad (3)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (k5_group_1 X0 k6_numbers X1 = k1_group_1 X0)) \quad (4)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (k4_group_4 X0 (k6_finseq_1 k4_numbers) (k6_finseq_1 (u1_struct_0 X0)) = k1_xboole_0) \quad (5)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (6)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((\neg v1_xboole_0 X0) \wedge ((v7_ordinal1 X1) \wedge (m1_subset_1 X2 X0))) \Rightarrow (k5_finseq_2 X0 X1 X2 = k2_finseq_2 X1 X2) \quad (7)$$

Assume the following.

$$\forall X0. ((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow (k3_finseq_1 X0 = k1_card_1 X0) \quad (8)$$

Assume the following.

$$\forall X0. \exists X1. (m1_finseq_1 X1 X0) \wedge ((v1_relat_1 X1) \wedge ((v4_relat_1 X1 k5_numbers) \wedge ((v5_relat_1 X1 X0) \wedge ((v1_funct_1 X1) \wedge ((v1_xboole_0 X1) \wedge ((v1_finset_1 X1) \wedge (v1_finseq_1 X1))))))) \quad (9)$$

Assume the following.

$$\forall X0. \forall X1. (v7_ordinal1 X0) \Rightarrow ((v1_relat_1 (k2_finseq_2 X0 X1)) \wedge ((v1_funct_1 (k2_finseq_2 X0 X1)) \wedge ((v3_card_1 (k2_finseq_2 X0 X1) X0) \wedge (v1_finseq_1 (k2_finseq_2 X0 X1)))))) \quad (10)$$

Assume the following.

$$\forall X0. ((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\neg v1_xboole_0 (u1_struct_0 X0)) \quad (11)$$

Assume the following.

$$v1_xboole_0 k1_xboole_0 \quad (12)$$

Assume the following.

$$\forall X0. (v1_xboole_0 X0) \Rightarrow ((v1_xboole_0 (k1_card_1 X0)) \wedge (v1_card_1 (k1_card_1 X0))) \quad (13)$$

Assume the following.

$$\forall X0. (l3_algstr_0 X0) \Rightarrow (l1_struct_0 X0) \quad (14)$$

Assume the following.

$$\forall X0. k6_finseq_1 X0 = k1_xboole_0 \quad (15)$$

Assume the following.

$$\forall X0. (v3_card_1 X0 k1_xboole_0) \Rightarrow (v1_xboole_0 X0) \quad (16)$$

Assume the following.

$$\forall X0. ((v3_ordinal1 X0) \wedge (v1_finset_1 X0)) \Rightarrow (v7_ordinal1 X0) \quad (17)$$

Assume the following.

$$\forall X0. (l3_algstr_0 X0) \Rightarrow ((v2_group_1 X0) \Rightarrow (v1_group_1 X0)) \quad (18)$$

Assume the following.

$$\forall X0. (v1_card_1 X0) \Rightarrow (v3_ordinal1 X0) \quad (19)$$

Theorem 1

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\ & X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 \\ & X0)) \Rightarrow (k3_group_4 X0 (k4_group_4 X0 (k6_finseq_1 k4_numbers) (\\ & k5_finseq_2 (u1_struct_0 X0) (k3_finseq_1 (k6_finseq_1 k4_numbers)) \\ & X1)) = k5_group_1 X0 (k1_gr_cy_1 (k6_finseq_1 k4_numbers) X1)) \end{aligned}$$