

t153_zmodul01
(TMUuS2sh3ZHDRWg9j4GheHo24xsfhQGqZTG)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v13_algstr_0 : \iota \Rightarrow o$ be given. Let $v3_rlvect_1 : \iota \Rightarrow o$ be given. Let $v4_rlvect_1 : \iota \Rightarrow o$ be given. Let $l2_algstr_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k2_binop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k3_binom : \iota \Rightarrow \iota$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $l2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_algstr_0 : \iota \Rightarrow o$ 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 $k1_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0 : \iota \Rightarrow o. ((X0 \ k6_numbers) \wedge (\forall X1. (m2_subset_1 \\ & X1 \ k1_numbers \ k5_numbers) \Rightarrow ((X0 \ X1) \Rightarrow (X0 \ (k2_nat_1 \ X1 \ np_1)))))) \Rightarrow \\ & (\forall X1. (m2_subset_1 \ X1 \ k1_numbers \ k5_numbers) \Rightarrow (X0 \ X1)) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 \ X0) \wedge ((\neg v1_xboole_0 \ X1) \wedge \\ & (m1_subset_1 \ X1 \ (k1_zfmisc_1 \ X0)))) \Rightarrow (\forall X2. (m2_subset_1 \\ & X2 \ X0 \ X1) \Leftrightarrow (m1_subset_1 \ X2 \ X1)) \end{aligned} \quad (2)$$

Assume the following.

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

Assume the following.

$$(\neg v1_xboole_0 \ k4_ordinal1) \wedge (v3_ordinal1 \ k4_ordinal1) \quad (4)$$

Assume the following.

$$\forall X0. (l2_algstr_0 \ X0) \Rightarrow ((l2_struct_0 \ X0) \wedge (l1_algstr_0 \ X0)) \quad (5)$$

Assume the following.

$$m1_subset_1 \ k5_numbers \ (k1_zfmisc_1 \ k1_numbers) \quad (6)$$

Assume the following.

$$\forall X0.(l2_struct_0 \ X0) \Rightarrow (m1_subset_1 \ (k4_struct_0 \ X0) \ (u1_struct_0 \ X0)) \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 \ X0) \wedge (l2_algstr_0 \ X0)) \Rightarrow & ((v1_funct_1 \\ (k3_binom \ X0)) \wedge ((v1_funct_2 \ (k3_binom \ X0) \ (k2_zfmisc_1 \ k5_numbers \\ (u1_struct_0 \ X0)) \ (u1_struct_0 \ X0)) \wedge (m1_subset_1 \ (k3_binom \ X0) \\ (k1_zfmisc_1 \ (k2_zfmisc_1 \ (k2_zfmisc_1 \ k5_numbers \ (u1_struct_0 \\ X0)) \ (u1_struct_0 \ X0)))))) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0.(l2_algstr_0 \ X0) \Rightarrow ((v4_rlvect_1 \ X0) \Leftrightarrow (\forall X1.(m1_subset_1 \ X1 \ (u1_struct_0 \ X0)) \Rightarrow (k1_algstr_0 \ X0 \ X1 \ (k4_struct_0 \ X0) = X1))) \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 \ X0) \wedge (l2_algstr_0 \ X0)) \Rightarrow & (\forall X1. \\ ((v1_funct_1 \ X1) \wedge ((v1_funct_2 \ X1 \ (k2_zfmisc_1 \ k5_numbers \ (u1_struct_0 \\ X0)) \ (u1_struct_0 \ X0)) \wedge (m1_subset_1 \ X1 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \\ (k2_zfmisc_1 \ k5_numbers \ (u1_struct_0 \ X0)) \ (u1_struct_0 \ X0)))))) \Rightarrow \\ ((X1 = k3_binom \ X0) \Leftrightarrow (\forall X2.(m1_subset_1 \ X2 \ (u1_struct_0 \ X0)) \Rightarrow \\ ((k2_binop_1 \ k5_numbers \ (u1_struct_0 \ X0) \ (u1_struct_0 \ X0) \ X1 \ k6_numbers \\ X2 = k4_struct_0 \ X0) \wedge (\forall X3.(m1_subset_1 \ X3 \ k5_numbers) \Rightarrow \\ (k2_binop_1 \ k5_numbers \ (u1_struct_0 \ X0) \ (u1_struct_0 \ X0) \ X1 \ (k2_nat_1 \\ X3 \ np_1) \ X2 = k1_algstr_0 \ X0 \ X2 \ (k2_binop_1 \ k5_numbers \ (u1_struct_0 \\ X0) \ (u1_struct_0 \ X0) \ X1 \ X3 \ X2)))))) \end{aligned} \quad (10)$$

Assume the following.

$$\forall X0.(v1_xboole_0 \ X0) \Rightarrow (\forall X1.(m1_subset_1 \ X1 \ (k1_zfmisc_1 \ X0)) \Rightarrow (v1_xboole_0 \ X1)) \quad (11)$$

Theorem 1

$$\begin{aligned} \forall X0.((\neg v2_struct_0 \ X0) \wedge ((v13_algstr_0 \ X0) \wedge ((v3_rlvect_1 \\ X0) \wedge ((v4_rlvect_1 \ X0) \wedge (l2_algstr_0 \ X0)))))) \Rightarrow & (\forall X1.(m2_subset_1 \\ X1 \ k1_numbers \ k5_numbers) \Rightarrow (k2_binop_1 \ k5_numbers \ (u1_struct_0 \\ X0) \ (u1_struct_0 \ X0) \ (k3_binom \ X0) \ X1 \ (k4_struct_0 \ X0) = k4_struct_0 \\ X0)) \end{aligned}$$