

t29_groeb_2 (TMYXDhAVoWQFyUVWMiR-
rHXjPcWFiKo4G6Q3)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l4_algstr_0 : \iota \Rightarrow o$ 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 $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $m2_ideal_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k7_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \neg (X0 \in X1) \wedge (v1_xboole_0 X1) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 (k1_zfmisc_1 X1)) \Leftrightarrow (r1_tarski X0 X1) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2. (m2_subset_1 X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. (m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1)\wedge(v4_relat_1 X1 X0))\Rightarrow(k1_relset_1 X0 X1 = k9_xtuple_0 X1) \quad (7)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0)\Rightarrow(v1_xboole_0 (k9_xtuple_0 X0)) \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(((\neg v2_struct_0 X0)\wedge(l4_algstr_0 X0))\wedge \\ & ((\neg v1_xboole_0 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 \\ & X0))))\Rightarrow(\forall X2.(m2_ideal_1 X2 X0 X1)\Rightarrow(m2_finseq_1 X2 (u1_struct_0 \\ & X0)))) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0)\Rightarrow((v1_funct_1 X1)\wedge((v1_finseq_1 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers X0)))))) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0)\Rightarrow((v1_relat_1 X1)\wedge((v1_funct_1 X1)\wedge(v1_finseq_1 X1))) \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0)\wedge(l4_algstr_0 X0))\Rightarrow(\forall X1. \\ & ((\neg v1_xboole_0 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 \\ & X0))))\Rightarrow(\forall X2.(m2_finseq_1 X2 (u1_struct_0 X0))\Rightarrow((m2_ideal_1 \\ & X2 X0 X1)\Leftrightarrow(\forall X3.\neg(X3 \in k1_relset_1 k5_numbers X2)\wedge(\forall X4. \\ & (m1_subset_1 X4 (u1_struct_0 X0))\Rightarrow(\forall X5.(m2_subset_1 X5 \\ & (u1_struct_0 X0) X1)\Rightarrow(k7_partfun1 (u1_struct_0 X0) X2 X3\neq k6_algstr_0 \\ & X0 X4 X5))))))) \end{aligned} \quad (12)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_finseq_1 X0)))\Rightarrow((v1_relat_1 X0)\wedge((v4_relat_1 X0 k5_numbers)\wedge((v1_funct_1 X0)\wedge(v1_finseq_1 X0)))) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.(v1_xboole_0 X0)\Rightarrow(\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X1 X0)))\Rightarrow(v1_xboole_0 X2)) \quad (14)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l4_algstr_0 X0)) \Rightarrow (\forall X1. \\ & ((\neg v1_xboole_0 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 \\ & X0)))) \Rightarrow (\forall X2.((\neg v1_xboole_0 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\ & (u1_struct_0 X0)))) \Rightarrow (\forall X3.(m2_ideal_1 X3 X0 X1) \Rightarrow ((r1_tarski \\ & X1 X2) \Rightarrow (m2_ideal_1 X3 X0 X2)))))) \end{aligned}$$