

t4_genealg1
(TMQu7Y5GEB5zzQt88mLnebMwT9LMv9QXVWh)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v2_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $m1_genealg1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_genealg1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k7_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_rfinseq : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k8_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k1_genealg1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k17_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k16_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_card_3 : \iota \Rightarrow \iota$ be given. Assume the following.

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

Assume the following.

$$\forall X0. ((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow ((k7_finseq_1 X0 k1_xboole_0 = X0) \wedge (k7_finseq_1 k1_xboole_0 X0 = X0)) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (m2_finseq_1 X1 X0) \Rightarrow (k2_rfinseq X0 k6_numbers X1 = X1) \quad (3)$$

Assume the following.

$$m1_subset_1 k1_xboole_0 k4_ordinal1 \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. (m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1_finseq_1 X1 X0)\wedge(m1_finseq_1 X2 X0))\Rightarrow(k8_finseq_1 X0 X1 X2 = k7_finseq_1 X1 X2) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(((\neg v1_xboole_0 X0)\wedge((v1_relat_1 X0)\wedge((v2_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_finseq_1 X0))))\wedge((m1_genealg1 X1 X0)\wedge((m1_genealg1 X2 X0)\wedge(m1_subset_1 X3 k5_numbers))))\Rightarrow(k7_genealg1 X0 X1 X2 X3 = k1_genealg1 X0 X1 X2 X3) \quad (7)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (8)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v7_ordinal1 X1)\wedge(m1_finseq_1 X2 X0))\Rightarrow(k17_finseq_1 X0 X1 X2 = k16_finseq_1 X1 X2) \quad (10)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_finseq_1 X0)))\Rightarrow(((v1_relat_1 (k16_finseq_1 k6_numbers X0))\wedge((v1_funct_1 (k16_finseq_1 k6_numbers X0))\wedge((v1_xboole_0 (k16_finseq_1 k6_numbers X0))\wedge(v1_finseq_1 (k16_finseq_1 k6_numbers X0)))))) \quad (11)$$

Assume the following.

$$v1_xboole_0 k1_xboole_0 \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0)\Rightarrow((v1_funct_1 X1)\wedge((v1_finseq_1 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers X0)))))) \quad (13)$$

Assume the following.

$$\forall X0.((\neg v1_xboole_0 X0)\wedge((v1_relat_1 X0)\wedge((v2_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_finseq_1 X0))))))\Rightarrow(\forall X1.(m1_genealg1 X1 X0)\Rightarrow(m2_finseq_1 X1 (k3_card_3 X0))) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0)\Rightarrow((v1_relat_1 X1)\wedge((v1_funct_1 X1)\wedge(v1_finseq_1 X1))) \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v7_ordinal1\ X1)\wedge(m1_finseq_1\ X2\ X0))\Rightarrow(m2_finseq_1\ (k17_finseq_1\ X0\ X1\ X2)\ X0) \quad (16)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v1_xboole_0\ X0)\wedge((v1_relat_1\ X0)\wedge((v2_relat_1\ X0)\wedge((v1_funct_1\ X0)\wedge(v1_finseq_1\ X0))))))\Rightarrow(\forall X1.(m2_finseq_1\ X1\ (k3_card_3\ X0))\Rightarrow(\forall X2.(m2_finseq_1\ X2\ (k3_card_3\ X0))\Rightarrow(\forall X3.(m1_subset_1\ X3\ k5_numbers)\Rightarrow(k1_genealg1\ X0\ X1\ X2\ X3 = k8_finseq_1\ (k3_card_3\ X0)\ (k17_finseq_1\ (k3_card_3\ X0)\ X3\ X1)\ (k2_rfinseq\ (k3_card_3\ X0)\ X3\ X2)))))) \end{aligned} \quad (17)$$

Assume the following.

$$\forall X0.(v1_xboole_0\ X0)\Rightarrow(v7_ordinal1\ X0) \quad (18)$$

Theorem 1

$$\begin{aligned} \forall X0.((\neg v1_xboole_0\ X0)\wedge((v1_relat_1\ X0)\wedge((v2_relat_1\ X0)\wedge((v1_funct_1\ X0)\wedge(v1_finseq_1\ X0))))))\Rightarrow(\forall X1.(m1_genealg1\ X1\ X0)\Rightarrow(\forall X2.(m1_genealg1\ X2\ X0)\Rightarrow(k7_genealg1\ X0\ X1\ X2\ k6_numbers = X2))) \end{aligned}$$