

l83_matrix13 (TMG- pLJ5NP9DtzWpAXDYfkeGFcTinYGLKBvJ)

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Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v6_struct_0 : \iota \Rightarrow o$ be given. Let $v13_algstr_0 : \iota \Rightarrow o$ be given. Let $v33_algstr_0 : \iota \Rightarrow o$ be given. Let $v3_group_1 : \iota \Rightarrow o$ be given. Let $v5_group_1 : \iota \Rightarrow o$ be given. Let $v2_rlvect_1 : \iota \Rightarrow o$ be given. Let $v3_rlvect_1 : \iota \Rightarrow o$ be given. Let $v4_rlvect_1 : \iota \Rightarrow o$ be given. Let $v4_vectsp_1 : \iota \Rightarrow o$ be given. Let $v5_vectsp_1 : \iota \Rightarrow o$ be given. Let $l6_algstr_0 : \iota \Rightarrow o$ be given. Let $m2_finseq_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $k4_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_matrix_1 : \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_finseq_2 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k2_matrix_1 : \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $v1_setfam_1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $v3_card_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k2_finseq_1 : \iota \Rightarrow \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_finseq_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $k1_finseq_1 : \iota \Rightarrow \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_matrix_1 : \iota \Rightarrow \iota$ be given. Assume the following.

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

Assume the following.

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

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \quad (3)$$

Assume the following.

$$\forall X0. (v1_relat_1 X0) \Rightarrow ((k9_xtuple_0 X0 = k1_xboole_0) \Leftrightarrow (k10_xtuple_0 X0 = k1_xboole_0)) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X0 (k1_zfmisc_1 X1))\Leftrightarrow(r1_tarski X0 X1) \quad (5)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0)\Rightarrow(\forall X1.(\neg v1_xboole_0 X1)\Rightarrow(\forall X2.((v3_card_1 X2 X0)\wedge(m2_finseq_1 X2 X1))\Rightarrow(k4_finseq_1 X2 = k2_finseq_1 X0))) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(r1_tarski (k2_zfmisc_1 X0 X1) (k2_zfmisc_1 X2 X3))\Rightarrow((k2_zfmisc_1 X0 X1 = k1_xboole_0)\vee((r1_tarski X0 X2)\wedge(r1_tarski X1 X3))) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge((\neg v1_xboole_0 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 X0))))\Rightarrow(\forall X2.(m2_subset_1 X2 X0 X1)\Leftrightarrow(m1_subset_1 X2 X1)) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_2 X1 X0)\Rightarrow(\forall X2.(m2_finseq_2 X2 X0 X1)\Leftrightarrow(m1_subset_1 X2 X1)) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0)\Leftrightarrow(m1_finseq_1 X1 X0) \quad (10)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (11)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (12)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_finseq_1 X0)))\Rightarrow(k4_finseq_1 X0 = k9_xtuple_0 X0) \quad (13)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0)\Rightarrow(k2_finseq_1 X0 = k1_finseq_1 X0) \quad (14)$$

Assume the following.

$$\exists X0.(m1_subset_1 X0 (k1_zfmisc_1 k5_numbers))\wedge((v1_xboole_0 X0)\wedge((v1_finset_1 X0)\wedge(v1_setfam_1 X0))) \quad (15)$$

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1) \wedge (v3_ordinal1 k4_ordinal1) \quad (16)$$

Assume the following.

$$\forall X0. (v7_ordinal1 X0) \Rightarrow (v1_finset_1 (k1_finseq_1 X0)) \quad (17)$$

Assume the following.

$$\forall X0. ((v7_ordinal1 X0) \wedge (\neg v1_xboole_0 X0)) \Rightarrow (\neg v1_xboole_0 (k1_finseq_1 X0)) \quad (18)$$

Assume the following.

$$v1_xboole_0 k1_xboole_0 \quad (19)$$

Assume the following.

$$\forall X0. (v7_ordinal1 X0) \Rightarrow (v1_setfam_1 (k1_finseq_1 X0)) \quad (20)$$

Assume the following.

$$\forall X0. ((v7_ordinal1 X0) \wedge (v1_xboole_0 X0)) \Rightarrow (v1_xboole_0 (k1_finseq_1 X0)) \quad (21)$$

Assume the following.

$$\forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge (\neg v1_xboole_0 X1)) \Rightarrow (\neg v1_xboole_0 (k2_zfmisc_1 X0 X1)) \quad (22)$$

Assume the following.

$$\forall X0. \forall X1. (m1_finseq_2 X1 X0) \Rightarrow (\forall X2. (m2_finseq_2 X2 X0 X1) \Rightarrow (m2_finseq_1 X2 X0)) \quad (23)$$

Assume the following.

$$\forall X0. \forall X1. (m2_finseq_1 X1 X0) \Rightarrow ((v1_funct_1 X1) \wedge ((v1_finseq_1 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers X0)))))) \quad (24)$$

Assume the following.

$$\forall X0. \forall X1. (m1_finseq_1 X1 X0) \Rightarrow ((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v1_finseq_1 X1))) \quad (25)$$

Assume the following.

$$m1_subset_1 k5_numbers (k1_zfmisc_1 k1_numbers) \quad (26)$$

Assume the following.

$$\forall X0.\forall X1.(v7_ordinal1\ X0)\Rightarrow(m1_finseq_2\ (k4_finseq_2\ X0\ X1)\ X1) \quad (27)$$

Assume the following.

$$\forall X0.((v1_relat_1\ X0)\wedge((v1_funct_1\ X0)\wedge(v1_finseq_1\ X0)))\Rightarrow(m2_subset_1\ (k3_finseq_1\ X0)\ k1_numbers\ k5_numbers) \quad (28)$$

Assume the following.

$$\forall X0.((v1_relat_1\ X0)\wedge((v1_funct_1\ X0)\wedge((v1_finseq_1\ X0)\wedge(v1_matrix_1\ X0))))\Rightarrow(m1_subset_1\ (k1_matrix_1\ X0)\ k5_numbers) \quad (29)$$

Assume the following.

$$\forall X0.((v1_relat_1\ X0)\wedge((v1_funct_1\ X0)\wedge((v1_finseq_1\ X0)\wedge(v1_matrix_1\ X0))))\Rightarrow(k2_matrix_1\ X0 = k2_zfmisc_1\ (k4_finseq_1\ X0)\ (k2_finseq_1\ (k1_matrix_1\ X0))) \quad (30)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1\ X1)\wedge((v1_funct_1\ X1)\wedge(v1_finseq_1\ X1)))\Rightarrow((m1_finseq_1\ X1\ X0)\Leftrightarrow(r1_tarski\ (k10_xtuple_0\ X1)\ X0)) \quad (31)$$

Assume the following.

$$\forall X0.((v1_relat_1\ X0)\wedge((v1_funct_1\ X0)\wedge(v1_finseq_1\ X0)))\Rightarrow(\forall X1.(m2_subset_1\ X1\ k1_numbers\ k5_numbers)\Rightarrow((X1 = k3_finseq_1\ X0)\Leftrightarrow(k2_finseq_1\ X1 = k9_xtuple_0\ X0))) \quad (32)$$

Assume the following.

$$\forall X0.(v1_setfam_1\ X0)\Leftrightarrow(\neg k6_numbers \in X0) \quad (33)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ k4_ordinal1)\Rightarrow(v7_ordinal1\ X0) \quad (34)$$

Assume the following.

$$\forall X0.(v1_xboole_0\ X0)\Rightarrow(v7_ordinal1\ X0) \quad (35)$$

Assume the following.

$$\forall X0.(v1_finset_1\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1\ X0))\Rightarrow(v1_finset_1\ X1)) \quad (36)$$

Assume the following.

$$\forall X0.(v1_xboole_0\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1\ X0))\Rightarrow(v1_xboole_0\ X1)) \quad (37)$$

Assume the following.

$$\forall X0.((\neg v1_xboole_0 X0) \wedge (v1_setfam_1 X0)) \Rightarrow (\forall X1. (m1_subset_1 X1 X0) \Rightarrow (\neg v1_xboole_0 X1)) \quad (38)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (v1_relat_1 X2) \quad (39)$$

Assume the following.

$$\forall X0. (v1_xboole_0 X0) \Rightarrow (v1_finset_1 X0) \quad (40)$$

Assume the following.

$$\forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge (v7_ordinal1 X1)) \Rightarrow (\forall X2. (m1_subset_1 X2 (k4_finseq_2 X1 X0)) \Rightarrow (v3_card_1 X2 X1)) \quad (41)$$

Theorem 1

$$\begin{aligned} & \forall X0. (v7_ordinal1 X0) \Rightarrow (\forall X1. (v7_ordinal1 X1) \Rightarrow (\forall X2. \\ & ((\neg v2_struct_0 X2) \wedge ((\neg v6_struct_0 X2) \wedge ((v13_algstr_0 X2) \wedge (\\ & (v33_algstr_0 X2) \wedge (v3_group_1 X2) \wedge ((v5_group_1 X2) \wedge ((v2_rlvect_1 \\ & X2) \wedge ((v3_rlvect_1 X2) \wedge ((v4_rlvect_1 X2) \wedge ((v4_vectsp_1 X2) \wedge \\ & ((v5_vectsp_1 X2) \wedge (l6_algstr_0 X2)))))))))) \Rightarrow (\forall X3. \\ & (m2_finseq_2 X3 k5_numbers (k4_finseq_2 X0 k5_numbers)) \Rightarrow (\forall X4. \\ & (m2_finseq_2 X4 k5_numbers (k4_finseq_2 X1 k5_numbers)) \Rightarrow (\forall X5. \\ & ((v1_matrix_1 X5) \wedge (m2_finseq_1 X5 (k3_finseq_2 (u1_struct_0 \\ & X2)))) \Rightarrow (\neg (r1_tarski (k2_zfmisc_1 (k10_xtuple_0 X3) (k10_xtuple_0 \\ & X4)) (k2_matrix_1 X5)) \wedge ((X0 = k6_numbers) \Rightarrow (X1 = k6_numbers)) \wedge \\ & (((X1 = k6_numbers) \Rightarrow (X0 = k6_numbers)) \wedge (\forall X6. ((v1_finset_1 \\ & X6) \wedge ((v1_setfam_1 X6) \wedge (m1_subset_1 X6 (k1_zfmisc_1 k5_numbers)))) \Rightarrow \\ & (\forall X7. ((v1_finset_1 X7) \wedge ((v1_setfam_1 X7) \wedge (m1_subset_1 \\ & X7 (k1_zfmisc_1 k5_numbers)))) \Rightarrow (\neg (X6 = k10_xtuple_0 X3) \wedge (X7 = \\ & k10_xtuple_0 X4)))))))))) \end{aligned}$$