

t28_matrix_8

(TMUgKbDrsXj4Hth54bsxDrd3tW51SKbMqvM)

October 27, 2020

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 $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $k11_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k12_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_int_1 : \iota \Rightarrow o$ be given. Let $k3_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k2_matrix_1 : \iota \Rightarrow \iota$ be given. Let $k3_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $m1_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_matrix_1 : \iota \Rightarrow \iota$ be given. Let $k2_finseq_1 : \iota \Rightarrow \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ 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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_0 : \iota$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k1_finseq_1 : \iota \Rightarrow \iota$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $l4_struct_0 : \iota \Rightarrow o$ be given. Let $v9_struct_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_struct_0 : \iota \Rightarrow \iota$ be given. Let $l2_struct_0 : \iota \Rightarrow o$ be given. Let $l2_algstr_0 : \iota \Rightarrow o$ be given. Let $l5_algstr_0 : \iota \Rightarrow o$ be given. Let $l4_algstr_0 : \iota \Rightarrow o$ be given. Let $l1_algstr_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. \forall X3. (k4_tarski X0 X1 \in k2_zfmisc_1 X2 X3) \Leftrightarrow ((X0 \in X2) \wedge (X1 \in X3)) \quad (1)$$

Assume the following.

$$\forall X0. (v1_int_1 X0) \Rightarrow (\forall X1. (v1_int_1 X1) \Rightarrow ((\neg r1_xxreal_0 X1 X0) \Rightarrow (r1_xxreal_0 (k3_real_1 X0 np_1) X1))) \quad (2)$$

Assume the following.

$$\forall X0. (v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.(v7_ordinal1\ X1) \Rightarrow (\forall X2. \\ (v7_ordinal1\ X2) \Rightarrow (\forall X3. ((\neg v2_struct_0\ X3) \wedge (l6_algstr_0 \\ X3)) \Rightarrow ((k4_tarski\ X0\ X1 \in k2_matrix_1\ (k11_matrix_1\ X3\ X2)) \Rightarrow (k3_matrix_1 \\ (u1_struct_0\ X3)\ (k11_matrix_1\ X3\ X2)\ X0\ X1 = k4_struct_0\ X3)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.(\neg v1_xboole_0\ X1) \Rightarrow (\\ \forall X2.(m1_matrix_1\ X2\ X1\ X0\ X0) \Rightarrow ((k3_finseq_1\ X2 = X0) \wedge ((k1_matrix_1 \\ X2 = X0) \wedge (k2_matrix_1\ X2 = k2_zfmisc_1\ (k2_finseq_1\ X0)\ (k2_finseq_1 \\ X0)))))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} ((v2_xxreal_0\ np_1) \wedge (m2_subset_1\ np_1\ k1_numbers\ k5_numbers)) \wedge \\ ((m1_subset_1\ np_1\ k5_numbers) \wedge (m1_subset_1\ np_1\ k1_numbers)) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} (m2_subset_1\ np_0\ k1_numbers\ k5_numbers) \wedge ((m1_subset_1\ np_0 \\ k5_numbers) \wedge (m1_subset_1\ np_0\ k1_numbers)) \end{aligned} \quad (7)$$

Assume the following.

$$v1_xboole_0\ np_0 \quad (8)$$

Assume the following.

$$k2_xcmplx_0\ np_0\ np_1 = np_1 \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((v1_xxreal_0\ X0) \wedge (v1_xxreal_0\ X1)) \Rightarrow (\\ r1_xxreal_0\ X0\ X0) \end{aligned} \quad (10)$$

Assume the following.

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

Assume the following.

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

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((v1_xreal_0\ X0) \wedge (m1_subset_1\ X1\ k1_numbers)) \Rightarrow \\ (k3_real_1\ X0\ X1 = k2_xcmplx_0\ X0\ X1) \end{aligned} \quad (13)$$

Assume the following.

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

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\neg v1_xboole_0 (u1_struct_0 X0)) \quad (15)$$

Assume the following.

$$\forall X0.((\neg v6_struct_0 X0) \wedge (l4_struct_0 X0)) \Rightarrow (\neg v9_struct_0 (k5_struct_0 X0) X0) \quad (16)$$

Assume the following.

$$\forall X0.(l2_struct_0 X0) \Rightarrow (v9_struct_0 (k4_struct_0 X0) X0) \quad (17)$$

Assume the following.

$$\forall X0.(l6_algstr_0 X0) \Rightarrow ((l2_algstr_0 X0) \wedge (l5_algstr_0 X0)) \quad (18)$$

Assume the following.

$$\forall X0.(l5_algstr_0 X0) \Rightarrow ((l4_algstr_0 X0) \wedge (l4_struct_0 X0)) \quad (19)$$

Assume the following.

$$\forall X0.(l2_struct_0 X0) \Rightarrow (l1_struct_0 X0) \quad (20)$$

Assume the following.

$$\forall X0.(l2_algstr_0 X0) \Rightarrow ((l2_struct_0 X0) \wedge (l1_algstr_0 X0)) \quad (21)$$

Assume the following.

$$\forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge (l6_algstr_0 X0)) \wedge (v7_ordinal1 X1)) \Rightarrow (m1_matrix_1 (k12_matrix_1 X0 X1) (u1_struct_0 X0) X1 X1) \quad (22)$$

Assume the following.

$$\forall X0. (v7_ordinal1 X0) \Rightarrow (k1_finseq_1 X0 = \text{ReplSep} (\text{toset} (\lambda X1 : \iota. m2_subset_1 X1 k1_numbers k5_numbers)) (\lambda X1 : \iota. (r1_xxreal_0 np_1 X1) \wedge (r1_xxreal_0 X1 X0)) (\lambda X1 : \iota. X1)) \quad (23)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge (l6_algstr_0 X0)) \Rightarrow (\forall X1. \\ & (v7_ordinal1 X1) \Rightarrow (\forall X2. (m1_matrix_1 X2 (u1_struct_0 X0) \\ & X1 X1) \Rightarrow ((X2 = k12_matrix_1 X0 X1) \Leftrightarrow ((\forall X3. (v7_ordinal1 X3) \Rightarrow \\ & ((k4_tarski X3 X3 \in k2_matrix_1 X2) \Rightarrow (k3_matrix_1 (u1_struct_0 \\ & X0) X2 X3 X3 = k5_struct_0 X0)))) \wedge (\forall X3. (v7_ordinal1 X3) \Rightarrow (\\ & \forall X4. (v7_ordinal1 X4) \Rightarrow ((k4_tarski X3 X4 \in k2_matrix_1 X2) \Rightarrow \\ & ((X3 = X4) \vee (k3_matrix_1 (u1_struct_0 X0) X2 X3 X4 = k4_struct_0 X0)))))))))) \quad (24) \end{aligned}$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1) \Rightarrow (v7_ordinal1 X0) \quad (25)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (v1_xxreal_0 X0) \quad (26)$$

Assume the following.

$$\forall X0.(v1_int_1 X0) \Rightarrow (v1_xreal_0 X0) \quad (27)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (v1_int_1 X0) \quad (28)$$

Theorem 1

$$\begin{aligned} \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1. (&(-v2_struct_0 X1) \wedge \\ &((-v6_struct_0 X1) \wedge (v13_algstr_0 X1) \wedge (v33_algstr_0 X1) \wedge \\ (v3_group_1 X1) \wedge (v5_group_1 X1) \wedge (v2_rlvect_1 X1) \wedge (v3_rlvect_1 \\ X1) \wedge (v4_rlvect_1 X1) \wedge (v4_vectsp_1 X1) \wedge (v5_vectsp_1 X1) \wedge \\ (l6_algstr_0 X1)))))) \Rightarrow (&(-r1_xxreal_0 X0 k6_numbers) \wedge \\ &(k11_matrix_1 X1 X0 = k12_matrix_1 X1 X0))) \end{aligned}$$