

t39_matrix_1

(TMXqsjAtGUyjvP8sKmecRkkgJ7ifT5sVhNZ)

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Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_matrix_1 : \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_1 : \iota$ be given. Let $k6_numbers : \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $v1_matrix_1 : \iota \Rightarrow o$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_matrix_1 : \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k4_ordinal1 : \iota$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k3_finseq_2 : \iota \Rightarrow \iota$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (\neg(k6_numbers \neq X0) \wedge (r1_xxreal_0 X0 k6_numbers)) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge ((v1_finseq_1 \\ & X0) \wedge (v1_matrix_1 X0)))) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow (\forall X2. \\ & (v7_ordinal1 X2) \Rightarrow ((k4_tarski X1 X2 \in k2_matrix_1 X0) \Rightarrow ((r1_xxreal_0 \\ & np_1 X1) \wedge ((r1_xxreal_0 X1 (k3_finseq_1 X0)) \wedge ((r1_xxreal_0 np_1 \\ & X2) \wedge (r1_xxreal_0 X2 (k1_matrix_1 X0)))))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow (\forall X2. \\ & (\neg v1_xboole_0 X2) \Rightarrow ((\neg r1_xxreal_0 X0 k1_xboole_0) \Rightarrow (\forall X3. \\ & (m1_matrix_1 X3 X2 X0 X1) \Rightarrow ((k3_finseq_1 X3 = X0) \wedge ((k1_matrix_1 \\ & X3 = X1) \wedge (k2_matrix_1 X3 = k2_zfmisc_1 (k2_finseq_1 X0) (k2_finseq_1 \\ & X1)))))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 \ np_1) \wedge (m2_subset_1 \ np_1 \ k1_numbers \ k5_numbers)) \wedge \\ & ((m1_subset_1 \ np_1 \ k5_numbers) \wedge (m1_subset_1 \ np_1 \ k1_numbers)) \end{aligned} \quad (4)$$

Assume the following.

$$\neg v1_xboole_0 \ np_1 \quad (5)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (6)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (7)$$

Assume the following.

$$\forall X0. \forall X1. v1_relat_1 \ (k2_zfmisc_1 \ X0 \ X1) \quad (8)$$

Assume the following.

$$v1_xboole_0 \ k1_xboole_0 \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m2_finseq_1 \ X1 \ X0) \Rightarrow ((v1_funct_1 \ X1) \wedge (\\ & (v1_finseq_1 \ X1) \wedge (m1_subset_1 \ X1 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ k5_numbers \\ & \ X0)))))) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((\neg v1_xboole_0 \ X0) \wedge ((v7_ordinal1 \\ & X1) \wedge (v7_ordinal1 \ X2))) \Rightarrow (\forall X3. (m1_matrix_1 \ X3 \ X0 \ X1 \ X2) \Rightarrow \\ & ((v1_matrix_1 \ X3) \wedge (m2_finseq_1 \ X3 \ (k3_finseq_2 \ X0)))) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 \ X0) \Rightarrow (\forall X1. (v7_ordinal1 \ X1) \Rightarrow (\\ & \forall X2. (v7_ordinal1 \ X2) \Rightarrow (\forall X3. ((v1_matrix_1 \ X3) \wedge (\\ & m2_finseq_1 \ X3 \ (k3_finseq_2 \ X0))) \Rightarrow ((m1_matrix_1 \ X3 \ X0 \ X1 \ X2) \Leftrightarrow (\\ & (k3_finseq_1 \ X3 = X1) \wedge (\forall X4. (m2_finseq_1 \ X4 \ X0) \Rightarrow ((X4 \in k10_xtuple_0 \\ & X3) \Rightarrow (k3_finseq_1 \ X4 = X2)))))))))) \end{aligned} \quad (12)$$

Assume the following.

$$\forall X0. (m1_subset_1 \ X0 \ k4_ordinal1) \Rightarrow (v7_ordinal1 \ X0) \quad (13)$$

Assume the following.

$$\forall X0. (v1_relat_1 \ X0) \Rightarrow (\forall X1. (m1_subset_1 \ X1 \ (k1_zfmisc_1 \ X0)) \Rightarrow (v1_relat_1 \ X1)) \quad (14)$$

Theorem 1

$$\begin{aligned} & \forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.(v7_ordinal1\ X1) \Rightarrow (\forall X2. \\ & \quad (v7_ordinal1\ X2) \Rightarrow (\forall X3.(v7_ordinal1\ X3) \Rightarrow (\forall X4.(\\ & \neg v1_xboole_0\ X4) \Rightarrow (\forall X5.(m1_matrix_1\ X5\ X4\ X0\ X1) \Rightarrow ((k4_tarski \\ & X2\ X3 \in k2_matrix_1\ X5) \Rightarrow ((r1_xxreal_0\ np_1\ X2) \wedge ((r1_xxreal_0 \\ & X2\ X0) \wedge ((r1_xxreal_0\ np_1\ X3) \wedge (r1_xxreal_0\ X3\ X1)))))))))) \end{aligned}$$