

t62_matrix13 (TMaaEtHJddQmY- Wnx7hNqPFHrRUPdBfjRBAL)

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Let $v1_xboole_0 : \iota \Rightarrow o$ 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 $v1_finset_1 : \iota \Rightarrow o$ 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 $k5_numbers : \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_matrix_1 : \iota \Rightarrow \iota$ be given. Let $k5_card_1 : \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k6_matrix13 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k2_finseq_1 : \iota \Rightarrow \iota$ be given. Let $m2_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k1_matrix13 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_matrix13 : \iota \Rightarrow \iota$ be given. Let $k14_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_card_1 : \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_1 : \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.((v1_finset_1 X0) \wedge ((v1_setfam_1 X0) \wedge (m1_subset_1 X0 (k1_zfmisc_1 k5_numbers)))) \Rightarrow (\exists X1.(v7_ordinal1 X1) \wedge (r1_tarski X0 (k2_finseq_1 X1))) \quad (1)$$

Assume the following.

$$\forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow (\forall X2.(v7_ordinal1 X2) \Rightarrow (\forall X3.((v1_matrix_1 X3) \wedge (m2_finseq_1 X3 (k3_finseq_2 X0))) \Rightarrow (\forall X4.(m2_finseq_2 X4 k5_numbers (k4_finseq_2 X2 k5_numbers)) \Rightarrow (\forall X5.(m2_finseq_2 X5 k5_numbers (k4_finseq_2 X1 k5_numbers)) \Rightarrow ((r1_tarski (k2_zfmisc_1 (k10_xtuple_0 X4) (k10_xtuple_0 X5)) (k2_matrix_1 X3)) \Rightarrow (((X1 = k6_numbers) \wedge (X2 \neq k6_numbers)) \vee (k1_matrix13 X0 X3 X2 X1 X4 X5 = k4_matrix_1 X0 (k1_matrix13 X0 (k4_matrix_1 X0 X3) X1 X2 X5 X4)))))))))) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \quad (3)$$

Assume the following.

$$\forall X0.((v1_finset_1 X0) \wedge ((v1_setfam_1 X0) \wedge (m1_subset_1 X0 (k1_zfmisc_1 k5_numbers)))) \Rightarrow (k5_matrix13 X0 = k14_finseq_1 X0) \quad (4)$$

Assume the following.

$$\forall X0.(v1_finset_1 X0) \Rightarrow (k5_card_1 X0 = k1_card_1 X0) \quad (5)$$

Assume the following.

$$\forall X0.((v1_finset_1 X0) \wedge ((v1_setfam_1 X0) \wedge (m1_subset_1 X0 (k1_zfmisc_1 k5_numbers)))) \Rightarrow (m2_finseq_2 (k5_matrix13 X0) k5_numbers (k4_finseq_2 (k5_card_1 X0) k5_numbers)) \quad (6)$$

Assume the following.

$$\forall X0.(v1_finset_1 X0) \Rightarrow (m1_subset_1 (k5_card_1 X0) k4_ordinal1) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge ((v1_matrix_1 X1) \wedge (m1_finseq_1 X1 (k3_finseq_2 X0)))) \Rightarrow ((v1_matrix_1 (k4_matrix_1 X0 X1)) \wedge (m2_finseq_1 (k4_matrix_1 X0 X1) (k3_finseq_2 X0))) \quad (8)$$

Assume the following.

$$\forall X0.m2_finseq_1 (k14_finseq_1 X0) k5_numbers \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((v1_matrix_1 X1) \wedge (m2_finseq_1 X1 (k3_finseq_2 X0))) \Rightarrow (\forall X2.((v1_finset_1 X2) \wedge ((v1_setfam_1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 k5_numbers)))) \Rightarrow (\forall X3.((v1_finset_1 X3) \wedge ((v1_setfam_1 X3) \wedge (m1_subset_1 X3 (k1_zfmisc_1 k5_numbers)))) \Rightarrow (k6_matrix13 X0 X1 X2 X3 = k1_matrix13 X0 X1 (k5_card_1 X2) (k5_card_1 X3) (k5_matrix13 X2) (k5_matrix13 X3)))))) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} \forall X0.(\exists X1.(v7_ordinal1 X1) \wedge (r1_tarski X0 (k2_finseq_1 X1))) \Rightarrow (\forall X1.(m2_finseq_1 X1 k5_numbers) \Rightarrow ((X1 = k14_finseq_1 X0) \Leftrightarrow ((k10_xtuple_0 X1 = X0) \wedge (\forall X2.(v7_ordinal1 X2) \Rightarrow (\forall X3.(v7_ordinal1 X3) \Rightarrow (\forall X4.(v7_ordinal1 X4) \Rightarrow (\forall X5.(v7_ordinal1 X5) \Rightarrow (\neg (r1_xxreal_0 np_1 X2) \wedge ((\neg r1_xxreal_0 X3 X2) \wedge ((r1_xxreal_0 X3 (k3_finseq_1 X1)) \wedge ((X4 = k1_funct_1 X1 X2) \wedge ((X5 = k1_funct_1 X1 X3) \wedge (r1_xxreal_0 X5 X4)))))))))))))) \end{aligned} \quad (11)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1) \Rightarrow (v7_ordinal1 X0) \quad (12)$$

Theorem 1

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((v1_matrix_1 X1) \wedge \\ & (m2_finseq_1 X1 (k3_finseq_2 X0))) \Rightarrow (\forall X2.((v1_finset_1 \\ & X2) \wedge ((v1_setfam_1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 k5_numbers)))) \Rightarrow \\ & (\forall X3.((v1_finset_1 X3) \wedge ((v1_setfam_1 X3) \wedge (m1_subset_1 \\ & X3 (k1_zfmisc_1 k5_numbers)))) \Rightarrow ((r1_tarski (k2_zfmisc_1 X2 X3) \\ & (k2_matrix_1 X1)) \Rightarrow (((k5_card_1 X3 = k6_numbers) \wedge (k5_card_1 X2 \neq \\ & k6_numbers)) \vee (k6_matrix13 X0 X1 X2 X3 = k4_matrix_1 X0 (k6_matrix13 \\ & X0 (k4_matrix_1 X0 X1) X3 X2)))))) \end{aligned}$$