

t27_matrixr1
(TMJDBsFKsgUo813dEsxCLpjL4FEt4kiyyfL)

October 27, 2020

Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ 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 $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k7_matrixr1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_matrix_1 : \iota \Rightarrow \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $np_1 : \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $v2_finseq_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $g6_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v6_struct_0 : \iota \Rightarrow o$ be given. Let $k2_vectsp_1 : \iota$ be given. Let $v13_algstr_0 : \iota \Rightarrow o$ be given. Let $v33_algstr_0 : \iota \Rightarrow o$ be given. Let $v36_algstr_0 : \iota \Rightarrow o$ 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 $v3_group_1 : \iota \Rightarrow o$ be given. Let $v5_group_1 : \iota \Rightarrow o$ be given. Let $v3_vectsp_1 : \iota \Rightarrow o$ be given. Let $v5_vectsp_1 : \iota \Rightarrow o$ be given. Let $v6_vectsp_1 : \iota \Rightarrow o$ be given. Let $v4_vectsp_1 : \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $l6_algstr_0 : \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k6_matrix_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k35_binop_2 : \iota$ be given. Let $k33_binop_2 : \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k2_matrixr1 : \iota \Rightarrow \iota$ be given. Let $k1_matrixr1 : \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_matrix_1 : \iota \Rightarrow \iota$ be given. Let $k3_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_group_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_algstr_0 : \iota \Rightarrow \iota$ be given. Let $u2_algstr_0 : \iota \Rightarrow \iota$ be given. Let $u3_struct_0 : \iota \Rightarrow \iota$ be given. Let $u2_struct_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 \ np_1) \wedge (m2_subset_1 \ np_1 \ k1_numbers \ k5_numbers)) \wedge \\ & ((m1_subset_1 \ np_1 \ k5_numbers) \wedge (m1_subset_1 \ np_1 \ k1_numbers)) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (m2_finseq_1 \ X1 \ X0) \Leftrightarrow (m1_finseq_1 \ X1 \ X0) \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\exists X1.(m1_finseq_1 X1 X0) \wedge \\ ((v1_relat_1 X1) \wedge ((v4_relat_1 X1 k5_numbers) \wedge ((v5_relat_1 X1 \\ X0) \wedge ((v1_funct_1 X1) \wedge ((\neg v1_xboole_0 X1) \wedge ((v1_finset_1 X1) \wedge \\ ((v1_finseq_1 X1) \wedge (v2_finseq_1 X1)))))))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.(((v1_funct_1 \\ X1) \wedge ((v1_funct_2 X1 (k2_zfmisc_1 X0 X0) X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ (k2_zfmisc_1 (k2_zfmisc_1 X0 X0) X0)))))) \wedge (((v1_funct_1 X2) \wedge \\ (v1_funct_2 X2 (k2_zfmisc_1 X0 X0) X0) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\ (k2_zfmisc_1 (k2_zfmisc_1 X0 X0) X0)))))) \wedge ((m1_subset_1 X3 X0) \wedge \\ (m1_subset_1 X4 X0)))) \Rightarrow (\forall X5.\forall X6.\forall X7.\forall X8. \\ \forall X9.(g6_algstr_0 X0 X1 X2 X3 X4 = g6_algstr_0 X5 X6 X7 X8 X9) \Rightarrow \\ ((X0 = X5) \wedge ((X1 = X6) \wedge ((X2 = X7) \wedge ((X3 = X8) \wedge (X4 = X9)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} (\neg v6_struct_0 k2_vectsp_1) \wedge ((v13_algstr_0 k2_vectsp_1) \wedge ((\\ v33_algstr_0 k2_vectsp_1) \wedge ((v36_algstr_0 k2_vectsp_1) \wedge ((v2_rlvect_1 \\ k2_vectsp_1) \wedge ((v3_rlvect_1 k2_vectsp_1) \wedge ((v4_rlvect_1 k2_vectsp_1) \wedge \\ ((v3_group_1 k2_vectsp_1) \wedge ((v5_group_1 k2_vectsp_1) \wedge ((v3_vectsp_1 \\ k2_vectsp_1) \wedge ((v5_vectsp_1 k2_vectsp_1) \wedge (v6_vectsp_1 k2_vectsp_1)))))))))) \end{aligned} \quad (5)$$

Assume the following.

$$(v36_algstr_0 k2_vectsp_1) \wedge (v4_vectsp_1 k2_vectsp_1) \quad (6)$$

Assume the following.

$$(\neg v2_struct_0 k2_vectsp_1) \wedge (v36_algstr_0 k2_vectsp_1) \quad (7)$$

Assume the following.

$$v3_membered k1_numbers \quad (8)$$

Assume the following.

$$\neg v1_xboole_0 k1_numbers \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\ (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2.(m2_subset_1 \\ X2 X0 X1) \Rightarrow (m1_subset_1 X2 X0)) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(m2_finseq_1 X1 X0) \Rightarrow ((v1_funct_1 X1) \wedge (\\ (v1_finseq_1 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers \\ X0)))))) \end{aligned} \quad (11)$$

Assume the following.

$$m2_subset_1 \ k6_numbers \ k1_numbers \ k5_numbers \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 \ X0) \wedge (\neg v6_struct_0 \\ & \ X0) \wedge ((v13_algstr_0 \ X0) \wedge ((v33_algstr_0 \ X0) \wedge ((v3_group_1 \ X0) \wedge \\ & ((v5_group_1 \ X0) \wedge ((v2_rlvect_1 \ X0) \wedge ((v3_rlvect_1 \ X0) \wedge ((v4_rlvect_1 \\ & \ X0) \wedge ((v4_vectsp_1 \ X0) \wedge ((v5_vectsp_1 \ X0) \wedge (l6_algstr_0 \ X0)))))))))) \wedge \\ & (((v1_matrix_1 \ X1) \wedge (m1_finseq_1 \ X1 \ (k3_finseq_2 \ (u1_struct_0 \\ & \ X0)))) \wedge (m1_subset_1 \ X2 \ (u1_struct_0 \ X0))) \Rightarrow ((v1_matrix_1 \ (k6_matrix_3 \\ & \ X0 \ X1 \ X2)) \wedge (m2_finseq_1 \ (k6_matrix_3 \ X0 \ X1 \ X2) \ (k3_finseq_2 \ (u1_struct_0 \\ & \ X0)))) \end{aligned} \quad (13)$$

Assume the following.

$$m1_subset_1 \ k5_numbers \ (k1_zfmisc_1 \ k1_numbers) \quad (14)$$

Assume the following.

$$\begin{aligned} & (v1_funct_1 \ k35_binop_2) \wedge ((v1_funct_2 \ k35_binop_2 \ (k2_zfmisc_1 \\ & \ k1_numbers \ k1_numbers) \ k1_numbers) \wedge (m1_subset_1 \ k35_binop_2 \\ & \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ (k2_zfmisc_1 \ k1_numbers \ k1_numbers) \\ & \ k1_numbers)))) \end{aligned} \quad (15)$$

Assume the following.

$$\begin{aligned} & (v1_funct_1 \ k33_binop_2) \wedge ((v1_funct_2 \ k33_binop_2 \ (k2_zfmisc_1 \\ & \ k1_numbers \ k1_numbers) \ k1_numbers) \wedge (m1_subset_1 \ k33_binop_2 \\ & \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ (k2_zfmisc_1 \ k1_numbers \ k1_numbers) \\ & \ k1_numbers)))) \end{aligned} \quad (16)$$

Assume the following.

$$(v36_algstr_0 \ k2_vectsp_1) \wedge (l6_algstr_0 \ k2_vectsp_1) \quad (17)$$

Assume the following.

$$\begin{aligned} & \forall X0. (v1_xreal_0 \ X0) \Rightarrow (\forall X1. ((v1_matrix_1 \ X1) \wedge (m2_finseq_1 \\ & \ X1 \ (k3_finseq_2 \ k1_numbers))) \Rightarrow (\forall X2. ((v1_matrix_1 \ X2) \wedge \\ & (m2_finseq_1 \ X2 \ (k3_finseq_2 \ k1_numbers))) \Rightarrow ((X2 = k7_matrixr1 \\ & \ X0 \ X1) \Leftrightarrow (\forall X3. (m1_subset_1 \ X3 \ (u1_struct_0 \ k2_vectsp_1)) \Rightarrow \\ & ((X3 = X0) \Rightarrow (X2 = k2_matrixr1 \ (k6_matrix_3 \ k2_vectsp_1 \ (k1_matrixr1 \\ & \ X1 \ X3)))))) \end{aligned} \quad (18)$$

Assume the following.

$$k2_vectsp_1 = g6_algstr_0 \ k1_numbers \ k33_binop_2 \ k35_binop_2 \ np_1 \ k6_numbers \quad (19)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v6_struct_0 X0) \wedge ((v13_algstr_0 \\
& X0) \wedge ((v33_algstr_0 X0) \wedge ((v3_group_1 X0) \wedge ((v5_group_1 X0) \wedge (\\
& (v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v4_vectsp_1 \\
& X0) \wedge ((v5_vectsp_1 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow (\forall X1. \\
& ((v1_matrix_1 X1) \wedge (m2_finseq_1 X1 (k3_finseq_2 (u1_struct_0 \\
& X0)))) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. \\
& ((v1_matrix_1 X3) \wedge (m2_finseq_1 X3 (k3_finseq_2 (u1_struct_0 \\
& X0)))) \Rightarrow ((X3 = k6_matrix_3 X0 X1 X2) \Leftrightarrow ((k3_finseq_1 X3 = k3_finseq_1 \\
& X1) \wedge ((k1_matrix_1 X3 = k1_matrix_1 X1) \wedge (\forall X4.(v7_ordinal1 \\
& X4) \Rightarrow (\forall X5.(v7_ordinal1 X5) \Rightarrow ((k4_tarski X4 X5 \in k2_matrix_1 \\
& X1) \Rightarrow (k3_matrix_1 (u1_struct_0 X0) X3 X4 X5 = k8_group_1 X0 X2 (k3_matrix_1 \\
& (u1_struct_0 X0) X1 X4 X5))))))))))
\end{aligned} \tag{20}$$

Assume the following.

$$\forall X0.((v1_matrix_1 X0) \wedge (m2_finseq_1 X0 (k3_finseq_2 (u1_struct_0 k2_vectsp_1)))) \Rightarrow (k2_matrixr1 X0 = X0) \tag{21}$$

Assume the following.

$$\forall X0.((v1_matrix_1 X0) \wedge (m2_finseq_1 X0 (k3_finseq_2 k1_numbers))) \Rightarrow (k1_matrixr1 X0 = X0) \tag{22}$$

Assume the following.

$$\forall X0. \forall X1.(v1_xboole_0 X0) \Rightarrow (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (v1_xboole_0 X2)) \tag{23}$$

Assume the following.

$$\forall X0.(v3_membered X0) \Rightarrow (\forall X1.(m1_subset_1 X1 X0) \Rightarrow (v1_xreal_0 X1)) \tag{24}$$

Assume the following.

$$\forall X0.(l6_algstr_0 X0) \Rightarrow ((v36_algstr_0 X0) \Rightarrow (X0 = g6_algstr_0 (u1_struct_0 X0) (u1_algstr_0 X0) (u2_algstr_0 X0) (u3_struct_0 X0) (u2_struct_0 X0))) \tag{25}$$

Theorem 1

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.((v1_matrix_1 X1) \wedge (m2_finseq_1 X1 (k3_finseq_2 k1_numbers))) \Rightarrow ((k3_finseq_1 (k7_matrixr1 X0 X1) = k3_finseq_1 X1) \wedge (k1_matrix_1 (k7_matrixr1 X0 X1) = k1_matrix_1 X1)))$$