

t12_matrix14

(TMNLJ4zTmL7fpMVWjGygwC89NTwZJcLAJVz)

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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 $v2_rlvect_1 : \iota \Rightarrow o$ 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 $v4_vectsp_1 : \iota \Rightarrow o$ be given. Let $v5_vectsp_1 : \iota \Rightarrow o$ be given. Let $l6_algstr_0 : \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k13_fvsu1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l4_algstr_0 : \iota \Rightarrow o$ be given. Let $k11_fvsu1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l2_algstr_0 : \iota \Rightarrow o$ be given. Let $k4_rlvect_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l5_algstr_0 : \iota \Rightarrow o$ be given. Let $l4_struct_0 : \iota \Rightarrow o$ be given. Let $l3_struct_0 : \iota \Rightarrow o$ be given. Let $l3_algstr_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v2_struct_0 X0) \wedge (l4_algstr_0 X0)) \Rightarrow (\forall X1. \\
 & (m2_finseq_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. (m2_finseq_1 X2 \\
 & (u1_struct_0 X0)) \Rightarrow (\forall X3. (m2_finseq_1 X3 (u1_struct_0 X0)) \Rightarrow \\
 & (\forall X4. (m2_finseq_1 X4 (u1_struct_0 X0)) \Rightarrow (((k3_finseq_1 \\
 & X1 = k3_finseq_1 X2) \wedge (k3_finseq_1 X3 = k3_finseq_1 X4)) \Rightarrow (k11_fvsu1 \\
 & X0 (k8_finseq_1 (u1_struct_0 X0) X1 X3) (k8_finseq_1 (u1_struct_0 \\
 & X0) X2 X4) = k8_finseq_1 (u1_struct_0 X0) (k11_fvsu1 X0 X1 X2) (\\
 & k11_fvsu1 X0 X3 X4))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 \\
 & X0) \wedge (l2_algstr_0 X0)))) \Rightarrow (\forall X1. (m2_finseq_1 X1 (u1_struct_0 \\
 & X0)) \Rightarrow (\forall X2. (m2_finseq_1 X2 (u1_struct_0 X0)) \Rightarrow (k4_rlvect_1 \\
 & X0 (k8_finseq_1 (u1_struct_0 X0) X1 X2) = k1_algstr_0 X0 (k4_rlvect_1 \\
 & X0 X1) (k4_rlvect_1 X0 X2))))
 \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. (m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \tag{3}$$

Assume the following.

$$\forall X0.(l6_algstr_0 X0) \Rightarrow ((l2_algstr_0 X0) \wedge (l5_algstr_0 X0)) \quad (4)$$

Assume the following.

$$\forall X0.(l5_algstr_0 X0) \Rightarrow ((l4_algstr_0 X0) \wedge (l4_struct_0 X0)) \quad (5)$$

Assume the following.

$$\forall X0.(l4_algstr_0 X0) \Rightarrow ((l3_struct_0 X0) \wedge (l3_algstr_0 X0)) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1_finseq_1 X1 X0) \wedge (m1_finseq_1 X2 X0)) \Rightarrow (m2_finseq_1 (k8_finseq_1 X0 X1 X2) X0) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0) \wedge (l3_algstr_0 X0)) \wedge ((m1_finseq_1 X1 (u1_struct_0 X0)) \wedge (m1_finseq_1 X2 (u1_struct_0 X0)))) \Rightarrow (m2_finseq_1 (k11_fvsum_1 X0 X1 X2) (u1_struct_0 X0)) \quad (8)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge (l6_algstr_0 X0)) \Rightarrow (\forall X1.(m2_finseq_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m2_finseq_1 X2 (u1_struct_0 X0)) \Rightarrow (k13_fvsum_1 X0 X1 X2 = k4_rlvect_1 X0 (k11_fvsum_1 X0 X1 X2)))) \quad (9)$$

Theorem 1

$$\forall X0.(((\neg v2_struct_0 X0) \wedge ((\neg v6_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v33_algstr_0 X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v3_group_1 X0) \wedge ((v5_group_1 X0) \wedge ((v4_vectsp_1 X0) \wedge ((v5_vectsp_1 X0) \wedge (l6_algstr_0 X0)))))))))))) \Rightarrow (\forall X1.(m2_finseq_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m2_finseq_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m2_finseq_1 X3 (u1_struct_0 X0)) \Rightarrow (\forall X4.(m2_finseq_1 X4 (u1_struct_0 X0)) \Rightarrow (((k3_finseq_1 X1 = k3_finseq_1 X2) \wedge (k3_finseq_1 X3 = k3_finseq_1 X4)) \Rightarrow (k13_fvsum_1 X0 (k8_finseq_1 (u1_struct_0 X0) X1 X3) (k8_finseq_1 (u1_struct_0 X0) X2 X4) = k1_algstr_0 X0 (k13_fvsum_1 X0 X1 X2) (k13_fvsum_1 X0 X3 X4))))))))))$$