

t26_hermitan (TMRodPhzh- beoKGFHng5WMK7SBaqKeJccJbW)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v13_algstr_0 : \iota \Rightarrow o$ 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 $v8_vectsp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_complfld : \iota$ be given. Let $v9_vectsp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v10_vectsp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v11_vectsp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_vectsp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v13_vectsp_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_hermitan : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_vectsp10 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_vectsp10 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_hermitan : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_vectsp_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_hermitan : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_vectsp10 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_hahnban1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v6_struct_0 : \iota \Rightarrow o$ be given. Let $v33_algstr_0 : \iota \Rightarrow o$ be given. Let $v36_algstr_0 : \iota \Rightarrow o$ be given. Let $v3_group_1 : \iota \Rightarrow o$ 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 $l6_algstr_0 : \iota \Rightarrow o$ be given. Let $v7_vectsp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_vectsp_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10_vectsp10 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge (l1_vectsp_1 X0 k1_complfld)) \Rightarrow \\
& (\forall X1.((v1_funct_1 X1) \wedge ((v1_funct_2 X1 (u1_struct_0 X0) \\
& (u1_struct_0 k1_complfld)) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\
& (u1_struct_0 X0) (u1_struct_0 k1_complfld)))))) \Rightarrow (k8_vectsp10 \\
& k1_complfld X0 X1 = k8_vectsp10 k1_complfld X0 (k1_hermitan X0 X1)))
\end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. r1_tarski X0 X0 \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.(((\neg v2_struct_0 X0)\wedge(l1_vectsp_1 X0 k1_complfld))\wedge \\
& ((v1_funct_1 X1)\wedge((v1_funct_2 X1 (u1_struct_0 X0) (u1_struct_0 \\
& k1_complfld))\wedge((v1_hermitan X1 X0)\wedge(m1_subset_1 X1 (k1_zfmisc_1 \\
& (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 k1_complfld))))))\Rightarrow \\
& ((v1_funct_1 (k1_hermitan X0 X1))\wedge((v1_funct_2 (k1_hermitan \\
& X0 X1) (u1_struct_0 X0) (u1_struct_0 k1_complfld))\wedge(v1_hahnban1 \\
& (k1_hermitan X0 X1) k1_complfld X0)))
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.(((\neg v2_struct_0 X0)\wedge(l1_vectsp_1 X0 k1_complfld))\wedge \\
& ((v1_funct_1 X1)\wedge((v1_funct_2 X1 (u1_struct_0 X0) (u1_struct_0 \\
& k1_complfld))\wedge((v13_vectsp_1 X1 X0 k1_complfld)\wedge(m1_subset_1 \\
& X1 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 k1_complfld))))))\Rightarrow \\
& ((v1_funct_1 (k1_hermitan X0 X1))\wedge((v1_funct_2 (k1_hermitan \\
& X0 X1) (u1_struct_0 X0) (u1_struct_0 k1_complfld))\wedge(v13_vectsp_1 \\
& (k1_hermitan X0 X1) X0 k1_complfld)))
\end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned}
& (\neg v6_struct_0 k1_complfld)\wedge((v13_algstr_0 k1_complfld)\wedge((\\
& v33_algstr_0 k1_complfld)\wedge((v36_algstr_0 k1_complfld)\wedge((v3_group_1 \\
& k1_complfld)\wedge((v5_group_1 k1_complfld)\wedge((v3_vectsp_1 k1_complfld)\wedge \\
& ((v5_vectsp_1 k1_complfld)\wedge((v6_vectsp_1 k1_complfld)\wedge((v2_rlvect_1 \\
& k1_complfld)\wedge((v3_rlvect_1 k1_complfld)\wedge(v4_rlvect_1 k1_complfld))))))))))
\end{aligned} \tag{5}$$

Assume the following.

$$(v36_algstr_0 k1_complfld)\wedge(v4_vectsp_1 k1_complfld) \tag{6}$$

Assume the following.

$$(\neg v2_struct_0 k1_complfld)\wedge(v36_algstr_0 k1_complfld) \tag{7}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge (v13_algstr_0 \\
& X0) \wedge (v2_rlvect_1 X0) \wedge (v3_rlvect_1 X0) \wedge (v4_rlvect_1 X0) \wedge \\
& (v3_group_1 X0) \wedge (v4_vectsp_1 X0) \wedge (v5_vectsp_1 X0) \wedge (l6_algstr_0 \\
& X0)))))) \wedge (((\neg v2_struct_0 X1) \wedge (v13_algstr_0 X1) \wedge (v2_rlvect_1 \\
& X1) \wedge (v3_rlvect_1 X1) \wedge (v4_rlvect_1 X1) \wedge (v8_vectsp_1 X1 X0) \wedge \\
& (v9_vectsp_1 X1 X0) \wedge (v10_vectsp_1 X1 X0) \wedge (v11_vectsp_1 X1 \\
& X0) \wedge (l1_vectsp_1 X1 X0)))))) \wedge ((v1_funct_1 X2) \wedge (v1_funct_2 \\
& X2 (u1_struct_0 X1) (u1_struct_0 X0)) \wedge (v13_vectsp_1 X2 X1 X0) \wedge \\
& (v1_hahnban1 X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\
& (u1_struct_0 X1) (u1_struct_0 X0)))))) \Rightarrow ((\neg v2_struct_0 (\\
& k9_vectsp10 X0 X1 X2)) \wedge (v7_vectsp_1 (k9_vectsp10 X0 X1 X2) X0) \wedge \\
& (m1_vectsp_4 (k9_vectsp10 X0 X1 X2) X0 X1)))
\end{aligned} \tag{8}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge (v13_algstr_0 X0) \wedge \\
& (v2_rlvect_1 X0) \wedge (v3_rlvect_1 X0) \wedge (v4_rlvect_1 X0) \wedge (v8_vectsp_1 \\
& X0 k1_complfld) \wedge (v9_vectsp_1 X0 k1_complfld) \wedge (v10_vectsp_1 \\
& X0 k1_complfld) \wedge (v11_vectsp_1 X0 k1_complfld) \wedge (l1_vectsp_1 \\
& X0 k1_complfld)))))) \wedge ((v1_funct_1 X1) \wedge (v1_funct_2 X1 (\\
& u1_struct_0 X0) (u1_struct_0 k1_complfld)) \wedge (v13_vectsp_1 X1 \\
& X0 k1_complfld) \wedge (v1_hermitan X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\
& (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 k1_complfld)))))) \Rightarrow \\
& ((v1_funct_1 (k2_hermitan X0 X1)) \wedge (v1_funct_2 (k2_hermitan \\
& X0 X1) (u1_struct_0 (k6_vectsp10 k1_complfld X0 (k9_vectsp10 k1_complfld \\
& X0 (k1_hermitan X0 X1)))) (u1_struct_0 k1_complfld)) \wedge (v13_vectsp_1 \\
& (k2_hermitan X0 X1) (k6_vectsp10 k1_complfld X0 (k9_vectsp10 k1_complfld \\
& X0 (k1_hermitan X0 X1))) k1_complfld) \wedge (v1_hermitan (k2_hermitan \\
& X0 X1) (k6_vectsp10 k1_complfld X0 (k9_vectsp10 k1_complfld X0 \\
& (k1_hermitan X0 X1)))) \wedge (m1_subset_1 (k2_hermitan X0 X1) (k1_zfmisc_1 \\
& (k2_zfmisc_1 (u1_struct_0 (k6_vectsp10 k1_complfld X0 (k9_vectsp10 \\
& k1_complfld X0 (k1_hermitan X0 X1)))) (u1_struct_0 k1_complfld))))))
\end{aligned} \tag{9}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge (l1_vectsp_1 X0 k1_complfld) \wedge \\
& ((v1_funct_1 X1) \wedge (v1_funct_2 X1 (u1_struct_0 X0) (u1_struct_0 \\
& k1_complfld)) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\
& X0) (u1_struct_0 k1_complfld)))))) \Rightarrow ((v1_funct_1 (k1_hermitan \\
& X0 X1)) \wedge (v1_funct_2 (k1_hermitan X0 X1) (u1_struct_0 X0) (u1_struct_0 \\
& k1_complfld)) \wedge (m1_subset_1 (k1_hermitan X0 X1) (k1_zfmisc_1 \\
& (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 k1_complfld))))))
\end{aligned} \tag{10}$$

Assume the following.

$$(v36_algstr_0 k1_complfld) \wedge (l6_algstr_0 k1_complfld) \tag{11}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\
& X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v8_vectsp_1 X0 k1_complfld) \wedge \\
& ((v9_vectsp_1 X0 k1_complfld) \wedge ((v10_vectsp_1 X0 k1_complfld) \wedge \\
& ((v11_vectsp_1 X0 k1_complfld) \wedge (l1_vectsp_1 X0 k1_complfld)))))))))) \Rightarrow \\
& (\forall X1.((v1_funct_1 X1) \wedge ((v1_funct_2 X1 (u1_struct_0 X0) \\
& (u1_struct_0 k1_complfld) \wedge ((v13_vectsp_1 X1 X0 k1_complfld) \wedge \\
& ((v1_hermitan X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\
& (u1_struct_0 X0) (u1_struct_0 k1_complfld)))))))))) \Rightarrow (k2_hermitan \\
& X0 X1 = k10_vectsp10 k1_complfld X0 (k9_vectsp10 k1_complfld X0 \\
& (k1_hermitan X0 X1)) X1))
\end{aligned} \tag{12}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\
& X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v3_group_1 X0) \wedge (\\
& (v4_vectsp_1 X0) \wedge ((v5_vectsp_1 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow \\
& (\forall X1.((\neg v2_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge ((v2_rlvect_1 \\
& X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 X1) \wedge ((v8_vectsp_1 X1 X0) \wedge \\
& ((v9_vectsp_1 X1 X0) \wedge ((v10_vectsp_1 X1 X0) \wedge ((v11_vectsp_1 X1 \\
& X0) \wedge (l1_vectsp_1 X1 X0)))))))))) \Rightarrow (\forall X2.(m1_vectsp_4 X2 \\
& X0 X1) \Rightarrow (\forall X3.((v1_funct_1 X3) \wedge ((v1_funct_2 X3 (u1_struct_0 \\
& X1) (u1_struct_0 X0)) \wedge ((v13_vectsp_1 X3 X1 X0) \wedge (m1_subset_1 X3 \\
& (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X1) (u1_struct_0 X0)))))) \Rightarrow \\
& ((r1_tarski (u1_struct_0 X2) (k8_vectsp10 X0 X1 X3)) \Rightarrow (\forall X4. \\
& ((v1_funct_1 X4) \wedge ((v1_funct_2 X4 (u1_struct_0 (k6_vectsp10 X0 \\
& X1 X2)) (u1_struct_0 X0)) \wedge ((v13_vectsp_1 X4 (k6_vectsp10 X0 X1 \\
& X2) X0) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\
& (k6_vectsp10 X0 X1 X2)) (u1_struct_0 X0)))))) \Rightarrow ((X4 = k10_vectsp10 \\
& X0 X1 X2 X3) \Leftrightarrow (\forall X5.(m1_subset_1 X5 (u1_struct_0 (k6_vectsp10 \\
& X0 X1 X2)) \Rightarrow (\forall X6.(m1_subset_1 X6 (u1_struct_0 X1)) \Rightarrow ((X5 = \\
& k3_vectsp_4 X0 X1 X6 X2) \Rightarrow (k3_funct_2 (u1_struct_0 (k6_vectsp10 \\
& X0 X1 X2)) (u1_struct_0 X0) X4 X5 = k3_funct_2 (u1_struct_0 X1) (u1_struct_0 \\
& X0) X3 X6))))))))))
\end{aligned} \tag{13}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\
& X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v3_group_1 X0) \wedge (\\
& (v4_vectsp_1 X0) \wedge ((v5_vectsp_1 X0) \wedge (l6_algstr_0 X0))))))) \Rightarrow \\
& (\forall X1.((\neg v2_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge ((v2_rlvect_1 \\
& X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 X1) \wedge ((v8_vectsp_1 X1 X0) \wedge \\
& ((v9_vectsp_1 X1 X0) \wedge ((v10_vectsp_1 X1 X0) \wedge ((v11_vectsp_1 X1 \\
& X0) \wedge (l1_vectsp_1 X1 X0))))))) \Rightarrow (\forall X2.((v1_funct_1 X2) \wedge \\
& ((v1_funct_2 X2 (u1_struct_0 X1) (u1_struct_0 X0)) \wedge ((v13_vectsp_1 \\
& X2 X1 X0) \wedge ((v1_hahnban1 X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\
& (k2_zfmisc_1 (u1_struct_0 X1) (u1_struct_0 X0))))))) \Rightarrow (\forall X3. \\
& ((\neg v2_struct_0 X3) \wedge ((v7_vectsp_1 X3 X0) \wedge (m1_vectsp_4 X3 X0 X1))) \Rightarrow \\
& ((X3 = k9_vectsp10 X0 X1 X2) \Leftrightarrow (u1_struct_0 X3 = k8_vectsp10 X0 X1 X2))))))
\end{aligned} \tag{14}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\
& X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v8_vectsp_1 X0 k1_complfld) \wedge \\
& ((v9_vectsp_1 X0 k1_complfld) \wedge ((v10_vectsp_1 X0 k1_complfld) \wedge \\
& ((v11_vectsp_1 X0 k1_complfld) \wedge (l1_vectsp_1 X0 k1_complfld))))))) \Rightarrow \\
& (\forall X1.((v1_funct_1 X1) \wedge ((v1_funct_2 X1 (u1_struct_0 X0) \\
& (u1_struct_0 k1_complfld) \wedge ((v13_vectsp_1 X1 X0 k1_complfld) \wedge \\
& ((v1_hermitan X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\
& (u1_struct_0 X0) (u1_struct_0 k1_complfld))))))) \Rightarrow (\forall X2. \\
& (m1_subset_1 X2 (u1_struct_0 (k6_vectsp10 k1_complfld X0 (k9_vectsp10 \\
& k1_complfld X0 (k1_hermitan X0 X1)))) \Rightarrow (\forall X3.(m1_subset_1 \\
& X3 (u1_struct_0 X0) \Rightarrow ((X2 = k3_vectsp_4 k1_complfld X0 X3 (k9_vectsp10 \\
& k1_complfld X0 (k1_hermitan X0 X1))) \Rightarrow (k3_funct_2 (u1_struct_0 \\
& (k6_vectsp10 k1_complfld X0 (k9_vectsp10 k1_complfld X0 (k1_hermitan \\
& X0 X1)))) (u1_struct_0 k1_complfld) (k2_hermitan X0 X1) X2 = k3_funct_2 \\
& (u1_struct_0 X0) (u1_struct_0 k1_complfld) X1 X3))))))
\end{aligned}$$