

t36_hermitan
(TMFnJK9npLDhRBcowhbYVfNBM4M2uM4owNp)

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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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ 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 $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_bilinear : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_bilinear : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_bilinear : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_hermitan : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_binop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_group_1 : \iota \Rightarrow o$ 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 $v6_struct_0 : \iota \Rightarrow o$ be given. Let $v33_algstr_0 : \iota \Rightarrow o$ be given. Let $v36_algstr_0 : \iota \Rightarrow o$ be given. Let $v5_group_1 : \iota \Rightarrow o$ be given. Let $v3_vectsp_1 : \iota \Rightarrow o$ be given. Let $v6_vectsp_1 : \iota \Rightarrow o$ be given. Let $l2_algstr_0 : \iota \Rightarrow o$ be given. Let $l5_algstr_0 : \iota \Rightarrow o$ be given. Let $l2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_algstr_0 : \iota \Rightarrow o$ be given.

Let $l1_struct_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\
& X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v8_vectsp_1 X0 k1_complfld) \wedge \\
& ((v9_vectsp_1 X0 k1_complfld) \wedge ((v10_vectsp_1 X0 k1_complfld) \wedge \\
& ((v11_vectsp_1 X0 k1_complfld) \wedge (l1_vectsp_1 X0 k1_complfld)))))))))) \Rightarrow \\
& (\forall X1.((\neg v2_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge ((v2_rlvect_1 \\
& X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 X1) \wedge ((v8_vectsp_1 X1 k1_complfld) \wedge \\
& ((v9_vectsp_1 X1 k1_complfld) \wedge ((v10_vectsp_1 X1 k1_complfld) \wedge \\
& ((v11_vectsp_1 X1 k1_complfld) \wedge (l1_vectsp_1 X1 k1_complfld)))))))))) \Rightarrow \\
& (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 \\
& X3 (u1_struct_0 X1)) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 \\
& X1)) \Rightarrow (\forall X5.((v1_funct_1 X5) \wedge ((v1_funct_2 X5 (k2_zfmisc_1 \\
& (u1_struct_0 X0) (u1_struct_0 X1)) (u1_struct_0 k1_complfld)) \wedge \\
& ((v1_bilinear X5 k1_complfld X0 X1) \wedge ((v2_hermitan X5 X0 X1) \wedge (m1_subset_1 \\
& X5 (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 \\
& X1)) (u1_struct_0 k1_complfld)))))) \Rightarrow (k2_binop_1 (u1_struct_0 \\
& X0) (u1_struct_0 X1) (u1_struct_0 k1_complfld) X5 X2 (k5_algstr_0 \\
& X1 X3 X4) = k5_algstr_0 k1_complfld (k2_binop_1 (u1_struct_0 X0) \\
& (u1_struct_0 X1) (u1_struct_0 k1_complfld) X5 X2 X3) (k2_binop_1 \\
& (u1_struct_0 X0) (u1_struct_0 X1) (u1_struct_0 k1_complfld) X5 \\
& X2 X4)))))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\
& X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v3_group_1 X0) \wedge (\\
& (v4_vectsp_1 X0) \wedge ((v5_vectsp_1 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow \\
& (\forall X1.((\neg v2_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge ((v2_rlvect_1 \\
& X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 X1) \wedge ((v8_vectsp_1 X1 X0) \wedge \\
& ((v9_vectsp_1 X1 X0) \wedge ((v10_vectsp_1 X1 X0) \wedge ((v11_vectsp_1 X1 \\
& X0) \wedge (l1_vectsp_1 X1 X0)))))))))) \Rightarrow (\forall X2.((\neg v2_struct_0 \\
& X2) \wedge ((v13_algstr_0 X2) \wedge ((v2_rlvect_1 X2) \wedge ((v3_rlvect_1 X2) \wedge \\
& ((v4_rlvect_1 X2) \wedge ((v8_vectsp_1 X2 X0) \wedge ((v9_vectsp_1 X2 X0) \wedge \\
& ((v10_vectsp_1 X2 X0) \wedge ((v11_vectsp_1 X2 X0) \wedge (l1_vectsp_1 X2 X0)))))))))) \Rightarrow \\
& (\forall X3.(m1_subset_1 X3 (u1_struct_0 X1)) \Rightarrow (\forall X4.(m1_subset_1 \\
& X4 (u1_struct_0 X1)) \Rightarrow (\forall X5.(m1_subset_1 X5 (u1_struct_0 \\
& X2)) \Rightarrow (\forall X6.((v1_funct_1 X6) \wedge ((v1_funct_2 X6 (k2_zfmisc_1 \\
& (u1_struct_0 X1) (u1_struct_0 X2)) (u1_struct_0 X0) \wedge ((v2_bilinear \\
& X6 X0 X1 X2) \wedge ((v4_bilinear X6 X0 X1 X2) \wedge (m1_subset_1 X6 (k1_zfmisc_1 \\
& (k2_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X1) (u1_struct_0 X2)) \\
& (u1_struct_0 X0)))))) \Rightarrow (k2_binop_1 (u1_struct_0 X1) (u1_struct_0 \\
& X2) (u1_struct_0 X0) X6 (k5_algstr_0 X1 X3 X4) X5 = k5_algstr_0 X0 \\
& (k2_binop_1 (u1_struct_0 X1) (u1_struct_0 X2) (u1_struct_0 X0) \\
& X6 X3 X5) (k2_binop_1 (u1_struct_0 X1) (u1_struct_0 X2) (u1_struct_0 \\
& X0) X6 X4 X5)))))))))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& (\neg v6_struct_0 \ k1_complfld) \wedge ((v13_algstr_0 \ k1_complfld) \wedge ((\\
& \quad v33_algstr_0 \ k1_complfld) \wedge ((v36_algstr_0 \ k1_complfld) \wedge ((v3_group_1 \\
& \quad k1_complfld) \wedge ((v5_group_1 \ k1_complfld) \wedge ((v3_vectsp_1 \ k1_complfld) \wedge \\
& \quad ((v5_vectsp_1 \ k1_complfld) \wedge ((v6_vectsp_1 \ k1_complfld) \wedge ((v2_rlvect_1 \\
& \quad k1_complfld) \wedge ((v3_rlvect_1 \ k1_complfld) \wedge (v4_rlvect_1 \ k1_complfld)))))))))) \\
& \tag{3}
\end{aligned}$$

Assume the following.

$$(v36_algstr_0 \ k1_complfld) \wedge (v4_vectsp_1 \ k1_complfld) \tag{4}$$

Assume the following.

$$(\neg v2_struct_0 \ k1_complfld) \wedge (v36_algstr_0 \ k1_complfld) \tag{5}$$

Assume the following.

$$\forall X0. (l6_algstr_0 \ X0) \Rightarrow ((l2_algstr_0 \ X0) \wedge (l5_algstr_0 \ X0)) \tag{6}$$

Assume the following.

$$\forall X0. (l2_algstr_0 \ X0) \Rightarrow ((l2_struct_0 \ X0) \wedge (l1_algstr_0 \ X0)) \tag{7}$$

Assume the following.

$$\begin{aligned}
& \forall X0. (l1_struct_0 \ X0) \Rightarrow (\forall X1. (l1_vectsp_1 \ X1 \ X0) \Rightarrow \\
& \quad (l2_algstr_0 \ X1)) \\
& \tag{8}
\end{aligned}$$

Assume the following.

$$\forall X0. (l1_algstr_0 \ X0) \Rightarrow (l1_struct_0 \ X0) \tag{9}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. ((l2_algstr_0 \ X0) \wedge ((m1_subset_1 \\
& \quad X1 \ (u1_struct_0 \ X0)) \wedge (m1_subset_1 \ X2 \ (u1_struct_0 \ X0)))) \Rightarrow (m1_subset_1 \\
& \quad (k5_algstr_0 \ X0 \ X1 \ X2) \ (u1_struct_0 \ X0)) \\
& \tag{10}
\end{aligned}$$

Assume the following.

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

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.((\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 k1_complfld) \wedge \\
& ((v9_vectsp_1 X1 k1_complfld) \wedge ((v10_vectsp_1 X1 k1_complfld) \wedge \\
& ((v11_vectsp_1 X1 k1_complfld) \wedge (l1_vectsp_1 X1 k1_complfld)))))))))) \Rightarrow \\
& (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 \\
& X3 (u1_struct_0 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 \\
& X1)) \Rightarrow (\forall X5.(m1_subset_1 X5 (u1_struct_0 X1)) \Rightarrow (\forall X6. \\
& ((v1_funct_1 X6) \wedge ((v1_funct_2 X6 (k2_zfmisc_1 (u1_struct_0 X0) \\
& (u1_struct_0 X1)) (u1_struct_0 k1_complfld)) \wedge ((v1_bilinear \\
& X6 k1_complfld X0 X1) \wedge ((v2_bilinear X6 k1_complfld X0 X1) \wedge ((v4_bilinear \\
& X6 k1_complfld X0 X1) \wedge ((v2_hermitan X6 X0 X1) \wedge (m1_subset_1 X6 (\\
& k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 \\
& X1)) (u1_struct_0 k1_complfld)))))))))) \Rightarrow (k2_binop_1 (u1_struct_0 \\
& X0) (u1_struct_0 X1) (u1_struct_0 k1_complfld) X6 (k5_algstr_0 \\
& X0 X2 X3) (k5_algstr_0 X1 X4 X5) = k5_algstr_0 k1_complfld (k5_algstr_0 \\
& k1_complfld (k2_binop_1 (u1_struct_0 X0) (u1_struct_0 X1) (u1_struct_0 \\
& k1_complfld) X6 X2 X4) (k2_binop_1 (u1_struct_0 X0) (u1_struct_0 \\
& X1) (u1_struct_0 k1_complfld) X6 X2 X5)) (k5_algstr_0 k1_complfld \\
& (k2_binop_1 (u1_struct_0 X0) (u1_struct_0 X1) (u1_struct_0 k1_complfld) \\
& X6 X3 X4) (k2_binop_1 (u1_struct_0 X0) (u1_struct_0 X1) (u1_struct_0 \\
& k1_complfld) X6 X3 X5))))))))))
\end{aligned}$$