

t8_hermitan

(TMG5TVCynzHA3iKpZrG9tM6huXUwy5tp5Rx)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_complfld : \iota$ be given. Let $k17_complex1 : \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k3_complex1 : \iota \Rightarrow \iota$ be given. Let $k8_group_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_complex1 : \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_numbers : \iota$ be given. Let $k9_complex1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $v36_algstr_0 : \iota \Rightarrow o$ be given. Let $v4_vectsp_1 : \iota \Rightarrow o$ be given. Let $l6_algstr_0 : \iota \Rightarrow o$ be given. Let $u1_algstr_0 : \iota \Rightarrow \iota$ be given. Let $k27_binop_2 : \iota$ be given. Let $u2_algstr_0 : \iota \Rightarrow \iota$ be given. Let $k29_binop_2 : \iota$ be given. Let $k5_struct_0 : \iota \Rightarrow \iota$ be given. Let $k6_complex1 : \iota$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $k5_complex1 : \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.(v1_xcmplx_0 X0) \Rightarrow (\forall X1.(v1_xcmplx_0 X1) \Rightarrow ((\\ k3_complex1 (k3_xcmplx_0 X0 X1) = k9_real_1 (k8_real_1 (k3_complex1 \\ X0) (k3_complex1 X1)) (k8_real_1 (k4_complex1 X0) (k4_complex1 \\ X1))) \wedge (k4_complex1 (k3_xcmplx_0 X0 X1) = k7_real_1 (k8_real_1 \\ (k3_complex1 X0) (k4_complex1 X1)) (k8_real_1 (k3_complex1 X1) \\ (k4_complex1 X0)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_subset_1 X0 k2_numbers) \Rightarrow (\exists X1.(m1_subset_1 \\ X1 k2_numbers) \wedge ((k17_complex1 X1 = np_1) \wedge ((k3_complex1 (k9_complex1 \\ X1 X0) = k17_complex1 X0) \wedge (k4_complex1 (k9_complex1 X1 X0) = k6_numbers)))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 (u1_struct_0 k1_complfld)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (u1_struct_0 k1_complfld)) \Rightarrow ((k3_complex1 (k8_group_1 \\ & k1_complfld X0 X1) = k9_real_1 (k8_real_1 (k3_complex1 X0) (k3_complex1 \\ & X1)) (k8_real_1 (k4_complex1 X0) (k4_complex1 X1))) \wedge (k4_complex1 \\ & (k8_group_1 k1_complfld X0 X1) = k7_real_1 (k8_real_1 (k3_complex1 \\ & X0) (k4_complex1 X1)) (k8_real_1 (k3_complex1 X1) (k4_complex1 \\ & X0)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k2_numbers) \wedge (m1_subset_1 X1 k2_numbers)) \Rightarrow (k9_complex1 X0 X1 = k3_xcmplx_0 X0 X1) \quad (4)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (5)$$

Assume the following.

$$(v36_algstr_0 k1_complfld) \wedge (v4_vectsp_1 k1_complfld) \quad (6)$$

Assume the following.

$$(v36_algstr_0 k1_complfld) \wedge (l6_algstr_0 k1_complfld) \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v36_algstr_0 X0) \wedge (l6_algstr_0 X0)) \Rightarrow ((X0 = k1_complfld) \Leftrightarrow \\ & ((u1_struct_0 X0 = k2_numbers) \wedge ((u1_algstr_0 X0 = k27_binop_2) \wedge \\ & ((u2_algstr_0 X0 = k29_binop_2) \wedge ((k5_struct_0 X0 = k6_complex1) \wedge \\ & (k4_struct_0 X0 = k5_complex1)))))) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 X0) \wedge (v1_xcmplx_0 X1)) \Rightarrow (k3_xcmplx_0 X0 X1 = k3_xcmplx_0 X1 X0) \quad (9)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k2_numbers) \Rightarrow (v1_xcmplx_0 X0) \quad (10)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 (u1_struct_0 k1_complfld)) \Rightarrow (v1_xcmplx_0 X0) \quad (11)$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 (u1_struct_0 k1_complfld)) \Rightarrow (\exists X1. \\ & (m1_subset_1 X1 (u1_struct_0 k1_complfld)) \wedge ((k17_complex1 X1 = \\ & np_1) \wedge ((k3_complex1 (k8_group_1 k1_complfld X1 X0) = k17_complex1 \\ & X0) \wedge (k4_complex1 (k8_group_1 k1_complfld X1 X0) = k6_numbers)))) \end{aligned}$$