

t28_complfld
(TMF4UXmLRkRwJZu6TSN6fubFxo7ckKM2KqB)

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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 $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $k8_group_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_vectsp_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_struct_0 : \iota \Rightarrow \iota$ be given. Let $k11_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $v36_algstr_0 : \iota \Rightarrow o$ 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 $v2_rlvect_1 : \iota \Rightarrow o$ be given. Let $v3_rlvect_1 : \iota \Rightarrow o$ be given. Let $v4_rlvect_1 : \iota \Rightarrow o$ be given. Let $v4_vectsp_1 : \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l6_algstr_0 : \iota \Rightarrow o$ be given. Let $l2_algstr_0 : \iota \Rightarrow o$ be given. Let $l5_algstr_0 : \iota \Rightarrow o$ be given. Let $l4_algstr_0 : \iota \Rightarrow o$ 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. Let $k6_complex1 : \iota$ be given. Let $k2_numbers : \iota$ be given. Let $np_1 : \iota$ 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 $k5_complex1 : \iota$ be given. Let $g6_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u3_struct_0 : \iota \Rightarrow \iota$ be given. Let $u2_struct_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 (u1_struct_0 k1_complfld)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (u1_struct_0 k1_complfld)) \Rightarrow (\forall X2.(m1_subset_1 \\ & X2 (u1_struct_0 k1_complfld)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 \\ & k1_complfld)) \Rightarrow (\neg(X0 \neq k4_struct_0 k1_complfld) \wedge ((X1 \neq k4_struct_0 \\ & k1_complfld) \wedge (k8_group_1 k1_complfld (k3_vectsp_1 k1_complfld \\ & X2 X0) (k3_vectsp_1 k1_complfld X3 X1) \neq k3_vectsp_1 k1_complfld \\ & (k8_group_1 k1_complfld X2 X3) (k8_group_1 k1_complfld X0 X1))))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 (u1_struct_0 k1_complfld)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (u1_struct_0 k1_complfld)) \Rightarrow ((k3_vectsp_1 k1_complfld \\ & X1 X0 = k4_struct_0 k1_complfld) \Rightarrow ((X0 = k4_struct_0 k1_complfld) \vee \\ & (X1 = k4_struct_0 k1_complfld)))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 (u1_struct_0 k1_complfld)) \Rightarrow ((X0 \neq k4_struct_0 k1_complfld) \Rightarrow (k3_vectsp_1 k1_complfld X0 X0 = k5_struct_0 k1_complfld)) \quad (3)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 (u1_struct_0 k1_complfld)) \Rightarrow (k3_vectsp_1 k1_complfld X0 (k5_struct_0 k1_complfld) = X0) \quad (4)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 (u1_struct_0 k1_complfld)) \Rightarrow ((X0 \neq k4_struct_0 k1_complfld) \Rightarrow (k11_algstr_0 k1_complfld X0 = k3_vectsp_1 k1_complfld (k5_struct_0 k1_complfld) X0)) \quad (5)$$

Assume the following.

$$\begin{aligned} & (\neg v6_struct_0 k1_complfld) \wedge ((v13_algstr_0 k1_complfld) \wedge ((\\ & v33_algstr_0 k1_complfld) \wedge (v36_algstr_0 k1_complfld) \wedge ((v3_group_1 \\ & k1_complfld) \wedge ((v5_group_1 k1_complfld) \wedge ((v3_vectsp_1 k1_complfld) \wedge \\ & ((v5_vectsp_1 k1_complfld) \wedge ((v6_vectsp_1 k1_complfld) \wedge ((v2_rlvect_1 \\ & k1_complfld) \wedge ((v3_rlvect_1 k1_complfld) \wedge (v4_rlvect_1 k1_complfld)))))))))) \quad (6) \end{aligned}$$

Assume the following.

$$(v36_algstr_0 k1_complfld) \wedge (v4_vectsp_1 k1_complfld) \quad (7)$$

Assume the following.

$$(\neg v2_struct_0 k1_complfld) \wedge (v36_algstr_0 k1_complfld) \quad (8)$$

Assume the following.

$$\forall X0.(l6_algstr_0 X0) \Rightarrow ((l2_algstr_0 X0) \wedge (l5_algstr_0 X0)) \quad (9)$$

Assume the following.

$$\forall X0.(l5_algstr_0 X0) \Rightarrow ((l4_algstr_0 X0) \wedge (l4_struct_0 X0)) \quad (10)$$

Assume the following.

$$\forall X0.(l4_algstr_0 X0) \Rightarrow ((l3_struct_0 X0) \wedge (l3_algstr_0 X0)) \quad (11)$$

Assume the following.

$$m1_subset_1 k6_complex1 k2_numbers \quad (12)$$

Assume the following.

$$(v36_algstr_0 \ k1_complfld) \wedge (l6_algstr_0 \ k1_complfld) \quad (13)$$

Assume the following.

$$k6_complex1 = np_1 \quad (14)$$

Assume the following.

$$\begin{aligned} \forall X0. ((v36_algstr_0 \ X0) \wedge (l6_algstr_0 \ X0)) \Rightarrow ((X0 = k1_complfld) \Leftrightarrow \\ ((u1_struct_0 \ X0 = k2_numbers) \wedge ((u1_algstr_0 \ X0 = k27_binop_2) \wedge \\ ((u2_algstr_0 \ X0 = k29_binop_2) \wedge ((k5_struct_0 \ X0 = k6_complex1) \wedge \\ (k4_struct_0 \ X0 = k5_complex1)))))) \end{aligned} \quad (15)$$

Assume the following.

$$\begin{aligned} \forall X0. ((\neg v2_struct_0 \ X0) \wedge ((v33_algstr_0 \ X0) \wedge ((v3_group_1 \\ X0) \wedge ((v5_group_1 \ X0) \wedge ((v4_vectsp_1 \ X0) \wedge ((v5_vectsp_1 \ X0) \wedge (\\ l6_algstr_0 \ X0))))))) \Rightarrow (\forall X1. (m1_subset_1 \ X1 \ (u1_struct_0 \\ X0)) \Rightarrow (\forall X2. (m1_subset_1 \ X2 \ (u1_struct_0 \ X0)) \Rightarrow (k3_vectsp_1 \\ X0 \ X1 \ X2 = k8_group_1 \ X0 \ X1 \ (k11_algstr_0 \ X0 \ X2)))) \end{aligned} \quad (16)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 \ X0) \wedge ((v5_group_1 \\ X0) \wedge (l3_algstr_0 \ X0))) \wedge ((m1_subset_1 \ X1 \ (u1_struct_0 \ X0)) \wedge (\\ m1_subset_1 \ X2 \ (u1_struct_0 \ X0)))) \Rightarrow (k8_group_1 \ X0 \ X1 \ X2 = k8_group_1 \\ X0 \ X2 \ X1) \end{aligned} \quad (17)$$

Assume the following.

$$\begin{aligned} \forall X0. (l6_algstr_0 \ X0) \Rightarrow ((v36_algstr_0 \ X0) \Rightarrow (X0 = g6_algstr_0 \\ (u1_struct_0 \ X0) \ (u1_algstr_0 \ X0) \ (u2_algstr_0 \ X0) \ (u3_struct_0 \\ X0) \ (u2_struct_0 \ X0))) \end{aligned} \quad (18)$$

Theorem 1

$$\begin{aligned} \forall X0. (m1_subset_1 \ X0 \ (u1_struct_0 \ k1_complfld)) \Rightarrow (\forall X1. \\ (m1_subset_1 \ X1 \ (u1_struct_0 \ k1_complfld)) \Rightarrow (\forall X2. (m1_subset_1 \\ X2 \ (u1_struct_0 \ k1_complfld)) \Rightarrow ((X0 \neq k4_struct_0 \ k1_complfld) \Rightarrow \\ (k8_group_1 \ k1_complfld \ X1 \ (k3_vectsp_1 \ k1_complfld \ X2 \ X0) = k3_vectsp_1 \\ k1_complfld \ (k8_group_1 \ k1_complfld \ X1 \ X2) \ X0)))) \end{aligned}$$