

t10_ec_pf_1 (TMWCoX-
aHVqZsVye3ZYPvabcxEQTwx7GB9qL)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v6_struct_0 : \iota \Rightarrow o$ be given. Let $v8_struct_0 : \iota \Rightarrow o$ 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 $v4_vectsp_1 : \iota \Rightarrow o$ be given. Let $v5_vectsp_1 : \iota \Rightarrow o$ 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 $l6_algstr_0 : \iota \Rightarrow o$ be given. Let $m1_ec_pf_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_ec_pf_1 : \iota \Rightarrow \iota$ be given. Let $k7_struct_0 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $r2_xboole_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_card_1 : \iota \Rightarrow \iota$ be given. Let $k1_card_1 : \iota \Rightarrow \iota$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $v1_card_1 : \iota \Rightarrow o$ 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 $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_algstr_0 : \iota \Rightarrow \iota$ be given. Let $k1_realset1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u2_algstr_0 : \iota \Rightarrow \iota$ be given. Let $k5_struct_0 : \iota \Rightarrow \iota$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((\neg v6_struct_0 X0) \wedge ((v13_algstr_0 \\ & X0) \wedge ((v33_algstr_0 X0) \wedge ((v3_group_1 X0) \wedge ((v5_group_1 X0) \wedge \\ & (v4_vectsp_1 X0) \wedge ((v5_vectsp_1 X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 \\ & X0) \wedge ((v4_rlvect_1 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow (\forall X1. \\ & ((v36_algstr_0 X1) \wedge (m1_ec_pf_1 X1 X0)) \Rightarrow (\forall X2. ((v36_algstr_0 \\ & X2) \wedge (m1_ec_pf_1 X2 X0)) \Rightarrow ((X1 = X2) \Leftrightarrow (u1_struct_0 X1 = u1_struct_0 \\ & X2)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. (v1_finset_1 X0) \Rightarrow (\forall X1. (v1_finset_1 X1) \Rightarrow ((\\ & r2_xboole_0 X0 X1) \Rightarrow ((\neg r1_xxreal_0 (k5_card_1 X1) (k5_card_1 X0)) \wedge \\ & (k5_card_1 X0 \in k5_card_1 X1)))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} \forall X0. (&(\neg v2_struct_0 X0) \wedge ((\neg v6_struct_0 X0) \wedge ((v13_algstr_0 \\ &X0) \wedge ((v33_algstr_0 X0) \wedge ((v3_group_1 X0) \wedge ((v5_group_1 X0) \wedge \\ &(v4_vectsp_1 X0) \wedge ((v5_vectsp_1 X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 \\ &X0) \wedge ((v4_rlvect_1 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow (m1_ec_pf_1 \\ &X0 X0) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. (v1_finset_1 X0) \Rightarrow (k5_card_1 X0 = k1_card_1 X0) \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0. (&(\neg v2_struct_0 X0) \wedge ((\neg v6_struct_0 X0) \wedge ((v8_struct_0 \\ &X0) \wedge ((v13_algstr_0 X0) \wedge ((v33_algstr_0 X0) \wedge ((v3_group_1 X0) \wedge \\ &((v5_group_1 X0) \wedge ((v4_vectsp_1 X0) \wedge ((v5_vectsp_1 X0) \wedge ((v2_rlvect_1 \\ &X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow \\ &(k1_ec_pf_1 X0 = k7_struct_0 X0) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0. ((v8_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (v1_finset_1 \\ (u1_struct_0 X0)) \quad (6)$$

Assume the following.

$$\forall X0. (\neg v1_finset_1 X0) \Rightarrow ((\neg v1_finset_1 (k1_card_1 X0)) \wedge \\ (v1_card_1 (k1_card_1 X0))) \quad (7)$$

Assume the following.

$$\forall X0. (v1_finset_1 X0) \Rightarrow ((v1_finset_1 (k1_card_1 X0)) \wedge \\ (v1_card_1 (k1_card_1 X0))) \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0. (&(\neg v2_struct_0 X0) \wedge ((\neg v6_struct_0 X0) \wedge ((v13_algstr_0 \\ &X0) \wedge ((v33_algstr_0 X0) \wedge ((v3_group_1 X0) \wedge ((v5_group_1 X0) \wedge \\ &(v4_vectsp_1 X0) \wedge ((v5_vectsp_1 X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 \\ &X0) \wedge ((v4_rlvect_1 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow (\forall X1. \\ &(m1_ec_pf_1 X1 X0) \Rightarrow ((\neg v2_struct_0 X1) \wedge ((\neg v6_struct_0 X1) \wedge ((\\ &v13_algstr_0 X1) \wedge ((v33_algstr_0 X1) \wedge ((v3_group_1 X1) \wedge ((v5_group_1 \\ &X1) \wedge ((v4_vectsp_1 X1) \wedge ((v5_vectsp_1 X1) \wedge ((v2_rlvect_1 X1) \wedge \\ &((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 X1) \wedge (l6_algstr_0 X1)))))))))))))) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0. (l6_algstr_0 X0) \Rightarrow ((l2_algstr_0 X0) \wedge (l5_algstr_0 X0)) \quad (10)$$

Assume the following.

$$\forall X0.(l2_struct_0 X0) \Rightarrow (l1_struct_0 X0) \quad (11)$$

Assume the following.

$$\forall X0.(l2_algstr_0 X0) \Rightarrow ((l2_struct_0 X0) \wedge (l1_algstr_0 X0)) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.(r2_xboole_0 X0 X1) \Leftrightarrow ((r1_tarski X0 X1) \wedge (X0 \neq X1)) \quad (13)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v6_struct_0 X0) \wedge ((v13_algstr_0 \\ & X0) \wedge ((v33_algstr_0 X0) \wedge ((v3_group_1 X0) \wedge ((v5_group_1 X0) \wedge \\ & (v4_vectsp_1 X0) \wedge ((v5_vectsp_1 X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 \\ & X0) \wedge ((v4_rlvect_1 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow (\forall X1. \\ & ((\neg v2_struct_0 X1) \wedge ((\neg v6_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge \\ & (v33_algstr_0 X1) \wedge ((v3_group_1 X1) \wedge ((v5_group_1 X1) \wedge ((v4_vectsp_1 \\ & X1) \wedge ((v5_vectsp_1 X1) \wedge ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 X1) \wedge \\ & ((v4_rlvect_1 X1) \wedge (l6_algstr_0 X1)))))))))) \Rightarrow ((m1_ec_pf_1 \\ & X1 X0) \Leftrightarrow ((r1_tarski (u1_struct_0 X1) (u1_struct_0 X0)) \wedge ((u1_algstr_0 \\ & X1 = k1_realset1 (u1_algstr_0 X0) (u1_struct_0 X1)) \wedge ((u2_algstr_0 \\ & X1 = k1_realset1 (u2_algstr_0 X0) (u1_struct_0 X1)) \wedge ((k5_struct_0 \\ & X1 = k5_struct_0 X0) \wedge (k4_struct_0 X1 = k4_struct_0 X0)))))) \end{aligned} \quad (14)$$

Assume the following.

$$\forall X0.(l1_struct_0 X0) \Rightarrow (k7_struct_0 X0 = k1_card.1 (u1_struct_0 X0)) \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (\neg X1 \in X0) \quad (16)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v6_struct_0 X0) \wedge ((v8_struct_0 \\ & X0) \wedge ((v13_algstr_0 X0) \wedge ((v33_algstr_0 X0) \wedge ((v36_algstr_0 X0) \wedge \\ & ((v3_group_1 X0) \wedge ((v5_group_1 X0) \wedge ((v4_vectsp_1 X0) \wedge ((v5_vectsp_1 \\ & X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge \\ & (l6_algstr_0 X0)))))))))) \Rightarrow (\forall X1.((v36_algstr_0 X1) \wedge \\ & (m1_ec_pf_1 X1 X0)) \Rightarrow ((k1_ec_pf_1 X0 = k7_struct_0 X1) \Rightarrow (X1 = X0))) \end{aligned}$$