

t24_sprect_3 (TMb- WncpxBYu7fNQLwiGFakmPHXC4weF7mdp)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v3_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_6 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k15_euclid : \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $v1_topreal1 : \iota \Rightarrow o$ be given. Let $v2_topreal1 : \iota \Rightarrow o$ be given. Let $v1_goboard5 : \iota \Rightarrow o$ be given. Let $v2_goboard5 : \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_goboard9 : \iota \Rightarrow \iota$ be given. Let $k3_goboard9 : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $r3_connsp_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v6_membered : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v2_pre_topc : \iota \Rightarrow o$ 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 $v5_rlvect_1 : \iota \Rightarrow o$ be given. Let $v6_rlvect_1 : \iota \Rightarrow o$ be given. Let $v7_rlvect_1 : \iota \Rightarrow o$ be given. Let $v8_rlvect_1 : \iota \Rightarrow o$ be given. Let $v5_rltopsp1 : \iota \Rightarrow o$ be given. Let $v4_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_topreal1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $k3_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1_rltopsp1 : \iota \Rightarrow o$ be given. Let $l1_rlvect_1 : \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_tops_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_goboard5 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k5_goboard5 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid \\ & \quad np_2)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 \\ & \quad (k15_euclid np_2)))) \Rightarrow (((v3_pre_topc X0 (k15_euclid np_2)) \wedge \\ & \quad (r3_connsp_1 (k15_euclid np_2) X0 X1)) \Rightarrow (v3_pre_topc X1 (k15_euclid \\ & \quad np_2)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 np_2) \wedge (m2_subset_1 np_2 k1_numbers k5_numbers)) \wedge \\ & ((m1_subset_1 np_2 k5_numbers) \wedge (m1_subset_1 np_2 k1_numbers)) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. (m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \tag{3}$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (4)$$

Assume the following.

$$v6_membered\ k4_ordinal1 \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1\ X0) \Rightarrow & ((v2_pre_topc\ (k15_euclid\ X0)) \wedge \\ & ((v13_algstr_0\ (k15_euclid\ X0)) \wedge ((v2_rlvect_1\ (k15_euclid\ X0)) \wedge \\ & ((v3_rlvect_1\ (k15_euclid\ X0)) \wedge ((v4_rlvect_1\ (k15_euclid\ X0)) \wedge \\ & ((v5_rlvect_1\ (k15_euclid\ X0)) \wedge ((v6_rlvect_1\ (k15_euclid\ X0)) \wedge \\ & ((v7_rlvect_1\ (k15_euclid\ X0)) \wedge ((v8_rlvect_1\ (k15_euclid\ X0)) \wedge \\ & (v5_rltopsp1\ (k15_euclid\ X0)))))))))) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0.(m1_finseq_1\ X0\ (u1_struct_0\ (k15_euclid\ np_2))) \Rightarrow \\ (v4_pre_topc\ (k3_topreal1\ np_2\ X0)\ (k15_euclid\ np_2)) \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(((v2_pre_topc\ X0) \wedge (l1_pre_topc\ X0)) \wedge \\ ((v4_pre_topc\ X1\ X0) \wedge (m1_subset_1\ X1\ (k1_zfmisc_1\ (u1_struct_0 \\ X0)))) \Rightarrow (v3_pre_topc\ (k3_subset_1\ (u1_struct_0\ X0)\ X1)\ X0) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0.(l1_rltopsp1\ X0) \Rightarrow ((l1_rlvect_1\ X0) \wedge (l1_pre_topc\ X0)) \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((v7_ordinal1\ X0) \wedge (m1_finseq_1\ X1\ (u1_struct_0 \\ (k15_euclid\ X0)))) \Rightarrow (m1_subset_1\ (k3_topreal1\ X0\ X1)\ (k1_zfmisc_1 \\ (u1_struct_0\ (k15_euclid\ X0)))) \end{aligned} \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1\ X0)) \Rightarrow (m1_subset_1 \\ (k3_subset_1\ X0\ X1)\ (k1_zfmisc_1\ X0)) \quad (11)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v1_xboole_0\ X0) \wedge ((\neg v3_funct_1\ X0) \wedge ((v1_finseq_6 \\ X0\ (u1_struct_0\ (k15_euclid\ np_2))) \wedge ((v1_topreal1\ X0) \wedge ((v2_topreal1 \\ X0) \wedge ((v1_goboard5\ X0) \wedge ((v2_goboard5\ X0) \wedge (m1_finseq_1\ X0\ (u1_struct_0 \\ (k15_euclid\ np_2)))))))))) \Rightarrow (m1_subset_1\ (k3_goboard9\ X0)\ (\\ k1_zfmisc_1\ (u1_struct_0\ (k15_euclid\ np_2)))) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} \forall X0. (&(\neg v1_xboole_0 X0) \wedge (\neg v3_funct_1 X0) \wedge ((v1_finseq_6 \\ &X0 (u1_struct_0 (k15_euclid np_2))) \wedge ((v1_topreal1 X0) \wedge ((v2_topreal1 \\ &X0) \wedge ((v1_goboard5 X0) \wedge ((v2_goboard5 X0) \wedge (m1_finseq_1 X0 (u1_struct_0 \\ &(k15_euclid np_2)))))))))) \Rightarrow (m1_subset_1 (k2_goboard9 X0) (\\ &k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2)))) \end{aligned} \quad (13)$$

Assume the following.

$$\forall X0. (v7_ordinal1 X0) \Rightarrow ((v5_rltopsp1 (k15_euclid X0)) \wedge (l1_rltopsp1 (k15_euclid X0))) \quad (14)$$

Assume the following.

$$\begin{aligned} \forall X0. (&(\neg v1_xboole_0 X0) \wedge (\neg v3_funct_1 X0) \wedge ((v1_finseq_6 \\ &X0 (u1_struct_0 (k15_euclid np_2))) \wedge ((v1_topreal1 X0) \wedge ((v2_topreal1 \\ &X0) \wedge ((v1_goboard5 X0) \wedge ((v2_goboard5 X0) \wedge (m2_finseq_1 X0 (u1_struct_0 \\ &(k15_euclid np_2)))))))))) \Rightarrow (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 \\ &(u1_struct_0 (k15_euclid np_2)))) \Rightarrow ((X1 = k3_goboard9 X0) \Leftrightarrow ((\\ &r3_connsp_1 (k15_euclid np_2) (k3_subset_1 (u1_struct_0 (k15_euclid \\ &np_2)) (k3_topreal1 np_2 X0)) X1) \wedge (r1_tarski (k1_tops_1 (k15_euclid \\ &np_2) (k4_goboard5 X0 np_1)) X1)))) \end{aligned} \quad (15)$$

Assume the following.

$$\begin{aligned} \forall X0. (&(\neg v1_xboole_0 X0) \wedge (\neg v3_funct_1 X0) \wedge ((v1_finseq_6 \\ &X0 (u1_struct_0 (k15_euclid np_2))) \wedge ((v1_topreal1 X0) \wedge ((v2_topreal1 \\ &X0) \wedge ((v1_goboard5 X0) \wedge ((v2_goboard5 X0) \wedge (m2_finseq_1 X0 (u1_struct_0 \\ &(k15_euclid np_2)))))))))) \Rightarrow (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 \\ &(u1_struct_0 (k15_euclid np_2)))) \Rightarrow ((X1 = k2_goboard9 X0) \Leftrightarrow ((\\ &r3_connsp_1 (k15_euclid np_2) (k3_subset_1 (u1_struct_0 (k15_euclid \\ &np_2)) (k3_topreal1 np_2 X0)) X1) \wedge (r1_tarski (k1_tops_1 (k15_euclid \\ &np_2) (k5_goboard5 X0 np_1)) X1)))) \end{aligned} \quad (16)$$

Assume the following.

$$\forall X0. (v6_membered X0) \Rightarrow (\forall X1. (m1_subset_1 X1 X0) \Rightarrow (v7_ordinal1 X1)) \quad (17)$$

Theorem 1

$$\begin{aligned} \forall X0. (&(\neg v1_xboole_0 X0) \wedge (\neg v3_funct_1 X0) \wedge ((v1_finseq_6 \\ &X0 (u1_struct_0 (k15_euclid np_2))) \wedge ((v1_topreal1 X0) \wedge ((v2_topreal1 \\ &X0) \wedge ((v1_goboard5 X0) \wedge ((v2_goboard5 X0) \wedge (m2_finseq_1 X0 (u1_struct_0 \\ &(k15_euclid np_2)))))))))) \Rightarrow ((v3_pre_topc (k2_goboard9 X0) \\ &(k15_euclid np_2)) \wedge (v3_pre_topc (k3_goboard9 X0) (k15_euclid \\ &np_2))) \end{aligned}$$