

t17_sprect_2 (TMTvnwTgypv- CaqpSn8VRtvSjAE5V6u6KhY3)

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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 $k15_euclid : \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $k1_rltopsp1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_xxreal.0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k17_euclid : \iota \Rightarrow \iota$ be given. Let $k8_pscomp.1 : \iota \Rightarrow \iota$ be given. Let $k6_pscomp.1 : \iota \Rightarrow \iota$ be given. Let $k1_zfmisc.1 : \iota \Rightarrow \iota$ be given. Let $v1_xxreal.0 : \iota \Rightarrow o$ be given. Let $k3_topreal1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_finseq.4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $m2_finseq.1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_finseq.1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v1_relat.1 : \iota \Rightarrow o$ be given. Let $v4_relat.1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v5_relat.1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_funct.1 : \iota \Rightarrow o$ be given. Let $v1_finset.1 : \iota \Rightarrow o$ be given. Let $v1_finseq.1 : \iota \Rightarrow o$ be given. Let $v2_finseq.1 : \iota \Rightarrow o$ be given. Let $v4_topreal1 : \iota \Rightarrow o$ 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 $v2_struct.0 : \iota \Rightarrow o$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $l1_rltopsp1 : \iota \Rightarrow o$ be given. Let $l1_rlvect.1 : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $v1_xboole.0 : \iota \Rightarrow o$ be given. Let $v2_membered : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
& \forall X0.(m1_subset.1 X0 (u1_struct.0 (k15_euclid np_2))) \Rightarrow \\
& (\forall X1.(m1_subset.1 X1 (u1_struct.0 (k15_euclid np_2))) \Rightarrow \\
& (\forall X2.(m1_subset.1 X2 (u1_struct.0 (k15_euclid np_2))) \Rightarrow \\
& (((X2 \in k1_rltopsp1 (k15_euclid np_2) X0 X1) \wedge (k17_euclid X2 = k17_euclid \\
& X0)) \Rightarrow ((k17_euclid X0 = k17_euclid X1) \vee (X2 = X0))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1_subset.1 X0 (u1_struct.0 (k15_euclid np_2))) \Rightarrow \\
& (\forall X1.(m1_subset.1 X1 (u1_struct.0 (k15_euclid np_2))) \Rightarrow \\
& ((r1_xxreal.0 (k17_euclid X0) (k17_euclid X1)) \Rightarrow (k8_pscomp.1 \\
& (k1_rltopsp1 (k15_euclid np_2) X0 X1) = k17_euclid X1)))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ & (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ & ((r1_xxreal_0 (k17_euclid X0) (k17_euclid X1)) \Rightarrow (k6_pscomp_1 \\ & (k1_rltopsp1 (k15_euclid np_2) X0 X1) = k17_euclid X0))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ & (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ & (\forall X2.(m1_subset_1 X2 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ & (((r1_xxreal_0 (k17_euclid X0) (k17_euclid X1)) \wedge (X2 \in k1_rltopsp1 \\ & (k15_euclid np_2) X0 X1)) \Rightarrow ((r1_xxreal_0 (k17_euclid X0) (k17_euclid \\ & X2)) \wedge (r1_xxreal_0 (k17_euclid X2) (k17_euclid X1)))))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow (\forall X2. \\ & (v1_xxreal_0 X2) \Rightarrow (((r1_xxreal_0 X0 X1) \wedge (r1_xxreal_0 X1 X2)) \Rightarrow \\ & (r1_xxreal_0 X0 X2)))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ & (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ & (k3_topreal1 np_2 (k2_finseq_4 (u1_struct_0 (k15_euclid np_2)) \\ & X0 X1) = k1_rltopsp1 (k15_euclid np_2) X0 X1)) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 np_2) \wedge (m2_subset_1 np_2 k1_numbers k5_numbers)) \wedge \\ & ((m1_subset_1 np_2 k5_numbers) \wedge (m1_subset_1 np_2 k1_numbers)) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \quad (9)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (10)$$

Assume the following.

$$\begin{aligned} & \exists X0.(m1_finseq_1 X0 (u1_struct_0 (k15_euclid np_2))) \wedge \\ & ((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v5_relat_1 X0 \\ & (u1_struct_0 (k15_euclid np_2))) \wedge (v1_funct_1 X0) \wedge ((v1_finset_1 \\ & X0) \wedge ((v1_finseq_1 X0) \wedge (v2_finseq_1 X0) \wedge (v4_topreal1 X0)))))) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1\ X0) \Rightarrow & ((v2_pre_topc\ (k15_euclid\ X0)) \wedge \\ & ((v13_algstr_0\ (k15_euclid\ X0)) \wedge ((v2_rlvect_1\ (k15_euclid\ X0)) \wedge \\ & ((v3_rlvect_1\ (k15_euclid\ X0)) \wedge ((v4_rlvect_1\ (k15_euclid\ X0)) \wedge \\ & ((v5_rlvect_1\ (k15_euclid\ X0)) \wedge ((v6_rlvect_1\ (k15_euclid\ X0)) \wedge \\ & ((v7_rlvect_1\ (k15_euclid\ X0)) \wedge ((v8_rlvect_1\ (k15_euclid\ X0)) \wedge \\ & (v5_rltopsp1\ (k15_euclid\ X0)))))))))) \end{aligned} \quad (12)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0) \Rightarrow ((-v2_struct_0\ (k15_euclid\ X0)) \wedge (v5_rltopsp1\ (k15_euclid\ X0))) \quad (13)$$

Assume the following.

$$v3_membered\ k1_numbers \quad (14)$$

Assume the following.

$$\forall X0.(l1_rltopsp1\ X0) \Rightarrow ((l1_rlvect_1\ X0) \wedge (l1_pre_topc\ X0)) \quad (15)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((v7_ordinal1\ X0) \wedge (m1_finseq_1\ X1\ (u1_struct_0 \\ (k15_euclid\ X0)))) \Rightarrow (m1_subset_1\ (k3_topreal1\ X0\ X1)\ (k1_zfmisc_1 \\ (u1_struct_0\ (k15_euclid\ X0)))) \end{aligned} \quad (16)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.((-v1_xboole_0\ X0) \wedge ((m1_subset_1 \\ X1\ X0) \wedge (m1_subset_1\ X2\ X0))) \Rightarrow (m2_finseq_1\ (k2_finseq_4\ X0\ X1\ X2) \\ X0) \end{aligned} \quad (17)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ (u1_struct_0\ (k15_euclid\ np_2))) \Rightarrow (m1_subset_1\ (k17_euclid\ X0)\ k1_numbers) \quad (18)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0) \Rightarrow ((v5_rltopsp1\ (k15_euclid\ X0)) \wedge (l1_rltopsp1\ (k15_euclid\ X0))) \quad (19)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0\ X0) \wedge (v1_xxreal_0\ X1)) \Rightarrow (r1_xxreal_0\ X0\ X1) \vee (r1_xxreal_0\ X1\ X0) \quad (20)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge (v13_algstr_0 \\ & X0) \wedge (v2_rlvect_1 X0) \wedge (v3_rlvect_1 X0) \wedge (v4_rlvect_1 X0) \wedge \\ & ((v5_rlvect_1 X0) \wedge (v6_rlvect_1 X0) \wedge (v7_rlvect_1 X0) \wedge (v8_rlvect_1 \\ & X0) \wedge (l1_rlvect_1 X0)))))) \wedge ((m1_subset_1 X1 (u1_struct_0 \\ & X0)) \wedge (m1_subset_1 X2 (u1_struct_0 X0))) \Rightarrow (k1_rltopsp1 X0 X1 X2 = \\ & k1_rltopsp1 X0 X2 X1) \end{aligned} \quad (21)$$

Assume the following.

$$\begin{aligned} & \forall X0. (v1_xboole_0 X0) \Rightarrow (\forall X1. ((v1_relat_1 X1) \wedge (v5_relat_1 \\ & X1 X0)) \Rightarrow ((v1_xboole_0 X1) \wedge ((v1_relat_1 X1) \wedge (v5_relat_1 X1 X0)))) \end{aligned} \quad (22)$$

Assume the following.

$$\forall X0. (m1_subset_1 X0 k4_ordinal1) \Rightarrow (v7_ordinal1 X0) \quad (23)$$

Assume the following.

$$\forall X0. (v3_membered X0) \Rightarrow (v2_membered X0) \quad (24)$$

Assume the following.

$$\begin{aligned} & \forall X0. (m1_finseq_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ & ((v4_topreal1 X0) \Rightarrow (\neg v1_xboole_0 X0)) \end{aligned} \quad (25)$$

Assume the following.

$$\begin{aligned} & \forall X0. (v2_membered X0) \Rightarrow (\forall X1. (m1_subset_1 X1 X0) \Rightarrow \\ & (v1_xxreal_0 X1)) \end{aligned} \quad (26)$$

Theorem 1

$$\begin{aligned} & \forall X0. (m1_subset_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ & (\forall X1. (m1_subset_1 X1 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ & (\forall X2. (m1_subset_1 X2 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ & (\neg (X1 \in k1_rltopsp1 (k15_euclid np_2) X0 X2) \wedge ((r1_xxreal_0 (k17_euclid \\ & X0) (k17_euclid X1)) \wedge (r1_xxreal_0 (k17_euclid X2) (k17_euclid \\ & X1)) \wedge ((X0 \neq X1) \wedge (X1 \neq X2) \wedge (\neg (k17_euclid X0 = k17_euclid X1) \wedge (k17_euclid \\ & X2 = k17_euclid X1)))))))))) \end{aligned}$$