

t57_sppol_2
(TMXZSP7MN6FybN3pB9DJkXWLS1aCrmFv6Mm)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ 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 $v5_topreal1 : \iota \Rightarrow o$ be given. Let $v2_compts_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_compts_1 : \iota \Rightarrow o$ be given. Let $k4_topmetr : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $k1_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_pre_topc : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_topmetr : \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_tops_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $np_1 : \iota$ be given. Let $k17_borsuk_1 : \iota$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v5_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_struct_0 : \iota \Rightarrow \iota$ 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 $np_0 : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ 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 $v1_pre_topc : \iota \Rightarrow o$ be given. Let $m1_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_rltopsp1 : \iota \Rightarrow o$ be given. Let $l1_rlvect_1 : \iota \Rightarrow o$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_funct_1 : \iota \Rightarrow o$ be given. Let $k2_tops_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \tag{1}$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow ((r1_xxreal_0 X0 X1) \Rightarrow (v1_compts_1 (k4_topmetr X0 X1)))) \tag{2}$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_pre_topc\ X0) \Rightarrow (\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1 \\ (u1_struct_0\ X0))) \Rightarrow (((X1 = k1_xboole_0) \Rightarrow ((v2_compts_1\ X1\ X0) \Leftrightarrow \\ (v1_compts_1\ (k1_pre_topc\ X0\ X1)))) \wedge ((v2_pre_topc\ X0) \Rightarrow ((X1 = \\ k1_xboole_0) \vee ((v2_compts_1\ X1\ X0) \Leftrightarrow (v1_compts_1\ (k1_pre_topc \\ X0\ X1)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_subset_1\ X0\ (k1_zfmisc_1\ (u1_struct_0\ (k15_euclid \\ np_2)))) \Rightarrow (\neg(v5_topreal1\ X0) \wedge (\forall X1.((v1_funct_1\ X1) \wedge \\ ((v1_funct_2\ X1\ (u1_struct_0\ k5_topmetr)\ (u1_struct_0\ (k1_pre_topc \\ (k15_euclid\ np_2)\ X0))) \wedge (m1_subset_1\ X1\ (k1_zfmisc_1\ (k2_zfmisc_1 \\ (u1_struct_0\ k5_topmetr)\ (u1_struct_0\ (k1_pre_topc\ (k15_euclid \\ np_2)\ X0)))))) \Rightarrow (\neg v3_tops_2\ X1\ k5_topmetr\ (k1_pre_topc\ (k15_euclid \\ np_2)\ X0)))) \end{aligned} \quad (4)$$

Assume the following.

$$k4_topmetr\ k6_numbers\ np_1 = k17_borsuk_1 \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_pre_topc\ X0) \Rightarrow (\forall X1.((\neg v2_struct_0\ X1) \wedge \\ (l1_pre_topc\ X1)) \Rightarrow (\forall X2.((v1_funct_1\ X2) \wedge ((v1_funct_2 \\ X2\ (u1_struct_0\ X0)\ (u1_struct_0\ X1)) \wedge (m1_subset_1\ X2\ (k1_zfmisc_1 \\ (k2_zfmisc_1\ (u1_struct_0\ X0)\ (u1_struct_0\ X1)))))) \Rightarrow (((v1_compts_1 \\ X0) \wedge ((v5_pre_topc\ X2\ X0\ X1) \wedge (k2_relset_1\ (u1_struct_0\ X1)\ X2 = \\ k2_struct_0\ X1))) \Rightarrow (v1_compts_1\ X1)))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} ((v2_xxreal_0\ np_2) \wedge (m2_subset_1\ np_2\ k1_numbers\ k5_numbers)) \wedge \\ ((m1_subset_1\ np_2\ k5_numbers) \wedge (m1_subset_1\ np_2\ k1_numbers)) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} ((v2_xxreal_0\ np_1) \wedge (m2_subset_1\ np_1\ k1_numbers\ k5_numbers)) \wedge \\ ((m1_subset_1\ np_1\ k5_numbers) \wedge (m1_subset_1\ np_1\ k1_numbers)) \end{aligned} \quad (8)$$

Assume the following.

$$v1_xboole_0\ np_0 \quad (9)$$

Assume the following.

$$r1_xxreal_0\ np_0\ np_1 \quad (10)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (11)$$

Assume the following.

$$k5_topmetr = k17_borsuk_1 \quad (12)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (13)$$

Assume the following.

$$\exists X0.(v1_xboole_0 X0) \wedge ((v1_xcmplx_0 X0) \wedge ((v1_xxreal_0 X0) \wedge (v1_xreal_0 X0))) \quad (14)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1 X0) \Rightarrow & ((v2_pre_topc (k15_euclid X0)) \wedge \\ & ((v13_algstr_0 (k15_euclid X0)) \wedge ((v2_rlvect_1 (k15_euclid X0)) \wedge \\ & ((v3_rlvect_1 (k15_euclid X0)) \wedge ((v4_rlvect_1 (k15_euclid X0)) \wedge \\ & ((v5_rlvect_1 (k15_euclid X0)) \wedge ((v6_rlvect_1 (k15_euclid X0)) \wedge \\ & ((v7_rlvect_1 (k15_euclid X0)) \wedge ((v8_rlvect_1 (k15_euclid X0)) \wedge \\ & (v5_rltopsp1 (k15_euclid X0)))))))))) \quad (15) \end{aligned}$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow ((-v2_struct_0 (k15_euclid X0)) \wedge (v5_rltopsp1 (k15_euclid X0))) \quad (16)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(((-v2_struct_0 X0) \wedge (l1_pre_topc X0)) \wedge \\ ((-v1_xboole_0 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0)))))) \Rightarrow & ((-v2_struct_0 (k1_pre_topc X0 X1)) \wedge (v1_pre_topc (k1_pre_topc \\ & X0 X1))) \quad (17) \end{aligned}$$

Assume the following.

$$\forall X0.(l1_pre_topc X0) \Rightarrow (\forall X1.(m1_pre_topc X1 X0) \Rightarrow (l1_pre_topc X1)) \quad (18)$$

Assume the following.

$$\forall X0.(l1_rltopsp1 X0) \Rightarrow ((l1_rlvect_1 X0) \wedge (l1_pre_topc X0)) \quad (19)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((l1_pre_topc X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ (u1_struct_0 X0)))) \Rightarrow & ((v1_pre_topc (k1_pre_topc X0 X1)) \wedge (m1_pre_topc \\ & (k1_pre_topc X0 X1) X0)) \quad (20) \end{aligned}$$

Assume the following.

$$l1_pre_topc\ k17_borsuk_1 \quad (21)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0) \Rightarrow ((v5_rltopsp1\ (k15_euclid\ X0)) \wedge (l1_rltopsp1\ (k15_euclid\ X0))) \quad (22)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_pre_topc\ X0) \Rightarrow (\forall X1.(l1_pre_topc\ X1) \Rightarrow (\forall X2. \\ ((v1_funct_1\ X2) \wedge ((v1_funct_2\ X2\ (u1_struct_0\ X0)\ (u1_struct_0 \\ X1)) \wedge (m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ (u1_struct_0 \\ X0)\ (u1_struct_0\ X1)))))) \Rightarrow ((v3_tops_2\ X2\ X0\ X1) \Leftrightarrow ((k1_relset_1 \\ (u1_struct_0\ X0)\ X2 = k2_struct_0\ X0) \wedge ((k2_relset_1\ (u1_struct_0 \\ X1)\ X2 = k2_struct_0\ X1) \wedge ((v2_funct_1\ X2) \wedge ((v5_pre_topc\ X2\ X0\ X1) \wedge \\ (v5_pre_topc\ (k2_tops_2\ (u1_struct_0\ X0)\ (u1_struct_0\ X1)\ X2) \\ X1\ X0)))))))))) \quad (23) \end{aligned}$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ k4_ordinal1) \Rightarrow (v7_ordinal1\ X0) \quad (24)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ k1_numbers) \Rightarrow (v1_xreal_0\ X0) \quad (25)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ (k1_zfmisc_1\ (u1_struct_0\ (k15_euclid\ np_2)))) \Rightarrow ((v5_topreal1\ X0) \Rightarrow (\neg v1_xboole_0\ X0)) \quad (26)$$

Theorem 1

$$\forall X0.(m1_subset_1\ X0\ (k1_zfmisc_1\ (u1_struct_0\ (k15_euclid\ np_2)))) \Rightarrow ((v5_topreal1\ X0) \Rightarrow (v2_compts_1\ X0\ (k15_euclid\ np_2)))$$