

l36_pscomp_1

(TMQ6YMCeaJv2vBCon6L1fX3eFQymVzjU2zy)

October 27, 2020

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 $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v2_compts_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_pscomp_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_pscomp_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_pscomp_1 : \iota$ be given. Let $k17_euclid : \iota \Rightarrow \iota$ be given. Let $k2_pscomp_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_pscomp_1 : \iota$ be given. Let $k18_euclid : \iota \Rightarrow \iota$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ 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 $k1_numbers : \iota$ be given. Let $v1_seq_2 : \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_seq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_seq_2 : \iota \Rightarrow o$ 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 $k5_numbers : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k5_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $v1_pscomp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_pre_topc : \iota \Rightarrow o$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $v1_compts_1 : \iota \Rightarrow o$ 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 $v2_pscomp_1 : \iota \Rightarrow o$ be given. Let $v5_measure6 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v6_measure6 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_comseq_2 : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v3_valued_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(l1_pre_topc\ X0) \Rightarrow (\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1\ (u1_struct_0\ X0))) \Rightarrow (u1_struct_0\ (k1_pre_topc\ X0\ X1) = X1)) \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ X0))) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge ((v1_funct_2 X1 (u1_struct_0 \\ X0) k1_numbers) \wedge ((v1_seq_2 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ (k2_zfmisc_1 (u1_struct_0 X0) k1_numbers)))))) \Rightarrow (\forall X2. \\ (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (r1_xxreal_0 (k1_seq_1 X1 X2) \\ (k2_pscomp_1 X0 X1)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid \\ np_2)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid \\ np_2))) \Rightarrow ((X1 \in X0) \Rightarrow (k1_seq_1 (k3_pscomp_1 (k15_euclid np_2) \\ k5_pscomp_1 X0) X1 = k18_euclid X1))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid \\ np_2)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid \\ np_2))) \Rightarrow ((X1 \in X0) \Rightarrow (k1_seq_1 (k3_pscomp_1 (k15_euclid np_2) \\ k4_pscomp_1 X0) X1 = k17_euclid X1))) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ X0))) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge ((v1_funct_2 X1 (u1_struct_0 \\ X0) k1_numbers) \wedge ((v2_seq_2 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ (k2_zfmisc_1 (u1_struct_0 X0) k1_numbers)))))) \Rightarrow (\forall X2. \\ (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (r1_xxreal_0 (k1_pscomp_1 \\ X0 X1) (k1_seq_1 X1 X2)))) \end{aligned} \quad (6)$$

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.

$$k5_numbers = k4_ordinal1 \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge (l1_pre_topc \\ X0)) \wedge ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 (u1_struct_0 X0) k1_numbers) \wedge \\ (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) k1_numbers)))))) \wedge \\ (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow (k3_pscomp_1 \\ X0 X1 X2 = k5_relat_1 X1 X2) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1\ X0) \Rightarrow & ((v2_pre_topc\ (k15_euclid\ X0)) \wedge \\ & ((v13_algstr_0\ (k15_euclid\ X0)) \wedge ((v2_rlvect_1\ (k15_euclid\ X0)) \wedge \\ & ((v3_rlvect_1\ (k15_euclid\ X0)) \wedge ((v4_rlvect_1\ (k15_euclid\ X0)) \wedge \\ & ((v5_rlvect_1\ (k15_euclid\ X0)) \wedge ((v6_rlvect_1\ (k15_euclid\ X0)) \wedge \\ & ((v7_rlvect_1\ (k15_euclid\ X0)) \wedge ((v8_rlvect_1\ (k15_euclid\ X0)) \wedge \\ & (v5_rltopsp1\ (k15_euclid\ X0)))))))))) \end{aligned} \quad (10)$$

Assume the following.

$$(v1_funct_1\ k5_pscomp_1) \wedge ((v1_funct_2\ k5_pscomp_1\ (u1_struct_0\ (k15_euclid\ np_2)))\ k1_numbers) \wedge (v1_pscomp_1\ k5_pscomp_1\ (k15_euclid\ np_2)) \quad (11)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0) \Rightarrow ((-v2_struct_0\ (k15_euclid\ X0)) \wedge (v5_rltopsp1\ (k15_euclid\ X0))) \quad (12)$$

Assume the following.

$$(v1_funct_1\ k4_pscomp_1) \wedge ((v1_funct_2\ k4_pscomp_1\ (u1_struct_0\ (k15_euclid\ np_2)))\ k1_numbers) \wedge (v1_pscomp_1\ k4_pscomp_1\ (k15_euclid\ np_2)) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.(((v2_pre_topc\ X0) \wedge (l1_pre_topc\ X0)) \wedge (m1_subset_1\ X1\ (k1_zfmisc_1\ (u1_struct_0\ X0)))) \Rightarrow ((v1_pre_topc\ (k1_pre_topc\ X0\ X1)) \wedge (v2_pre_topc\ (k1_pre_topc\ X0\ X1))) \quad (14)$$

Assume the following.

$$v3_membered\ k1_numbers \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.(((v2_pre_topc\ X0) \wedge (l1_pre_topc\ X0)) \wedge ((-v1_xboole_0\ X1) \wedge (m1_subset_1\ X1\ (k1_zfmisc_1\ (u1_struct_0\ X0)))))) \Rightarrow ((v1_pre_topc\ (k1_pre_topc\ X0\ X1)) \wedge (v1_compts_1\ (k1_pre_topc\ X0\ X1))) \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.(((v2_pre_topc\ X0) \wedge (l1_pre_topc\ X0)) \wedge ((-v1_xboole_0\ X1) \wedge (m1_subset_1\ X1\ (k1_zfmisc_1\ (u1_struct_0\ X0)))))) \Rightarrow ((-v2_struct_0\ (k1_pre_topc\ X0\ X1)) \wedge (v1_pre_topc\ (k1_pre_topc\ X0\ X1))) \quad (17)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0)\wedge((v2_pre_topc \\ & X0)\wedge(l1_pre_topc X0)))\wedge(((v1_funct_1 X1)\wedge((v1_funct_2 X1 (u1_struct_0 \\ & X0) k1_numbers)\wedge((v1_pscomp_1 X1 X0)\wedge(m1_subset_1 X1 (k1_zfmisc_1 \\ & (k2_zfmisc_1 (u1_struct_0 X0) k1_numbers))))))\wedge(m1_subset_1 \\ & X2 (k1_zfmisc_1 (u1_struct_0 X0))))))\Rightarrow((v1_funct_1 (k5_relat_1 \\ & X1 X2))\wedge((v1_funct_2 (k5_relat_1 X1 X2) (u1_struct_0 (k1_pre_topc \\ & X0 X2)) k1_numbers)\wedge(v1_pscomp_1 (k5_relat_1 X1 X2) (k1_pre_topc \\ & X0 X2)))) \end{aligned} \quad (18)$$

Assume the following.

$$\forall X0.(l1_pre_topc X0)\Rightarrow(\forall X1.(m1_pre_topc X1 X0)\Rightarrow(l1_pre_topc X1)) \quad (19)$$

Assume the following.

$$\forall X0.(l1_rltopsp1 X0)\Rightarrow((l1_rlvect_1 X0)\wedge(l1_pre_topc X0)) \quad (20)$$

Assume the following.

$$\begin{aligned} & (v1_funct_1 k5_pscomp_1)\wedge((v1_funct_2 k5_pscomp_1 (u1_struct_0 \\ & (k15_euclid np_2)) k1_numbers)\wedge(m1_subset_1 k5_pscomp_1 (k1_zfmisc_1 \\ & (k2_zfmisc_1 (u1_struct_0 (k15_euclid np_2)) k1_numbers)))) \end{aligned} \quad (21)$$

Assume the following.

$$\begin{aligned} & (v1_funct_1 k4_pscomp_1)\wedge((v1_funct_2 k4_pscomp_1 (u1_struct_0 \\ & (k15_euclid np_2)) k1_numbers)\wedge(m1_subset_1 k4_pscomp_1 (k1_zfmisc_1 \\ & (k2_zfmisc_1 (u1_struct_0 (k15_euclid np_2)) k1_numbers)))) \end{aligned} \quad (22)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0)\wedge(l1_pre_topc \\ & X0))\wedge(((v1_funct_1 X1)\wedge((v1_funct_2 X1 (u1_struct_0 X0) k1_numbers)\wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) k1_numbers))))))\wedge \\ & (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0))))))\Rightarrow((v1_funct_1 \\ & (k3_pscomp_1 X0 X1 X2))\wedge((v1_funct_2 (k3_pscomp_1 X0 X1 X2) (u1_struct_0 \\ & (k1_pre_topc X0 X2)) k1_numbers)\wedge(m1_subset_1 (k3_pscomp_1 X0 \\ & X1 X2) (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 (k1_pre_topc X0 \\ & X2)) k1_numbers)))) \end{aligned} \quad (23)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((l1_pre_topc X0)\wedge(m1_subset_1 X1 (k1_zfmisc_1 \\ & (u1_struct_0 X0))))\Rightarrow((v1_pre_topc (k1_pre_topc X0 X1))\wedge(m1_pre_topc \\ & (k1_pre_topc X0 X1) X0)) \end{aligned} \quad (24)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow ((v5_rltopsp1 (k15_euclid X0)) \wedge (l1_rltopsp1 (k15_euclid X0))) \quad (25)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1) \Rightarrow (v7_ordinal1 X0) \quad (26)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge ((v2_pscomp_1 \\ X0) \wedge (l1_pre_topc X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 \\ (k2_zfmisc_1 (u1_struct_0 X0) k1_numbers))) \Rightarrow (((v1_funct_1 X1) \wedge \\ ((v1_funct_2 X1 (u1_struct_0 X0) k1_numbers) \wedge (v1_pscomp_1 X1 \\ X0))) \Rightarrow ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 (u1_struct_0 X0) k1_numbers) \wedge \\ ((v5_measure6 X1 (u1_struct_0 X0)) \wedge ((v6_measure6 X1 (u1_struct_0 \\ X0)) \wedge (v1_comseq_2 X1))))))) \end{aligned} \quad (27)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge ((v3_valued_0 \\ X0) \wedge (v1_comseq_2 X0)))) \Rightarrow ((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge \\ ((v3_valued_0 X0) \wedge ((v1_seq_2 X0) \wedge (v2_seq_2 X0)))) \end{aligned} \quad (28)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (v1_relat_1 X2) \quad (29)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_pre_topc X0) \Rightarrow (((\neg v2_struct_0 X0) \wedge ((v2_pre_topc \\ X0) \wedge (v1_compts_1 X0))) \Rightarrow ((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge \\ (v2_pscomp_1 X0)))) \end{aligned} \quad (30)$$

Assume the following.

$$\forall X0.\forall X1.(v3_membered X1) \Rightarrow (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (v3_valued_0 X2)) \quad (31)$$

Theorem 1

$$\begin{aligned} \forall X0.(m1_subset_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ ((\forall X1.((\neg v1_xboole_0 X1) \wedge ((v2_compts_1 X1 (k15_euclid \\ np_2)) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 (k15_euclid \\ np_2)))))) \Rightarrow ((X0 \in X1) \Rightarrow ((r1_xxreal_0 (k1_pscomp_1 (k1_pre_topc \\ (k15_euclid np_2) X1) (k3_pscomp_1 (k15_euclid np_2) k4_pscomp_1 \\ X1)) (k17_euclid X0)) \wedge ((r1_xxreal_0 (k17_euclid X0) (k2_pscomp_1 \\ (k1_pre_topc (k15_euclid np_2) X1) (k3_pscomp_1 (k15_euclid \\ np_2) k4_pscomp_1 X1))) \wedge ((r1_xxreal_0 (k1_pscomp_1 (k1_pre_topc \\ (k15_euclid np_2) X1) (k3_pscomp_1 (k15_euclid np_2) k5_pscomp_1 \\ X1)) (k18_euclid X0)) \wedge ((r1_xxreal_0 (k18_euclid X0) (k2_pscomp_1 \\ (k1_pre_topc (k15_euclid np_2) X1) (k3_pscomp_1 (k15_euclid \\ np_2) k5_pscomp_1 X1)))))))))) \end{aligned}$$