

t2_pscomp_1
(TMXR31zVkbQCBUzd81JHH8iTScKkmWzZjf9)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v2_pre_topc : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ 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 $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Let $v2_seq_2 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_seq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_pscomp_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k3_seq_4 : \iota \Rightarrow \iota$ be given. Let $k7_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_seq_4 : \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v3_valued_0 : \iota \Rightarrow o$ be given. Let $v2_compts_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((v1_funct_1 X3) \wedge \\ & ((v1_funct_2 X3 X0 X1) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 X1)))))) \Rightarrow (\forall X4. \neg (X4 \in k7_relset_1 X0 X1 X3 X2) \wedge (\forall X5. \\ & \neg (X5 \in X0) \wedge ((X5 \in X2) \wedge (X4 = k1_funct_1 X3 X5)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v1_xboole_0 X0) \wedge (v3_membered X0)) \Rightarrow (\forall X1. \\ & (v1_xreal_0 X1) \Rightarrow ((\forall X2. (v1_xreal_0 X2) \Rightarrow ((X2 \in X0) \Rightarrow (r1_xxreal_0 \\ & X1 X2)))) \Rightarrow (r1_xxreal_0 X1 (k3_seq_4 X0))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. (m1_subset_1 X2 (\\ & k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (k7_relset_1 X0 X1 X2 X3 = k7_relat_1 \\ & X2 X3) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 (k1_zfmisc_1 k1_numbers)) \Rightarrow (k5_seq_4 X0 = k3_seq_4 X0) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v3_valued_0 X0))) \Rightarrow (k1_seq_1 X0 X1 = k1_funct_1 X0 X1) \quad (6)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc X0))) \Rightarrow (\exists X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \wedge ((\neg v1_xboole_0 X1) \wedge (v2_compts_1 X1 X0))) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))))) \Rightarrow (\neg v1_xboole_0 (k7_relat_1 X2 X0)) \quad (8)$$

Assume the following.

$$\neg v1_xboole_0 k1_numbers \quad (9)$$

Assume the following.

$$\forall X0.(l1_pre_topc X0) \Rightarrow (l1_struct_0 X0) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (m1_subset_1 (k7_relset_1 X0 X1 X2 X3) (k1_zfmisc_1 X1)) \quad (11)$$

Assume the following.

$$\forall X0.(l1_struct_0 X0) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge ((v1_funct_2 X1 (u1_struct_0 X0) k1_numbers) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) k1_numbers)))))) \Rightarrow (k1_pscomp_1 X0 X1 = k5_seq_4 (k7_relset_1 (u1_struct_0 X0) k1_numbers X1 (u1_struct_0 X0)))) \quad (12)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 (k1_zfmisc_1 k1_numbers)) \Rightarrow (v3_membered X0) \quad (13)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge (v5_relat_1 X0 k1_numbers)) \Rightarrow ((v1_relat_1 X0) \wedge (v3_valued_0 X0)) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow((v4_relat_1 X2 X0)\wedge(v5_relat_1 X2 X1)) \quad (15)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers)\Rightarrow(v1_xreal_0 X0) \quad (16)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0))\Rightarrow(v1_xboole_0 X1)) \quad (17)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(v1_relat_1 X2) \quad (18)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0)\wedge((v2_pre_topc X0)\wedge(l1_pre_topc X0)))\Rightarrow(\forall X1.((v1_funct_1 X1)\wedge((v1_funct_2 X1 (u1_struct_0 X0) k1_numbers)\wedge((v2_seq_2 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) k1_numbers))))))\Rightarrow(\forall X2. \\ & (m1_subset_1 X2 k1_numbers)\Rightarrow((\forall X3.(m1_subset_1 X3 (u1_struct_0 X0))\Rightarrow(r1_xreal_0 X2 (k1_seq_1 X1 X3)))\Rightarrow(r1_xreal_0 X2 (k1_pscomp_1 X0 X1)))))) \end{aligned}$$