

t14_pscomp_1
(TMT9EiqAoLfKE1qqZduLVqVZqtrQwg9zrcw)

October 27, 2020

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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_pscomp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v5_measure6 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v6_measure6 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k32_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $k30_valued_1 : \iota \Rightarrow \iota$ 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 $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_valued_0 : \iota \Rightarrow o$ be given. Let $v2_valued_0 : \iota \Rightarrow o$ be given. Let $v3_valued_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(l1_pre_topc X0) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge ((\\ & v1_funct_2 X1 (u1_struct_0 X0) k1_numbers) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ & (k2_zfmisc_1 (u1_struct_0 X0) k1_numbers)))))) \Rightarrow ((v1_pscomp_1 \\ & X1 X0) \Rightarrow (v1_pscomp_1 (k32_valued_1 (u1_struct_0 X0) k1_numbers \\ & X1) X0))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge (\\ & (v1_funct_2 X1 X0 k1_numbers) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 k1_numbers)))))) \Rightarrow ((v6_measure6 X1 X0) \Leftrightarrow (v5_measure6 (k32_valued_1 \\ & X0 k1_numbers X1) X0)) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((v3_membered X1) \wedge ((v1_funct_1 \\ & X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \Rightarrow (k32_valued_1 \\ & X0 X1 X2 = k30_valued_1 X2) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ X0))) \Rightarrow (\exists X1.(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ (u1_struct_0 X0) k1_numbers))) \wedge ((\neg v1_xboole_0 X1) \wedge ((v1_relat_1 \\ X1) \wedge ((v4_relat_1 X1 (u1_struct_0 X0)) \wedge ((v5_relat_1 X1 k1_numbers) \wedge \\ ((v1_funct_1 X1) \wedge ((v1_partfun1 X1 (u1_struct_0 X0)) \wedge ((v1_funct_2 \\ X1 (u1_struct_0 X0) k1_numbers) \wedge ((v1_valued_0 X1) \wedge ((v2_valued_0 \\ X1) \wedge ((v3_valued_0 X1) \wedge (v1_pscomp_1 X1 X0))))))))))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge (\\ (v1_funct_2 X1 X0 k1_numbers) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ X0 k1_numbers)))))) \Rightarrow ((v6_measure6 X1 X0) \Rightarrow (v5_measure6 (k32_valued_1 \\ X0 k1_numbers X1) X0))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_valued_0 X0))) \Rightarrow \\ (k30_valued_1 (k30_valued_1 X0) = X0) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.(v3_membered X1) \Rightarrow (v3_valued_0 (k2_zfmisc_1 X0 X1)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.v1_relat_1 (k2_zfmisc_1 X0 X1) \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.(((\neg v1_xboole_0 X1) \wedge (v3_membered \\ X1)) \wedge ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 X1) \wedge (m1_subset_1 X2 \\ (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \Rightarrow ((v1_funct_1 (k30_valued_1 \\ X2)) \wedge (v1_partfun1 (k30_valued_1 X2) X0)) \end{aligned} \quad (9)$$

Assume the following.

$$v3_membered k1_numbers \quad (10)$$

Assume the following.

$$\neg v1_xboole_0 k1_numbers \quad (11)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.((v3_membered X1) \wedge ((v1_funct_1 \\ X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \Rightarrow ((v1_funct_1 \\ (k32_valued_1 X0 X1 X2)) \wedge (m1_subset_1 (k32_valued_1 X0 X1 X2) (\\ k1_zfmisc_1 (k2_zfmisc_1 X0 k1_numbers)))) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_xboole_0 X0) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge (v4_relat_1 \\ X1 X0)) \Rightarrow ((v1_xboole_0 X1) \wedge ((v1_relat_1 X1) \wedge (v4_relat_1 X1 X0)))) \end{aligned} \quad (13)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge (v3_valued_0 X0)) \Rightarrow ((v1_relat_1 \\ X0) \wedge (v1_valued_0 X0)) \quad (14)$$

Assume the following.

$$\forall X0.(v1_relat_1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 \\ X0)) \Rightarrow (v1_relat_1 X1)) \quad (15)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\ (k2_zfmisc_1 X0 X1))) \Rightarrow ((v1_partfun1 X2 X0) \Rightarrow (v1_funct_2 X2 X0 X1)) \end{aligned} \quad (16)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge (v1_valued_0 X0)) \Rightarrow (\forall X1.(\\ m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (v1_valued_0 X1)) \quad (17)$$

Theorem 1

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