

t17_conlat_1 (TM-
bLfEk95EEcByrzWbbDFcMo1kFCUWWogtb)

October 27, 2020

Let $v1_conlat_1 : \iota \Rightarrow o$ be given. Let $l1_conlat_1 : \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_conlat_1 : \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $u4_struct_0 : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_setfam_1 : \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ 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 $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l5_struct_0 : \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $r1_conlat_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. \neg (X0 \in X1) \wedge (v1_xboole_0 X1) \quad (1)$$

Assume the following.

$$\forall X0. (v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (\forall X2. (X2 \in X0) \Leftrightarrow (X2 \in X1)) \Rightarrow (X0 = X1) \quad (4)$$

Assume the following.

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

Assume the following.

$$\forall X0. k9_setfam_1 X0 = k1_zfmisc_1 X0 \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((\neg v1_xboole_0 X0) \wedge \\ & (((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1)))))) \wedge (m1_subset_1 X3 X0))) \Rightarrow (k3_funct_2 X0 \\ & X1 X2 X3 = k1_funct_1 X2 X3) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.\exists X1.(m1_subset_1 X1 (k1_zfmisc_1 X0))\wedge(v1_xboole_0 X1) \quad (8)$$

Assume the following.

$$\forall X0.\neg v1_xboole_0 (k1_zfmisc_1 X0) \quad (9)$$

Assume the following.

$$\forall X0.((\neg v1_conlat_1 X0)\wedge(l5_struct_0 X0))\Rightarrow(\neg v1_xboole_0 (u4_struct_0 X0)) \quad (10)$$

Assume the following.

$$\forall X0.(l1_conlat_1 X0)\Rightarrow(l5_struct_0 X0) \quad (11)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v1_conlat_1 X0)\wedge(l1_conlat_1 X0))\Rightarrow((v1_funct_1 \\ (k1_conlat_1 X0))\wedge((v1_funct_2 (k1_conlat_1 X0) (k9_setfam_1 \\ (u1_struct_0 X0)) (k9_setfam_1 (u4_struct_0 X0)))\wedge(m1_subset_1 \\ (k1_conlat_1 X0) (k1_zfmisc_1 (k2_zfmisc_1 (k9_setfam_1 (u1_struct_0 \\ X0)) (k9_setfam_1 (u4_struct_0 X0))))))) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v1_conlat_1 X0)\wedge(l1_conlat_1 X0))\Rightarrow(\forall X1. \\ ((v1_funct_1 X1)\wedge((v1_funct_2 X1 (k9_setfam_1 (u1_struct_0 X0)) \\ (k9_setfam_1 (u4_struct_0 X0)))\wedge(m1_subset_1 X1 (k1_zfmisc_1 \\ (k2_zfmisc_1 (k9_setfam_1 (u1_struct_0 X0)) (k9_setfam_1 (u4_struct_0 \\ X0)))))))\Rightarrow((X1 = k1_conlat_1 X0)\Leftrightarrow(\forall X2.(m1_subset_1 X2 \\ (k1_zfmisc_1 (u1_struct_0 X0))\Rightarrow(k3_funct_2 (k1_zfmisc_1 (u1_struct_0 \\ X0)) (k9_setfam_1 (u4_struct_0 X0)) X1 X2 = ReplSep (toset (\lambda X3 : \\ \iota.m1_subset_1 X3 (u4_struct_0 X0))) (\lambda X3 : \iota.\forall X4. \\ (m1_subset_1 X4 (u1_struct_0 X0))\Rightarrow((X4 \in X2)\Rightarrow(r1_conlat_1 X0 X4 \\ X3))) (\lambda X3 : \iota.X3)))))) \end{aligned} \quad (13)$$

Theorem 1

$$\forall X0.((\neg v1_conlat_1 X0)\wedge(l1_conlat_1 X0))\Rightarrow(k1_funct_1 (k1_conlat_1 X0) k1_xboole_0 = u4_struct_0 X0)$$