

t31_conlat_1 (TMRDP- mVJ9ApZAY65XNhSmDBYzRmzCA7QJu)

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Let $v1_conlat_1 : \iota \Rightarrow o$ be given. Let $l1_conlat_1 : \iota \Rightarrow o$ be given. Let $k8_conlat_1 : \iota \Rightarrow \iota$ be given. Let $v4_conlat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v5_conlat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v7_conlat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l2_conlat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_conlat_1 : \iota \Rightarrow \iota$ be given. Let $l5_struct_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $u4_struct_0 : \iota \Rightarrow \iota$ be given. Let $g2_conlat_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u3_conlat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u2_conlat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_setfam_1 : \iota \Rightarrow \iota$ be given. Let $k1_conlat_1 : \iota \Rightarrow \iota$ be given. Let $k2_conlat_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.((\neg v1_conlat_1 X0) \wedge (l1_conlat_1 X0)) \Rightarrow (k8_conlat_1 X0 = k7_conlat_1 X0) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((l5_struct_0 X0) \wedge ((m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (u4_struct_0 X0)))))) \Rightarrow (\forall X3. \forall X4. \forall X5. (g2_conlat_1 X0 X1 X2 = g2_conlat_1 X3 X4 X5) \Rightarrow ((X0 = X3) \wedge ((X1 = X4) \wedge (X2 = X5)))) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. ((l5_struct_0 X0) \wedge (l2_conlat_1 X1 X0)) \Rightarrow (m1_subset_1 (u3_conlat_1 X0 X1) (k1_zfmisc_1 (u4_struct_0 X0))) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. ((l5_struct_0 X0) \wedge (l2_conlat_1 X1 X0)) \Rightarrow (m1_subset_1 (u2_conlat_1 X0 X1) (k1_zfmisc_1 (u1_struct_0 X0))) \quad (4)$$

Assume the following.

$$\forall X0. (l1_conlat_1 X0) \Rightarrow (l5_struct_0 X0) \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((l5_struct_0 X0)\wedge((m1_subset_1 \\ & X1 (k1_zfmisc_1 (u1_struct_0 X0)))\wedge(m1_subset_1 X2 (k1_zfmisc_1 \\ & (u4_struct_0 X0))))\Rightarrow((v4_conlat_1 (g2_conlat_1 X0 X1 X2) X0)\wedge \\ & (l2_conlat_1 (g2_conlat_1 X0 X1 X2) X0)) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v1_conlat_1 X0)\wedge(l1_conlat_1 X0))\Rightarrow(k7_conlat_1 \\ & X0 = ReplSep2 (toset (\lambda X1 : \iota.m1_subset_1 X1 (k1_zfmisc_1 (\\ & u1_struct_0 X0)))) (\lambda X1 : \iota.toset (\lambda X2 : \iota.m1_subset_1 \\ & X2 (k1_zfmisc_1 (u4_struct_0 X0)))) (\lambda X1 : \iota.\lambda X2 : \iota. \\ & (\neg v5_conlat_1 (g2_conlat_1 X0 X1 X2) X0)\wedge((k3_funct_2 (k1_zfmisc_1 \\ & (u1_struct_0 X0)) (k9_setfam_1 (u4_struct_0 X0)) (k1_conlat_1 \\ & X0) X1 = X2)\wedge(k3_funct_2 (k1_zfmisc_1 (u4_struct_0 X0)) (k9_setfam_1 \\ & (u1_struct_0 X0)) (k2_conlat_1 X0) X2 = X1))) (\lambda X1 : \iota.\lambda X2 : \\ & \iota.g2_conlat_1 X0 X1 X2)) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v1_conlat_1 X0)\wedge(l1_conlat_1 X0))\Rightarrow(\forall X1. \\ & (l2_conlat_1 X1 X0)\Rightarrow((v7_conlat_1 X1 X0)\Leftrightarrow((k3_funct_2 (k1_zfmisc_1 \\ & (u1_struct_0 X0)) (k9_setfam_1 (u4_struct_0 X0)) (k1_conlat_1 \\ & X0) (u2_conlat_1 X0 X1) = u3_conlat_1 X0 X1)\wedge(k3_funct_2 (k1_zfmisc_1 \\ & (u4_struct_0 X0)) (k9_setfam_1 (u1_struct_0 X0)) (k2_conlat_1 \\ & X0) (u3_conlat_1 X0 X1) = u2_conlat_1 X0 X1)))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((l5_struct_0 X0)\wedge(l2_conlat_1 X1 X0))\Rightarrow \\ & ((v4_conlat_1 X1 X0)\Rightarrow(X1 = g2_conlat_1 X0 (u2_conlat_1 X0 X1) (u3_conlat_1 \\ & X0 X1))) \end{aligned} \quad (9)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v1_conlat_1 X0)\wedge(l1_conlat_1 X0))\Rightarrow(\forall X1. \\ & (X1 \in k8_conlat_1 X0)\Leftrightarrow((v4_conlat_1 X1 X0)\wedge((\neg v5_conlat_1 X1 X0)\wedge \\ & ((v7_conlat_1 X1 X0)\wedge(l2_conlat_1 X1 X0)))) \end{aligned}$$