

t33_conlat_1

(TMa2Kxe2SS9aRVnJHZcEjpVbYXC7ZWde7jD)

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Let $v1_conlat_1 : \iota \Rightarrow o$ be given. Let $l1_conlat_1 : \iota \Rightarrow o$ 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 $k1_binop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_conlat_1 : \iota \Rightarrow \iota$ be given. Let $l5_struct_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u3_conlat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $u4_struct_0 : \iota \Rightarrow \iota$ be given. Let $u2_conlat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ 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 $k8_conlat_1 : \iota \Rightarrow \iota$ be given. Let $g2_conlat_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k2_conlat_1 : \iota \Rightarrow \iota$ be given. Let $k1_conlat_1 : \iota \Rightarrow \iota$ be given. Let $k4_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((l5_struct_0 X0) \wedge (l2_conlat_1 X1 X0)) \Rightarrow \\ & (m1_subset_1 (u3_conlat_1 X0 X1) (k1_zfmisc_1 (u4_struct_0 X0))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((l5_struct_0 X0) \wedge (l2_conlat_1 X1 X0)) \Rightarrow \\ & (m1_subset_1 (u2_conlat_1 X0 X1) (k1_zfmisc_1 (u1_struct_0 X0))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. (l1_conlat_1 X0) \Rightarrow (l5_struct_0 X0) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v1_conlat_1 X0) \wedge (l1_conlat_1 X0)) \Rightarrow ((v1_funct_1 \\ & (k10_conlat_1 X0)) \wedge ((v1_funct_2 (k10_conlat_1 X0) (k2_zfmisc_1 \\ & (k8_conlat_1 X0) (k8_conlat_1 X0)) (k8_conlat_1 X0)) \wedge (m1_subset_1 \\ & (k10_conlat_1 X0) (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 (k8_conlat_1 \\ & X0) (k8_conlat_1 X0)) (k8_conlat_1 X0)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v1_conlat_1 X0) \wedge (l1_conlat_1 X0)) \Rightarrow (\forall X1. \\
& ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 (k2_zfmisc_1 (k8_conlat_1 X0) \\
& (k8_conlat_1 X0)) (k8_conlat_1 X0)) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\
& (k2_zfmisc_1 (k2_zfmisc_1 (k8_conlat_1 X0) (k8_conlat_1 X0)) \\
& (k8_conlat_1 X0)))))) \Rightarrow ((X1 = k10_conlat_1 X0) \Leftrightarrow (\forall X2.((\\
& v4_conlat_1 X2 X0) \wedge ((\neg v5_conlat_1 X2 X0) \wedge ((v7_conlat_1 X2 X0) \wedge \\
& (l2_conlat_1 X2 X0)))))) \Rightarrow (\forall X3.((v4_conlat_1 X3 X0) \wedge ((\neg v5_conlat_1 \\
& X3 X0) \wedge ((v7_conlat_1 X3 X0) \wedge (l2_conlat_1 X3 X0)))))) \Rightarrow (\exists X4. \\
& (m1_subset_1 X4 (k1_zfmisc_1 (u1_struct_0 X0))) \wedge (\exists X5. \\
& (m1_subset_1 X5 (k1_zfmisc_1 (u4_struct_0 X0))) \wedge ((k1_binop_1 \\
& X1 X2 X3 = g2_conlat_1 X0 X4 X5) \wedge ((X4 = k3_funct_2 (k9_setfam_1 (u4_struct_0 \\
& X0)) (k9_setfam_1 (u1_struct_0 X0)) (k2_conlat_1 X0) (k3_funct_2 \\
& (k1_zfmisc_1 (u1_struct_0 X0)) (k9_setfam_1 (u4_struct_0 X0)) \\
& (k1_conlat_1 X0) (k4_subset_1 (u1_struct_0 X0) (u2_conlat_1 X0 \\
& X2) (u2_conlat_1 X0 X3)))))) \wedge (X5 = k9_subset_1 (u4_struct_0 X0) (\\
& u3_conlat_1 X0 X2) (u3_conlat_1 X0 X3))))))))) \\
\end{aligned} \tag{5}$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1_subset_1 X2 (k1_zfmisc_1 X0)) \Rightarrow (k9_subset_1 X0 X1 X2 = k9_subset_1 X0 X2 X1) \tag{6}$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((m1_subset_1 X1 (k1_zfmisc_1 X0)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 X0))) \Rightarrow (k4_subset_1 X0 X1 X2 = k4_subset_1 X0 X2 X1) \tag{7}$$

Assume the following.

$$\forall X0. \forall X1. ((l5_struct_0 X0) \wedge (l2_conlat_1 X1 X0)) \Rightarrow ((v4_conlat_1 X1 X0) \Rightarrow (X1 = g2_conlat_1 X0 (u2_conlat_1 X0 X1) (u3_conlat_1 X0 X1))) \tag{8}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v1_conlat_1 X0) \wedge (l1_conlat_1 X0)) \Rightarrow (\forall X1. \\
& ((v4_conlat_1 X1 X0) \wedge ((\neg v5_conlat_1 X1 X0) \wedge ((v7_conlat_1 X1 X0) \wedge \\
& (l2_conlat_1 X1 X0)))))) \Rightarrow (\forall X2.((v4_conlat_1 X2 X0) \wedge ((\neg v5_conlat_1 \\
& X2 X0) \wedge ((v7_conlat_1 X2 X0) \wedge (l2_conlat_1 X2 X0)))))) \Rightarrow (k1_binop_1 \\
& (k10_conlat_1 X0) X1 X2 = k1_binop_1 (k10_conlat_1 X0) X2 X1))
\end{aligned}$$