

t21_conlat_1

(TMEgi9W4qkZhZx23hc3kCE5GwzhGyQsVuwG)

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Let $v1_conlat_1 : \iota \Rightarrow o$ be given. Let $l1_conlat_1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $u4_struct_0 : \iota \Rightarrow \iota$ be given. Let $v5_conlat_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k2_conlat_1 : \iota \Rightarrow \iota$ be given. Let $k1_conlat_1 : \iota \Rightarrow \iota$ 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 $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u2_conlat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u3_conlat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l5_struct_0 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ 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 $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v4_conlat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v1_conlat_1 X0) \wedge (l1_conlat_1 X0)) \Rightarrow (\forall X1. \\
 & (m1_subset_1 X1 (k1_zfmisc_1 (u4_struct_0 X0))) \Rightarrow (k3_funct_2 \\
 & (k1_zfmisc_1 (u4_struct_0 X0)) (k9_setfam_1 (u1_struct_0 X0)) \\
 & (k2_conlat_1 X0) X1 = k3_funct_2 (k9_setfam_1 (u4_struct_0 X0)) \\
 & (k9_setfam_1 (u1_struct_0 X0)) (k2_conlat_1 X0) (k3_funct_2 (\\
 & k9_setfam_1 (u1_struct_0 X0)) (k9_setfam_1 (u4_struct_0 X0)) \\
 & (k1_conlat_1 X0) (k3_funct_2 (k1_zfmisc_1 (u4_struct_0 X0)) (\\
 & k9_setfam_1 (u1_struct_0 X0)) (k2_conlat_1 X0) X1))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v1_conlat_1 X0) \wedge (l1_conlat_1 X0)) \Rightarrow (\forall X1. \\
 & (m1_subset_1 X1 (k1_zfmisc_1 (u4_struct_0 X0))) \Rightarrow (\forall X2. \\
 & (m1_subset_1 X2 (k1_zfmisc_1 (u4_struct_0 X0))) \Rightarrow ((r1_tarski \\
 & X1 X2) \Rightarrow (r1_tarski (k3_funct_2 (k1_zfmisc_1 (u4_struct_0 X0)) \\
 & (k9_setfam_1 (u1_struct_0 X0)) (k2_conlat_1 X0) X2) (k3_funct_2 \\
 & (k1_zfmisc_1 (u4_struct_0 X0)) (k9_setfam_1 (u1_struct_0 X0)) \\
 & (k2_conlat_1 X0) X1))))
 \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v1_conlat_1 X0) \wedge (l1_conlat_1 X0)) \Rightarrow (\forall X1. \\
& (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\forall X2. \\
& (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow ((r1_tarski \\
& X1 X2) \Rightarrow (r1_tarski (k3_funct_2 (k1_zfmisc_1 (u1_struct_0 X0)) \\
& (k9_setfam_1 (u4_struct_0 X0)) (k1_conlat_1 X0) X2) (k3_funct_2 \\
& (k1_zfmisc_1 (u1_struct_0 X0)) (k9_setfam_1 (u4_struct_0 X0)) \\
& (k1_conlat_1 X0) X1))))))
\end{aligned} \tag{3}$$

Assume the following.

$$\forall X0. k9_setfam_1 X0 = k1_zfmisc_1 X0 \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v1_conlat_1 X0) \wedge (l1_conlat_1 X0)) \Rightarrow (\forall X1. \\
& (l2_conlat_1 X1 X0) \Rightarrow (\neg (k3_funct_2 (k1_zfmisc_1 (u1_struct_0 \\
& X0)) (k9_setfam_1 (u4_struct_0 X0)) (k1_conlat_1 X0) (u2_conlat_1 \\
& X0 X1) = u3_conlat_1 X0 X1) \wedge (v5_conlat_1 X1 X0)))
\end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. ((l5_struct_0 X0) \wedge ((m1_subset_1 \\
& X1 (k1_zfmisc_1 (u1_struct_0 X0))) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\
& (u4_struct_0 X0)))))) \Rightarrow (\forall X3. \forall X4. \forall X5. (g2_conlat_1 \\
& X0 X1 X2 = g2_conlat_1 X3 X4 X5) \Rightarrow ((X0 = X3) \wedge ((X1 = X4) \wedge (X2 = X5))))
\end{aligned} \tag{6}$$

Assume the following.

$$\forall X0. \neg v1_xboole_0 (k1_zfmisc_1 X0) \tag{7}$$

Assume the following.

$$\forall X0. (l1_conlat_1 X0) \Rightarrow (l5_struct_0 X0) \tag{8}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. \forall X3. ((\neg v1_xboole_0 X0) \wedge \\
& (((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\
& (k2_zfmisc_1 X0 X1)))))) \wedge (m1_subset_1 X3 X0)) \Rightarrow (m1_subset_1 (\\
& k3_funct_2 X0 X1 X2 X3) X1)
\end{aligned} \tag{9}$$

Assume the following.

$$\begin{aligned}
& \forall X0. ((\neg v1_conlat_1 X0) \wedge (l1_conlat_1 X0)) \Rightarrow ((v1_funct_1 \\
& (k2_conlat_1 X0)) \wedge ((v1_funct_2 (k2_conlat_1 X0) (k9_setfam_1 \\
& (u4_struct_0 X0)) (k9_setfam_1 (u1_struct_0 X0))) \wedge (m1_subset_1 \\
& (k2_conlat_1 X0) (k1_zfmisc_1 (k2_zfmisc_1 (k9_setfam_1 (u4_struct_0 \\
& X0)) (k9_setfam_1 (u1_struct_0 X0))))))
\end{aligned} \tag{10}$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v1_conlat_1 X0) \wedge (l1_conlat_1 X0)) \Rightarrow & ((v1_funct_1 \\ & (k1_conlat_1 X0)) \wedge ((v1_funct_2 (k1_conlat_1 X0) (k9_setfam_1 \\ & (u1_struct_0 X0)) (k9_setfam_1 (u4_struct_0 X0))) \wedge (m1_subset_1 \\ & (k1_conlat_1 X0) (k1_zfmisc_1 (k2_zfmisc_1 (k9_setfam_1 (u1_struct_0 \\ & X0)) (k9_setfam_1 (u4_struct_0 X0)))))) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. ((l5_struct_0 X0) \wedge ((m1_subset_1 \\ X1 (k1_zfmisc_1 (u1_struct_0 X0))) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\ (u4_struct_0 X0)))))) \Rightarrow ((v4_conlat_1 (g2_conlat_1 X0 X1 X2) X0) \wedge \\ (l2_conlat_1 (g2_conlat_1 X0 X1 X2) X0)) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} \forall X0. ((\neg v1_conlat_1 X0) \wedge (l1_conlat_1 X0)) \Rightarrow (\forall X1. \\ (l2_conlat_1 X1 X0) \Rightarrow ((v7_conlat_1 X1 X0) \Leftrightarrow ((k3_funct_2 (k1_zfmisc_1 \\ (u1_struct_0 X0)) (k9_setfam_1 (u4_struct_0 X0)) (k1_conlat_1 \\ X0) (u2_conlat_1 X0 X1) = u3_conlat_1 X0 X1) \wedge (k3_funct_2 (k1_zfmisc_1 \\ (u4_struct_0 X0)) (k9_setfam_1 (u1_struct_0 X0)) (k2_conlat_1 \\ X0) (u3_conlat_1 X0 X1) = u2_conlat_1 X0 X1)))) \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. ((l5_struct_0 X0) \wedge (l2_conlat_1 X1 X0)) \Rightarrow \\ ((v4_conlat_1 X1 X0) \Rightarrow (X1 = g2_conlat_1 X0 (u2_conlat_1 X0 X1) (u3_conlat_1 \\ X0 X1))) \end{aligned} \quad (14)$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v1_conlat_1 X0) \wedge (l1_conlat_1 X0)) \Rightarrow (\forall X1. \\
& (m1_subset_1 X1 (k1_zfmisc_1 (u4_struct_0 X0))) \Rightarrow (((\neg v5_conlat_1 \\
& (g2_conlat_1 X0 (k3_funct_2 (k1_zfmisc_1 (u4_struct_0 X0)) (k9_setfam_1 \\
& (u1_struct_0 X0)) (k2_conlat_1 X0) X1) (k3_funct_2 (k9_setfam_1 \\
& (u1_struct_0 X0)) (k9_setfam_1 (u4_struct_0 X0)) (k1_conlat_1 \\
& X0) (k3_funct_2 (k1_zfmisc_1 (u4_struct_0 X0)) (k9_setfam_1 (\\
& u1_struct_0 X0)) (k2_conlat_1 X0) X1))) X0) \wedge ((v7_conlat_1 (g2_conlat_1 \\
& X0 (k3_funct_2 (k1_zfmisc_1 (u4_struct_0 X0)) (k9_setfam_1 (u1_struct_0 \\
& X0)) (k2_conlat_1 X0) X1) (k3_funct_2 (k9_setfam_1 (u1_struct_0 \\
& X0)) (k9_setfam_1 (u4_struct_0 X0)) (k1_conlat_1 X0) (k3_funct_2 \\
& (k1_zfmisc_1 (u4_struct_0 X0)) (k9_setfam_1 (u1_struct_0 X0)) \\
& (k2_conlat_1 X0) X1))) X0) \wedge (l2_conlat_1 (g2_conlat_1 X0 (k3_funct_2 \\
& (k1_zfmisc_1 (u4_struct_0 X0)) (k9_setfam_1 (u1_struct_0 X0)) \\
& (k2_conlat_1 X0) X1) (k3_funct_2 (k9_setfam_1 (u1_struct_0 X0)) \\
& (k9_setfam_1 (u4_struct_0 X0)) (k1_conlat_1 X0) (k3_funct_2 (\\
& k1_zfmisc_1 (u4_struct_0 X0)) (k9_setfam_1 (u1_struct_0 X0)) \\
& (k2_conlat_1 X0) X1))) X0))) \wedge (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\
& (u1_struct_0 X0))) \Rightarrow (\forall X3.(m1_subset_1 X3 (k1_zfmisc_1 \\
& (u4_struct_0 X0))) \Rightarrow (((\neg v5_conlat_1 (g2_conlat_1 X0 X2 X3) X0) \wedge \\
& ((v7_conlat_1 (g2_conlat_1 X0 X2 X3) X0) \wedge (l2_conlat_1 (g2_conlat_1 \\
& X0 X2 X3) X0))) \wedge (r1_tarski X1 X3)) \Rightarrow (r1_tarski (k3_funct_2 (k9_setfam_1 \\
& (u1_struct_0 X0)) (k9_setfam_1 (u4_struct_0 X0)) (k1_conlat_1 \\
& X0) (k3_funct_2 (k1_zfmisc_1 (u4_struct_0 X0)) (k9_setfam_1 (\\
& u1_struct_0 X0)) (k2_conlat_1 X0) X1)) X3))))))
\end{aligned}$$