

t10_conlat_1

(TMVSx4ZHVaqornWRN4mYp2YuBwBBDkkabtU)

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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 $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $u4_struct_0 : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_setfam_1 : \iota \Rightarrow \iota$ be given. Let $k1_conlat_1 : \iota \Rightarrow \iota$ be given. Let $r1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k8_mcart_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_conlat_1 : \iota \Rightarrow \iota$ be given. Let $k2_conlat_1 : \iota \Rightarrow \iota$ 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 $r1_conlat_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v1_conlat_1 X0) \wedge (l1_conlat_1 X0)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 (k1_zfmisc_1 (u4_struct_0 X0))) \Rightarrow ((r1_tarski \\ & X1 (k3_funct_2 (k1_zfmisc_1 (u4_struct_0 X0)) (k9_setfam_1 (u1_struct_0 \\ & X0)) (k2_conlat_1 X0) X2)) \Leftrightarrow (r1_relset_1 (u1_struct_0 X0) (u4_struct_0 \\ & X0) (k8_mcart_1 (u1_struct_0 X0) (u4_struct_0 X0) X1 X2) (u1_conlat_1 \\ & X0)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v1_conlat_1 X0) \wedge (l1_conlat_1 X0)) \Rightarrow ((v1_funct_1 \\ & (k2_conlat_1 X0)) \wedge ((v1_funct_2 (k2_conlat_1 X0) (k9_setfam_1 \\ & (u4_struct_0 X0)) (k9_setfam_1 (u1_struct_0 X0))) \wedge (m1_subset_1 \\ & (k2_conlat_1 X0) (k1_zfmisc_1 (k2_zfmisc_1 (k9_setfam_1 (u4_struct_0 \\ & X0)) (k9_setfam_1 (u1_struct_0 X0)))))) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v1_conlat_1 X0) \wedge (l1_conlat_1 X0)) \Rightarrow & ((v1_funct_1 \\ & (k1_conlat_1 X0)) \wedge ((v1_funct_2 (k1_conlat_1 X0) (k9_setfam_1 \\ & (u1_struct_0 X0)) (k9_setfam_1 (u4_struct_0 X0))) \wedge (m1_subset_1 \\ & (k1_conlat_1 X0) (k1_zfmisc_1 (k2_zfmisc_1 (k9_setfam_1 (u1_struct_0 \\ & X0)) (k9_setfam_1 (u4_struct_0 X0)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v1_conlat_1 X0) \wedge (l1_conlat_1 X0)) \Rightarrow & (\forall X1. \\ & ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 (k9_setfam_1 (u4_struct_0 X0)) \\ & (k9_setfam_1 (u1_struct_0 X0))) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ & (k2_zfmisc_1 (k9_setfam_1 (u4_struct_0 X0)) (k9_setfam_1 (u1_struct_0 \\ & X0)))))) \Rightarrow ((X1 = k2_conlat_1 X0) \Leftrightarrow (\forall X2.(m1_subset_1 X2 \\ & (k1_zfmisc_1 (u4_struct_0 X0))) \Rightarrow (k3_funct_2 (k1_zfmisc_1 (u4_struct_0 \\ & X0)) (k9_setfam_1 (u1_struct_0 X0)) X1 X2 = ReplSep (toset (\lambda X3 : \\ & \iota.m1_subset_1 X3 (u1_struct_0 X0))) (\lambda X3 : \iota.\forall X4. \\ & (m1_subset_1 X4 (u4_struct_0 X0)) \Rightarrow ((X4 \in X2) \Rightarrow (r1_conlat_1 X0 X3 \\ & X4)) (\lambda X3 : \iota.X3)))))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(r1_tarski X0 X1) \Leftrightarrow (\forall X2.(X2 \in X0) \Rightarrow (X2 \in X1)) \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v1_conlat_1 X0) \wedge (l1_conlat_1 X0)) \Rightarrow & (\forall X1. \\ & ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 (k9_setfam_1 (u1_struct_0 X0)) \\ & (k9_setfam_1 (u4_struct_0 X0))) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ & (k2_zfmisc_1 (k9_setfam_1 (u1_struct_0 X0)) (k9_setfam_1 (u4_struct_0 \\ & X0)))))) \Rightarrow ((X1 = k1_conlat_1 X0) \Leftrightarrow (\forall X2.(m1_subset_1 X2 \\ & (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (k3_funct_2 (k1_zfmisc_1 (u1_struct_0 \\ & X0)) (k9_setfam_1 (u4_struct_0 X0)) X1 X2 = ReplSep (toset (\lambda X3 : \\ & \iota.m1_subset_1 X3 (u4_struct_0 X0))) (\lambda X3 : \iota.\forall X4. \\ & (m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow ((X4 \in X2) \Rightarrow (r1_conlat_1 X0 X4 \\ & X3)) (\lambda X3 : \iota.X3)))))) \end{aligned} \quad (7)$$

Theorem 1

$$\begin{aligned} \forall X0.((\neg v1_conlat_1 X0) \wedge (l1_conlat_1 X0)) \Rightarrow & (\forall X1. \\ & (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 (k1_zfmisc_1 (u4_struct_0 X0))) \Rightarrow ((r1_tarski \\ & X2 (k3_funct_2 (k1_zfmisc_1 (u1_struct_0 X0)) (k9_setfam_1 (u4_struct_0 \\ & X0)) (k1_conlat_1 X0) X1)) \Leftrightarrow (r1_reset_1 (u1_struct_0 X0) (u4_struct_0 \\ & X0) (k8_mcart_1 (u1_struct_0 X0) (u4_struct_0 X0) X1 X2) (u1_conlat_1 \\ & X0)))))) \end{aligned}$$