

t16_tdlat_2
(TMJ4SoUiqjjNBEaSW5jQzBjPziTqq5Ke31T)

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Let $v2_pre_topc : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ 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 $k1_tdlat_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tops_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (\forall X2. (X2 \in X0) \Leftrightarrow (X2 \in X1)) \Rightarrow (X0 = X1) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (((v2_pre_topc X0) \wedge (l1_pre_topc X0)) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow (m1_subset_1 (k1_tdlat_2 X0 X1) (k1_zfmisc_1 (k1_zfmisc_1 (u1_struct_0 X0)))) \quad (3)$$

Assume the following.

$$\forall X0. ((v2_pre_topc X0) \wedge (l1_pre_topc X0)) \Rightarrow (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow (\forall X2. (m1_subset_1 X2 (k1_zfmisc_1 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow ((X2 = k1_tdlat_2 X0 X1) \Leftrightarrow (\forall X3. (m1_subset_1 X3 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow ((X3 \in X2) \Leftrightarrow (\exists X4. (m1_subset_1 X4 (k1_zfmisc_1 (u1_struct_0 X0)))) \wedge ((X3 = k1_tops_1 X0 X4) \wedge (X4 \in X1)))))) \quad (4)$$

Theorem 1

$$\forall X0. ((v2_pre_topc X0) \wedge (l1_pre_topc X0)) \Rightarrow (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow (k1_tdlat_2 X0 X1 = \text{ReplSep} (\text{toset} (\lambda X2 : \iota. m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0)))) (\lambda X2 : \iota. \exists X3. (m1_subset_1 X3 (k1_zfmisc_1 (u1_struct_0 X0)))) \wedge ((X2 = k1_tops_1 X0 X3) \wedge (X3 \in X1))) (\lambda X2 : \iota. X2)))$$