

t48_kurato_1
(TMcF1Dh8qcnPBzqmLe5DUrt2QaJe3yoxJNS)

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Let $k1_enumset1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tops_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_topmetr : \iota$ be given. Let $k6_kurato_1 : \iota$ be given. Let $k2_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v3_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ 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 $v2_pre_topc : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v2_pre_topc X0) \wedge (l1_pre_topc X0)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (k1_tops_1 X0 \\ & (k2_pre_topc X0 X1) = k1_tops_1 X0 (k2_pre_topc X0 (k1_tops_1 X0 \\ & (k2_pre_topc X0 X1)))))) \end{aligned} \quad (1)$$

Assume the following.

$$k2_pre_topc k3_topmetr (k1_tops_1 k3_topmetr k6_kurato_1) \neq k1_tops_1 k3_topmetr k6_kurato_1 \quad (2)$$

Assume the following.

$$k2_pre_topc k3_topmetr (k1_tops_1 k3_topmetr k6_kurato_1) \neq k1_tops_1 k3_topmetr (k2_pre_topc k3_topmetr (k1_tops_1 k3_topmetr k6_kurato_1)) \quad (3)$$

Assume the following.

$$k1_tops_1 k3_topmetr (k2_pre_topc k3_topmetr k6_kurato_1) \neq k2_pre_topc k3_topmetr (k1_tops_1 k3_topmetr k6_kurato_1) \quad (4)$$

Assume the following.

$$k2_pre_topc k3_topmetr (k1_tops_1 k3_topmetr (k2_pre_topc k3_topmetr k6_kurato_1)) \neq k2_pre_topc k3_topmetr (k1_tops_1 k3_topmetr k6_kurato_1) \quad (5)$$

Assume the following.

$$k2_pre_topc\ k3_topmetr\ (k1_tops_1\ k3_topmetr\ (k2_pre_topc\ k3_topmetr\ k6_kurato_1)) \neq k1_tops_1\ k3_topmetr\ (k2_pre_topc\ k3_topmetr\ k6_kurato_1) \quad (6)$$

Assume the following.

$$\forall X0.(l1_pre_topc\ X0) \Rightarrow (\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1\ (u1_struct_0\ X0))) \Rightarrow (k2_pre_topc\ X0\ (k1_tops_1\ X0\ X1) = k2_pre_topc\ X0\ (k1_tops_1\ X0\ (k2_pre_topc\ X0\ (k1_tops_1\ X0\ X1)))))) \quad (7)$$

Assume the following.

$$\forall X0.((v2_pre_topc\ X0) \wedge (l1_pre_topc\ X0)) \Rightarrow (\forall X1.(l1_pre_topc\ X1) \Rightarrow (\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1\ (u1_struct_0\ X0))) \Rightarrow (\forall X3.(m1_subset_1\ X3\ (k1_zfmisc_1\ (u1_struct_0\ X1))) \Rightarrow (((v3_pre_topc\ X3\ X1) \Rightarrow (k1_tops_1\ X1\ X3 = X3)) \wedge ((k1_tops_1\ X0\ X2 = X2) \Rightarrow (v3_pre_topc\ X2\ X0))))))) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.(((v2_pre_topc\ X0) \wedge (l1_pre_topc\ X0)) \wedge (m1_subset_1\ X1\ (k1_zfmisc_1\ (u1_struct_0\ X0)))) \Rightarrow (v3_pre_topc\ (k1_tops_1\ X0\ X1)\ X0) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.(((v2_pre_topc\ X0) \wedge (l1_pre_topc\ X0)) \wedge ((v1_xboole_0\ X1) \wedge (m1_subset_1\ X1\ (k1_zfmisc_1\ (u1_struct_0\ X0)))))) \Rightarrow (v1_xboole_0\ (k2_pre_topc\ X0\ X1)) \quad (10)$$

Assume the following.

$$m1_subset_1\ k6_kurato_1\ (k1_zfmisc_1\ (u1_struct_0\ k3_topmetr)) \quad (11)$$

Assume the following.

$$(v2_pre_topc\ k3_topmetr) \wedge (l1_pre_topc\ k3_topmetr) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.(((l1_pre_topc\ X0) \wedge (m1_subset_1\ X1\ (k1_zfmisc_1\ (u1_struct_0\ X0)))) \Rightarrow (m1_subset_1\ (k2_pre_topc\ X0\ X1)\ (k1_zfmisc_1\ (u1_struct_0\ X0)))) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.(((l1_pre_topc\ X0) \wedge (m1_subset_1\ X1\ (k1_zfmisc_1\ (u1_struct_0\ X0)))) \Rightarrow (m1_subset_1\ (k1_tops_1\ X0\ X1)\ (k1_zfmisc_1\ (u1_struct_0\ X0)))) \quad (14)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.(X3 = k1_enumset1 \\ & X0 X1 X2)\Leftrightarrow(\forall X4.(X4 \in X3)\Leftrightarrow(\neg(X4\neq X0)\wedge((X4\neq X1)\wedge(X4\neq X2)))) \end{aligned} \quad (15)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v2_pre_topc X0)\wedge(l1_pre_topc X0))\Rightarrow(\forall X1. \\ & (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0)))\Rightarrow((v1_xboole_0 \\ & X1)\Rightarrow(v3_pre_topc X1 X0))) \end{aligned} \quad (16)$$

Theorem 1

$$\begin{aligned} & \forall X0.(X0 \in k1_enumset1 (k1_tops_1 k3_topmetr k6_kurato_1) \\ & (k1_tops_1 k3_topmetr (k2_pre_topc k3_topmetr k6_kurato_1)) \\ & (k1_tops_1 k3_topmetr (k2_pre_topc k3_topmetr (k1_tops_1 k3_topmetr \\ & k6_kurato_1))))\Rightarrow((\neg v1_xboole_0 X0)\wedge((v3_pre_topc X0 k3_topmetr)\wedge \\ & (m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 k3_topmetr)))))) \end{aligned}$$