

t45_tmap_1 (TM- SWFqivGftG6hdFL9ZxyGwR1P3tvb7HJWZ)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v2_pre_topc : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_pre_topc : \iota \Rightarrow \iota$ 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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tmap_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v3_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. \neg(X0 \in X1) \wedge ((m1_subset_1 X1 (k1_zfmisc_1 X2)) \wedge (v1_xboole_0 X2)) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc X0))) \Rightarrow (\forall X1. ((\neg v2_struct_0 X1) \wedge ((v2_pre_topc X1) \wedge (l1_pre_topc X1)))) \Rightarrow (\forall X2. ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 X1)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1)))))) \Rightarrow (\forall X3. (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow ((r1_tmap_1 X0 X1 X2 X3) \Leftrightarrow (\forall X4. (m1_subset_1 X4 (k1_zfmisc_1 (u1_struct_0 X1))) \Rightarrow (\neg(v3_pre_topc X4 X1) \wedge ((k3_funct_2 (u1_struct_0 X0) (u1_struct_0 X1) X2 X3 \in X4) \wedge (\forall X5. (m1_subset_1 X5 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\neg(v3_pre_topc X5 X0) \wedge ((X3 \in X5) \wedge (r1_tarski (k7_relset_1 (u1_struct_0 X0) (u1_struct_0 X1) X2 X5) X4)))))))))) \quad (3) \end{aligned}$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 (k1_zfmisc_1 X1)) \Leftrightarrow (r1_tarski X0 X1) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X0 X1)\Rightarrow((v1_xboole_0 X1)\vee (X0 \in X1)) \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5. \\ & ((\neg v1_xboole_0 X1)\wedge(\neg v1_xboole_0 X3)\wedge(((v1_funct_1 X4)\wedge((v1_funct_2 X4 X0 X1)\wedge(m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))))\wedge((v1_funct_1 X5)\wedge((v1_funct_2 X5 X2 X3)\wedge(m1_subset_1 X5 (k1_zfmisc_1 (k2_zfmisc_1 X2 X3))))))\Rightarrow((r1_funct_2 X0 X1 X2 X3 X4 X5)\Leftrightarrow(X4 = X5)) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0.((v2_pre_topc X0)\wedge(l1_pre_topc X0))\Rightarrow(\exists X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0)))\wedge(v3_pre_topc X1 X0)) \quad (7)$$

Assume the following.

$$\forall X0.(l1_pre_topc X0)\Rightarrow(\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0)))\Rightarrow((v3_pre_topc X1 X0)\Leftrightarrow(X1 \in u1_pre_topc X0))) \quad (8)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0)\wedge((v2_pre_topc X0)\wedge(l1_pre_topc X0)))\Rightarrow(\forall X1.((\neg v2_struct_0 X1)\wedge((v2_pre_topc X1)\wedge(l1_pre_topc X1)))\Rightarrow(\forall X2.((\neg v2_struct_0 X2)\wedge((v2_pre_topc X2)\wedge(l1_pre_topc X2)))\Rightarrow(((u1_struct_0 X1 = u1_struct_0 X2)\wedge(r1_tarski (u1_pre_topc X2) (u1_pre_topc X1)))\Rightarrow(\forall X3.((v1_funct_1 X3)\wedge((v1_funct_2 X3 (u1_struct_0 X0) (u1_struct_0 X1))\wedge(m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1))))))\Rightarrow(\forall X4.((v1_funct_1 X4)\wedge((v1_funct_2 X4 (u1_struct_0 X0) (u1_struct_0 X2))\wedge(m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X2))))))\Rightarrow((r1_funct_2 (u1_struct_0 X0) (u1_struct_0 X1) (u1_struct_0 X0) (u1_struct_0 X2) X3 X4)\Rightarrow(\forall X5.(m1_subset_1 X5 (u1_struct_0 X0))\Rightarrow((r1_tmap_1 X0 X1 X3 X5)\Rightarrow(r1_tmap_1 X0 X2 X4 X5)))))))))) \end{aligned}$$