

t55_tmap_1

(TMJrbz5s4CNEKEm9ZykAJT7si1qcHLNaKEQ)

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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 $m1_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ 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 $u1_struct_0 : \iota \Rightarrow \iota$ 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 $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_tmap_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $k7_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1. \forall X2. \\ & (r1_tarski X2 X1) \Rightarrow (k7_relat_1 X0 X2 = k7_relat_1 (k5_relat_1 X0 \\ & X1) X2)) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. (m1_subset_1 X2 (\\ & k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (k7_relset_1 X0 X1 X2 X3 = k7_relat_1 \\ & X2 X3) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((v1_funct_1 X2) \wedge \\ & (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))) \Rightarrow (k2_partfun1 \\ & X0 X1 X2 X3 = k5_relat_1 X2 X3) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. (l1_pre_topc X0) \Rightarrow (\forall X1. (m1_pre_topc X1 X0) \Rightarrow \\ & (l1_pre_topc X1)) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0. (l1_pre_topc X0) \Rightarrow (l1_struct_0 X0) \quad (5)$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.\forall X3.((l1_struct_0 X0)\wedge \\
& ((l1_struct_0 X1)\wedge(((v1_funct_1 X2)\wedge((v1_funct_2 X2 (u1_struct_0 \\
& X0) (u1_struct_0 X1))\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\
& (u1_struct_0 X0) (u1_struct_0 X1))))))\wedge(l1_struct_0 X3))))\Rightarrow \\
& ((v1_funct_1 (k2_tmap_1 X0 X1 X2 X3))\wedge((v1_funct_2 (k2_tmap_1 \\
& X0 X1 X2 X3) (u1_struct_0 X3) (u1_struct_0 X1))\wedge(m1_subset_1 (k2_tmap_1 \\
& X0 X1 X2 X3) (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X3) (u1_struct_0 \\
& X1))))))
\end{aligned} \tag{6}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0)\wedge((v2_pre_topc X0)\wedge(l1_pre_topc \\
& X0)))\Rightarrow(\forall X1.((\neg v2_struct_0 X1)\wedge((v2_pre_topc X1)\wedge(l1_pre_topc \\
& X1)))\Rightarrow(\forall X2.((v1_funct_1 X2)\wedge((v1_funct_2 X2 (u1_struct_0 \\
& X0) (u1_struct_0 X1))\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\
& (u1_struct_0 X0) (u1_struct_0 X1))))))\Rightarrow(\forall X3.(m1_pre_topc \\
& X3 X0)\Rightarrow(k2_tmap_1 X0 X1 X2 X3 = k2_partfun1 (u1_struct_0 X0) (u1_struct_0 \\
& X1) X2 (u1_struct_0 X3))))))
\end{aligned} \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(v1_relat_1 X2) \tag{8}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0)\wedge((v2_pre_topc X0)\wedge(l1_pre_topc \\
& X0)))\Rightarrow(\forall X1.((\neg v2_struct_0 X1)\wedge((v2_pre_topc X1)\wedge(l1_pre_topc \\
& X1)))\Rightarrow(\forall X2.((\neg v2_struct_0 X2)\wedge(m1_pre_topc X2 X1))\Rightarrow(\\
& \forall X3.((v1_funct_1 X3)\wedge((v1_funct_2 X3 (u1_struct_0 X1) \\
& (u1_struct_0 X0))\wedge(m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 \\
& (u1_struct_0 X1) (u1_struct_0 X0))))))\Rightarrow(\forall X4.(m1_subset_1 \\
& X4 (k1_zfmisc_1 (u1_struct_0 X1)))\Rightarrow((r1_tarski X4 (u1_struct_0 \\
& X2))\Rightarrow(k7_relset_1 (u1_struct_0 X1) (u1_struct_0 X0) X3 X4 = k7_relset_1 \\
& (u1_struct_0 X2) (u1_struct_0 X0) (k2_tmap_1 X1 X0 X3 X2) X4))))))
\end{aligned}$$