

t76_tmap_1
(TMMjxgxzQLY44p7dR7kfeE1BP9KJHbqu2Bc)

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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 $m1_connsp_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tmap_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_tmap_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_tmap_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v2_pre_topc X0) \wedge (l1_pre_topc X0)) \Rightarrow (\forall X1. \\ & (m1_pre_topc X1 X0) \Rightarrow (\forall X2.(m1_pre_topc X2 X1) \Rightarrow (m1_pre_topc \\ & X2 X0))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ & X0))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge ((v2_pre_topc X1) \wedge (l1_pre_topc \\ & X1)))) \Rightarrow (\forall X2.((\neg v2_struct_0 X2) \wedge (m1_pre_topc X2 X0)) \Rightarrow (\\ & \forall X3.((\neg v2_struct_0 X3) \wedge (m1_pre_topc X3 X0)) \Rightarrow (\forall X4. \\ & ((v1_funct_1 X4) \wedge ((v1_funct_2 X4 (u1_struct_0 X2) (u1_struct_0 \\ & X1)) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\ & X2) (u1_struct_0 X1)))))) \Rightarrow (\forall X5.(m1_subset_1 X5 (u1_struct_0 \\ & X2)) \Rightarrow (\forall X6.(m1_subset_1 X6 (u1_struct_0 X3)) \Rightarrow (((X5 = X6) \wedge \\ & ((m1_pre_topc X3 X2) \wedge (r1_tmap_1 X2 X1 X4 X5)) \Rightarrow (r1_tmap_1 X3 X1 \\ & (k3_tmap_1 X0 X1 X2 X3 X4) X6))))))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc X0))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge ((v2_pre_topc X1) \wedge (l1_pre_topc X1)))) \Rightarrow (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 X2 (u1_struct_0 X1) (u1_struct_0 X0)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X1) (u1_struct_0 X0))))))) \Rightarrow (\forall X3.((\neg v2_struct_0 X3) \wedge (m1_pre_topc X3 X1))) \Rightarrow (\forall X4.(m1_subset_1 X4 (k1_zfmisc_1 (u1_struct_0 X1)))) \Rightarrow (\forall X5.(m1_subset_1 X5 (u1_struct_0 X1))) \Rightarrow (\forall X6.(m1_subset_1 X6 (u1_struct_0 X3))) \Rightarrow (((r1_tarSKI X4 (u1_struct_0 X3)) \wedge ((m1_connsp_2 X4 X1 X5) \wedge (X5 = X6))) \Rightarrow ((r1_tmap_1 X1 X0 X2 X5) \Leftrightarrow (r1_tmap_1 X3 X0 (k2_tmap_1 X1 X0 X2 X3) X6))))))))) \quad (3)
\end{aligned}$$

Assume the following.

$$\forall X0.(l1_pre_topc X0) \Rightarrow (\forall X1.(m1_pre_topc X1 X0) \Rightarrow (l1_pre_topc X1)) \quad (4)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc X0))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge ((v2_pre_topc X1) \wedge (l1_pre_topc X1)))) \Rightarrow (\forall X2.(m1_pre_topc X2 X0) \Rightarrow (\forall X3.(m1_pre_topc X3 X0) \Rightarrow (\forall X4.((v1_funct_1 X4) \wedge ((v1_funct_2 X4 (u1_struct_0 X2) (u1_struct_0 X1)) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X2) (u1_struct_0 X1))))))) \Rightarrow ((m1_pre_topc X3 X2) \Rightarrow (k3_tmap_1 X0 X1 X2 X3 X4 = k2_partfun1 (u1_struct_0 X2) (u1_struct_0 X1) X4 (u1_struct_0 X3)))))) \quad (5)
\end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc X0))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge ((v2_pre_topc X1) \wedge (l1_pre_topc X1)))) \Rightarrow (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 X1)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1))))))) \Rightarrow (\forall X3.(m1_pre_topc X3 X0) \Rightarrow (k2_tmap_1 X0 X1 X2 X3 = k2_partfun1 (u1_struct_0 X0) (u1_struct_0 X1) X2 (u1_struct_0 X3)))) \quad (6)
\end{aligned}$$

Assume the following.

$$\forall X0.((v2_pre_topc X0) \wedge (l1_pre_topc X0)) \Rightarrow (\forall X1.(m1_pre_topc X1 X0) \Rightarrow (v2_pre_topc X1)) \quad (7)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ & X0))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge ((v2_pre_topc X1) \wedge (l1_pre_topc \\ & X1)))) \Rightarrow (\forall X2.((\neg v2_struct_0 X2) \wedge (m1_pre_topc X2 X0))) \Rightarrow (\\ & \forall X3.((\neg v2_struct_0 X3) \wedge (m1_pre_topc X3 X0))) \Rightarrow (\forall X4. \\ & ((v1_funct_1 X4) \wedge ((v1_funct_2 X4 (u1_struct_0 X3) (u1_struct_0 \\ & X1)) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\ & X3) (u1_struct_0 X1)))))) \Rightarrow ((m1_pre_topc X2 X3) \Rightarrow (\forall X5.(\\ & m1_subset_1 X5 (k1_zfmisc_1 (u1_struct_0 X3))) \Rightarrow (\forall X6.(\\ & m1_subset_1 X6 (u1_struct_0 X3)) \Rightarrow (\forall X7.(m1_subset_1 X7 \\ & (u1_struct_0 X2)) \Rightarrow (((r1_tarski X5 (u1_struct_0 X2)) \wedge ((m1_connsp_2 \\ & X5 X3 X6) \wedge (X6 = X7))) \Rightarrow ((r1_tmap_1 X3 X1 X4 X6) \Leftrightarrow (r1_tmap_1 X2 X1 (k3_tmap_1 \\ & X0 X1 X3 X2 X4) X7)))))))))) \end{aligned}$$