

t103\_tmap\_1  
(TMHwqoTjbg8VyDy3eCHdi4kiJRCbz6zvnvZG)

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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  $k8\_tmap\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $v1\_tsep\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k6\_tmap\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v3\_pre\_topc : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_pre\_topc : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc X0) \wedge (l1\_pre\_topc \\ & X0))) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 \\ & X0))) \Rightarrow (\forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 \\ & (k6\_tmap\_1 X0 X1)))) \Rightarrow ((X2 = X1) \Rightarrow (v3\_pre\_topc X2 (k6\_tmap\_1 X0 X1)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0. (l1\_pre\_topc X0) \Rightarrow (\forall X1. (m1\_pre\_topc X1 X0) \Rightarrow (m1\_subset\_1 (u1\_struct\_0 X1) (k1\_zfmisc\_1 (u1\_struct\_0 X0)))) \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v2\_pre\_topc X0) \wedge (l1\_pre\_topc X0)) \Rightarrow (\forall X1. \\ & (m1\_pre\_topc X1 X0) \Rightarrow (\forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 \\ & (u1\_struct\_0 X0))) \Rightarrow ((X2 = u1\_struct\_0 X1) \Rightarrow (((v1\_tsep\_1 X1 X0) \wedge \\ & (m1\_pre\_topc X1 X0)) \Leftrightarrow (v3\_pre\_topc X2 X0)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc X0) \wedge \\ & (l1\_pre\_topc X0))) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 \\ & X0)))) \Rightarrow ((v1\_pre\_topc (k6\_tmap\_1 X0 X1)) \wedge ((v2\_pre\_topc (k6\_tmap\_1 \\ & X0 X1)) \wedge (l1\_pre\_topc (k6\_tmap\_1 X0 X1)))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc X0) \wedge (l1\_pre\_topc \\
& X0))) \Rightarrow (\forall X1.(m1\_pre\_topc X1 X0) \Rightarrow (\forall X2.((v1\_pre\_topc \\
& X2) \wedge ((v2\_pre\_topc X2) \wedge (l1\_pre\_topc X2))) \Rightarrow ((X2 = k8\_tmap\_1 X0 \\
& X1) \Leftrightarrow (\forall X3.(m1\_subset\_1 X3 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow \\
& ((X3 = u1\_struct\_0 X1) \Rightarrow (X2 = k6\_tmap\_1 X0 X3)))))) \quad (5)
\end{aligned}$$

**Theorem 1**

$$\begin{aligned}
& \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc X0) \wedge (l1\_pre\_topc \\
& X0))) \Rightarrow (\forall X1.((\neg v2\_struct\_0 X1) \wedge (m1\_pre\_topc X1 X0)) \Rightarrow ( \\
& \forall X2.(m1\_pre\_topc X2 (k8\_tmap\_1 X0 X1)) \Rightarrow ((u1\_struct\_0 X2 = \\
& u1\_struct\_0 X1) \Rightarrow ((v1\_tsep\_1 X2 (k8\_tmap\_1 X0 X1)) \wedge (m1\_pre\_topc \\
& X2 (k8\_tmap\_1 X0 X1))))))
\end{aligned}$$