

### t3\_tex\_1

(TMHzAwu41fmTcb5Vbz24LqzAXMowBg6Cv11)

October 27, 2020

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  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k6\_tmap\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v4\_pre\_topc : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v3\_pre\_topc : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_pre\_topc : \iota \Rightarrow \iota$  be given. Let  $k5\_tmap\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  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.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc X0) \wedge (l1\_pre\_topc \\ & X0))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 \\ & X0))) \Rightarrow ((u1\_struct\_0 (k6\_tmap\_1 X0 X1) = u1\_struct\_0 X0) \wedge (u1\_pre\_topc \\ & (k6\_tmap\_1 X0 X1) = k5\_tmap\_1 X0 X1))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.(l1\_pre\_topc X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 \\ & (u1\_struct\_0 X0))) \Rightarrow ((v4\_pre\_topc X1 X0) \Leftrightarrow (v3\_pre\_topc (k3\_subset\_1 \\ & (u1\_struct\_0 X0) X1) X0))) \end{aligned} \quad (3)$$

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.

$$\forall X0.\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 X0))\Rightarrow(m1\_subset\_1 (k3\_subset\_1 X0 X1) (k1\_zfmisc\_1 X0)) \quad (5)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0)\wedge((v2\_pre\_topc X0)\wedge(l1\_pre\_topc \\ & X0)))\Rightarrow(\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 \\ & X0)))\Rightarrow(\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 \\ & (k6\_tmap\_1 X0 (k3\_subset\_1 (u1\_struct\_0 X0) X1))))))\Rightarrow((X2 = X1)\Rightarrow \\ & (v4\_pre\_topc X2 (k6\_tmap\_1 X0 (k3\_subset\_1 (u1\_struct\_0 X0) X1)))))) \end{aligned}$$