

## t27\_tops\_2

(TMR7vF3cdgt4Gamun5wtARSDwRpss93WoC5)

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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  $m1\_pre\_topc : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_tops\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v3\_pre\_topc : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} \forall X0.(l1\_pre\_topc X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 \\ (u1\_struct\_0 X0))) \Rightarrow (\forall X2.(m1\_pre\_topc X2 X0) \Rightarrow ((v3\_pre\_topc \\ X1 X0) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (k1\_zfmisc\_1 (u1\_struct\_0 \\ X2))) \Rightarrow ((X3 = X1) \Rightarrow (v3\_pre\_topc X3 X2)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1\_pre\_topc X0) \Rightarrow (\forall X1.(m1\_pre\_topc X1 X0) \Rightarrow \\ (\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 X1))) \Rightarrow \\ (m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 X0)))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.(l1\_pre\_topc X0) \Rightarrow (\forall X1.(m1\_pre\_topc X1 X0) \Rightarrow \\ (l1\_pre\_topc X1)) \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1\_pre\_topc X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 \\ (k1\_zfmisc\_1 (u1\_struct\_0 X0)))) \Rightarrow ((v1\_tops\_2 X1 X0) \Leftrightarrow (\forall X2. \\ (m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow ((X2 \in X1) \Rightarrow (v3\_pre\_topc \\ X2 X0)))))) \end{aligned} \quad (4)$$

### Theorem 1

$$\begin{aligned} \forall X0.(l1\_pre\_topc X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 \\ (k1\_zfmisc\_1 (u1\_struct\_0 X0)))) \Rightarrow (\forall X2.(m1\_pre\_topc X2 \\ X0) \Rightarrow ((v1\_tops\_2 X1 X0) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (k1\_zfmisc\_1 \\ (k1\_zfmisc\_1 (u1\_struct\_0 X2)))) \Rightarrow ((X3 = X1) \Rightarrow (v1\_tops\_2 X3 X2)))))) \end{aligned}$$