

## t42\_tex\_2

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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  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $v1\_tops\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v2\_tex\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v3\_tex\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k9\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_pre\_topc : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} \forall X0.(l1\_pre\_topc\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1 \\ (u1\_struct\_0\ X0))) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1 \\ (u1\_struct\_0\ X0))) \Rightarrow (((v1\_tops\_1\ X1\ X0) \wedge (r1\_tarski\ X1\ X2)) \Rightarrow (v1\_tops\_1 \\ X2\ X0)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v2\_pre\_topc\ X0) \wedge (l1\_pre\_topc \\ X0))) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0 \\ X0))) \Rightarrow ((v2\_tex\_2\ X1\ X0) \Leftrightarrow (\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1 \\ (u1\_struct\_0\ X0))) \Rightarrow ((r1\_tarski\ X2\ X1) \Rightarrow (k9\_subset\_1\ (u1\_struct\_0 \\ X0)\ X1\ (k2\_pre\_topc\ X0\ X2) = X2)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.r1\_tarski\ X0\ X0 \tag{3}$$

Assume the following.

$$\begin{aligned} \forall X0.(l1\_pre\_topc\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1 \\ (u1\_struct\_0\ X0))) \Rightarrow ((v3\_tex\_2\ X1\ X0) \Leftrightarrow ((v2\_tex\_2\ X1\ X0) \wedge (\forall X2. \\ (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0))) \Rightarrow (((v2\_tex\_2 \\ X2\ X0) \wedge (r1\_tarski\ X1\ X2)) \Rightarrow (X1 = X2)))))) \end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned} \forall X0.(l1\_pre\_topc\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1 \\ (u1\_struct\_0\ X0))) \Rightarrow ((v1\_tops\_1\ X1\ X0) \Leftrightarrow (k2\_pre\_topc\ X0\ X1 = u1\_struct\_0 \\ X0))) \end{aligned} \tag{5}$$

**Theorem 1**

$$\forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc X0) \wedge (l1\_pre\_topc X0))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow (((v1\_tops\_1 X1 X0) \wedge (v2\_tex\_2 X1 X0)) \Rightarrow (v3\_tex\_2 X1 X0)))$$