

# t31\_tex\_3 (TMPDhNKyHgoe- FYnw6ck3QTQReVevoXpVRTn)

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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  $r3\_tsep\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_tex\_3 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v3\_tex\_3 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $r2\_tsep\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_tops\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v2\_tops\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc X0) \wedge (l1\_pre\_topc \\ & X0))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 \\ & X0))) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 \\ & X0))) \Rightarrow ((r2\_tsep\_2 X0 X1 X2) \Rightarrow ((v1\_tops\_1 X1 X0) \Leftrightarrow (v2\_tops\_1 X2 X0)))))) \end{aligned} \quad (1)$$

Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc X0) \wedge (l1\_pre\_topc \\ & X0))) \Rightarrow (\forall X1.(m1\_pre\_topc X1 X0) \Rightarrow ((v3\_tex\_3 X1 X0) \Leftrightarrow (\forall X2. \\ & (m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow ((X2 = u1\_struct\_0 \\ & X1) \Rightarrow (v2\_tops\_1 X2 X0)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc X0) \wedge (l1\_pre\_topc \\ & X0))) \Rightarrow (\forall X1.(m1\_pre\_topc X1 X0) \Rightarrow (\forall X2.(m1\_pre\_topc \\ & X2 X0) \Rightarrow ((r3\_tsep\_2 X0 X1 X2) \Leftrightarrow (\forall X3.(m1\_subset\_1 X3 (k1\_zfmisc\_1 \\ & (u1\_struct\_0 X0))) \Rightarrow (\forall X4.(m1\_subset\_1 X4 (k1\_zfmisc\_1 \\ & (u1\_struct\_0 X0))) \Rightarrow (((X3 = u1\_struct\_0 X1) \wedge (X4 = u1\_struct\_0 X2)) \Rightarrow \\ & (r2\_tsep\_2 X0 X3 X4))))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc X0) \wedge (l1\_pre\_topc \\ & X0))) \Rightarrow (\forall X1.(m1\_pre\_topc X1 X0) \Rightarrow ((v1\_tex\_3 X1 X0) \Leftrightarrow (\forall X2. \\ & (m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow ((X2 = u1\_struct\_0 \\ & X1) \Rightarrow (v1\_tops\_1 X2 X0)))))) \end{aligned} \tag{5}$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc X0) \wedge (l1\_pre\_topc \\ & X0))) \Rightarrow (\forall X1.(m1\_pre\_topc X1 X0) \Rightarrow (\forall X2.(m1\_pre\_topc \\ & X2 X0) \Rightarrow ((r3\_tsep\_2 X0 X1 X2) \Rightarrow ((v1\_tex\_3 X1 X0) \Leftrightarrow (v3\_tex\_3 X2 X0)))))) \end{aligned}$$