

# t47\_tdlat\_3 (TMFTdCx- HaBGD4r3q1qkn2ayV8CwXnBLhiVN)

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v2\_pre\_topc : \iota \Rightarrow o$  be given. Let  $v4\_tdlat\_3 : \iota \Rightarrow o$  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  $v1\_tdlat\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_tdlat\_1 : \iota \Rightarrow \iota$  be given. Let  $k15\_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_pre\_topc : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_setfam\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_tdlat\_1 : \iota \Rightarrow \iota$  be given. Let  $v2\_tdlat\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_tdlat\_1 : \iota \Rightarrow \iota$  be given. Let  $k8\_tdlat\_1 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc X0) \wedge (l1\_pre\_topc \\ X0))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 (k1\_zfmisc\_1 \\ (u1\_struct\_0 X0)))) \Rightarrow ((r1\_tarski X1 (k5\_tdlat\_1 X0)) \Leftrightarrow (v2\_tdlat\_2 \\ X1 X0))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc X0) \wedge (l1\_pre\_topc \\ X0))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 (k1\_zfmisc\_1 \\ (u1\_struct\_0 X0)))) \Rightarrow ((r1\_tarski X1 (k1\_tdlat\_1 X0)) \Leftrightarrow (v1\_tdlat\_2 \\ X1 X0))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc X0) \wedge ((v4\_tdlat\_3 \\ X0) \wedge (l1\_pre\_topc X0)))) \Rightarrow (k4\_tdlat\_1 X0 = k8\_tdlat\_1 X0) \quad (3)$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc X0) \wedge ((v4\_tdlat\_3 \\ X0) \wedge (l1\_pre\_topc X0)))) \Rightarrow (k1\_tdlat\_1 X0 = k5\_tdlat\_1 X0) \quad (4)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc X0) \wedge (l1\_pre\_topc \\
& X0))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 (k1\_zfmisc\_1 \\
& (u1\_struct\_0 X0)))) \Rightarrow ((v2\_tdlat\_2 X1 X0) \Rightarrow (\forall X2.(m1\_subset\_1 \\
& X2 (k1\_zfmisc\_1 (u1\_struct\_0 (k8\_tdlat\_1 X0)))) \Rightarrow ((X2 = X1) \Rightarrow (k15\_lattice3 \\
& (k8\_tdlat\_1 X0) X2 = k2\_pre\_topc X0 (k5\_setfam\_1 (u1\_struct\_0 X0) \\
& X1))))))
\end{aligned} \tag{5}$$

**Theorem 1**

$$\begin{aligned}
& \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc X0) \wedge ((v4\_tdlat\_3 \\
& X0) \wedge (l1\_pre\_topc X0)))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 \\
& (k1\_zfmisc\_1 (u1\_struct\_0 X0)))) \Rightarrow ((v1\_tdlat\_2 X1 X0) \Rightarrow (\forall X2. \\
& (m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 (k4\_tdlat\_1 X0)))) \Rightarrow \\
& ((X2 = X1) \Rightarrow (k15\_lattice3 (k4\_tdlat\_1 X0) X2 = k2\_pre\_topc X0 (k5\_setfam\_1 \\
& (u1\_struct\_0 X0) X1))))))
\end{aligned}$$