

## t7\_tdlat\_3

(TMF8Gt1egjuKuMQSm3Nm8MS5b217kHubY3m)

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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  $v4\_tops\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_pre\_topc : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_tops\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v6\_tops\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v5\_tops\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((r1\_tarski X0 X1) \wedge (r1\_tarski X1 X2)) \Rightarrow (r1\_tarski X0 X2) \quad (1)$$

Assume the following.

$$\forall X0. (l1\_pre\_topc X0) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow ((v6\_tops\_1 X1 X0) \Leftrightarrow (X1 = k1\_tops\_1 X0 (k2\_pre\_topc X0 X1)))) \quad (2)$$

Assume the following.

$$\forall X0. (l1\_pre\_topc X0) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow ((v5\_tops\_1 X1 X0) \Leftrightarrow (X1 = k2\_pre\_topc X0 (k1\_tops\_1 X0 X1)))) \quad (3)$$

Assume the following.

$$\forall X0. (l1\_pre\_topc X0) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow ((v4\_tops\_1 X1 X0) \Leftrightarrow ((r1\_tarski (k1\_tops\_1 X0 (k2\_pre\_topc X0 X1)) X1) \wedge (r1\_tarski X1 (k2\_pre\_topc X0 (k1\_tops\_1 X0 X1)))))) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. (X0 = X1) \Leftrightarrow ((r1\_tarski X0 X1) \wedge (r1\_tarski X1 X0)) \quad (5)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((v2\_pre\_topc\ X0)\wedge(l1\_pre\_topc\ X0))\Rightarrow(\forall X1. \\ & (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))\Rightarrow(((v4\_tops\_1 \\ & X1\ X0)\wedge(r1\_tarSKI\ (k2\_pre\_topc\ X0\ (k1\_tops\_1\ X0\ X1))\ (k1\_tops\_1 \\ & X0\ (k2\_pre\_topc\ X0\ X1))))\Rightarrow((v6\_tops\_1\ X1\ X0)\wedge(v5\_tops\_1\ X1\ X0)))) \end{aligned}$$