

t5\_tsp\_1 (TMUU-  
umuCBB04bbiJq7CFAQ19tbmmm65Cc69)

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  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  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_tsp\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v3\_pre\_topc : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 X2))) \Rightarrow (m1\_subset\_1 X0 X2) \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. (l1\_pre\_topc X0) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 \\ (u1\_struct\_0 X0))) \Rightarrow ((v1\_tsp\_1 X1 X0) \Leftrightarrow (\forall X2. (m1\_subset\_1 \\ X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3. (m1\_subset\_1 X3 (u1\_struct\_0 \\ X0)) \Rightarrow (\neg(X2 \in X1) \wedge ((X3 \in X1) \wedge ((X2 \neq X3) \wedge ((\forall X4. (m1\_subset\_1 \\ X4 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow (\neg(v3\_pre\_topc X4 X0) \wedge ((X2 \in \\ X4) \wedge (\neg X3 \in X4)))))) \wedge (\forall X4. (m1\_subset\_1 X4 (k1\_zfmisc\_1 (u1\_struct\_0 \\ X0))) \Rightarrow (\neg(v3\_pre\_topc X4 X0) \wedge ((\neg X2 \in X4) \wedge (X3 \in X4)))))))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (r1\_tarski X0 X1) \Leftrightarrow (\forall X2. (X2 \in X0) \Rightarrow (X2 \in X1)) \quad (3)$$

**Theorem 1**

$$\begin{aligned} \forall X0. ((\neg v2\_struct\_0 X0) \wedge (l1\_pre\_topc X0)) \Rightarrow (\forall X1. \\ (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow (\forall X2. \\ (m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow (((r1\_tarski \\ X2 X1) \wedge (v1\_tsp\_1 X1 X0)) \Rightarrow (v1\_tsp\_1 X2 X0)))) \end{aligned}$$