

t30\_tsp\_2 (TMUkCFZ-  
mUbS3DB4fmTUwFGPxc2HnA8mNXhH)

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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  $v2\_tsp\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_pre\_topc : \iota \Rightarrow \iota \Rightarrow o$  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  $k7\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_tsp\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_tex\_4 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v5\_pre\_topc : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k9\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge (l1\_pre\_topc X0)) \Rightarrow (\forall X1. \\ & (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow (k3\_tex\_4 X0 \\ & X1 = k3\_tex\_4 X0 (k3\_tex\_4 X0 X1))) \end{aligned} \quad (1)$$

Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2\_struct\_0 X0) \wedge (l1\_pre\_topc X0)) \wedge \\ & (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0)))) \Rightarrow (m1\_subset\_1 \\ & (k3\_tex\_4 X0 X1) (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2\_struct\_0 X0) \wedge (v2\_pre\_topc X0) \wedge \\ & (l1\_pre\_topc X0))) \wedge ((\neg v2\_struct\_0 X1) \wedge ((v2\_tsp\_2 X1 X0) \wedge (m1\_pre\_topc \\ & X1 X0))) \Rightarrow ((v1\_funct\_1 (k1\_tsp\_2 X0 X1)) \wedge ((v1\_funct\_2 (k1\_tsp\_2 \\ & X0 X1) (u1\_struct\_0 X0) (u1\_struct\_0 X1)) \wedge ((v5\_pre\_topc (k1\_tsp\_2 \\ & X0 X1) X0 X1) \wedge (m1\_subset\_1 (k1\_tsp\_2 X0 X1) (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & (u1\_struct\_0 X0) (u1\_struct\_0 X1)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc X0) \wedge (l1\_pre\_topc \\
& X0))) \Rightarrow (\forall X1.((\neg v2\_struct\_0 X1) \wedge ((v2\_tsp\_2 X1 X0) \wedge (m1\_pre\_topc \\
& X1 X0))) \Rightarrow (\forall X2.((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 (u1\_struct\_0 \\
& X0) (u1\_struct\_0 X1)) \wedge ((v5\_pre\_topc X2 X0 X1) \wedge (m1\_subset\_1 X2 \\
& (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 X0) (u1\_struct\_0 X1)))))) \Rightarrow \\
& ((X2 = k1\_tsp\_2 X0 X1) \Leftrightarrow (\forall X3.(m1\_subset\_1 X3 (k1\_zfmisc\_1 \\
& (u1\_struct\_0 X0))) \Rightarrow ((X3 = u1\_struct\_0 X1) \Rightarrow (\forall X4.(m1\_subset\_1 \\
& X4 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow (k9\_subset\_1 (u1\_struct\_0 \\
& X0) X3 (k3\_tex\_4 X0 X4) = k7\_reset\_1 (u1\_struct\_0 X0) (u1\_struct\_0 \\
& X1) X2 X4))))))
\end{aligned} \tag{5}$$

**Theorem 1**

$$\begin{aligned}
& \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc X0) \wedge (l1\_pre\_topc \\
& X0))) \Rightarrow (\forall X1.((\neg v2\_struct\_0 X1) \wedge ((v2\_tsp\_2 X1 X0) \wedge (m1\_pre\_topc \\
& X1 X0))) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 \\
& X0))) \Rightarrow (k7\_reset\_1 (u1\_struct\_0 X0) (u1\_struct\_0 X1) (k1\_tsp\_2 \\
& X0 X1) X2 = k7\_reset\_1 (u1\_struct\_0 X0) (u1\_struct\_0 X1) (k1\_tsp\_2 \\
& X0 X1) (k3\_tex\_4 X0 X2))))
\end{aligned}$$