

# t25\_connsp\_2 (TMKzc- sTM8gDaUdet83dCWfmm2acTpCfZDBn)

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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  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $v4\_pre\_topc : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_connsp\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k6\_setfam\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v3\_pre\_topc : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0.((v2\_pre\_topc X0) \wedge (l1\_pre\_topc X0)) \Rightarrow (\forall X1. \\ & (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k1\_zfmisc\_1 (u1\_struct\_0 X0)))) \Rightarrow \\ & ((\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow \\ & ((X2 \in X1) \Rightarrow (v4\_pre\_topc X2 X0))) \Rightarrow (v4\_pre\_topc (k6\_setfam\_1 (u1\_struct\_0 \\ & X0) X1) X0))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc X0) \wedge \\ & (l1\_pre\_topc X0))) \wedge (m1\_subset\_1 X1 (u1\_struct\_0 X0))) \Rightarrow (m1\_subset\_1 \\ & (k1\_connsp\_2 X0 X1) (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc X0) \wedge (l1\_pre\_topc \\ & X0))) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2. \\ & (m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow ((X2 = k1\_connsp\_2 \\ & X0 X1) \Leftrightarrow (\exists X3. (m1\_subset\_1 X3 (k1\_zfmisc\_1 (k1\_zfmisc\_1 \\ & (u1\_struct\_0 X0)))) \wedge ((\forall X4. (m1\_subset\_1 X4 (k1\_zfmisc\_1 \\ & (u1\_struct\_0 X0))) \Rightarrow ((X4 \in X3) \Leftrightarrow ((v3\_pre\_topc X4 X0) \wedge ((v4\_pre\_topc \\ & X4 X0) \wedge (X1 \in X4)))))) \wedge (k6\_setfam\_1 (u1\_struct\_0 X0) X3 = X2)))))) \end{aligned} \tag{3}$$

**Theorem 1**

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc X0) \wedge (l1\_pre\_topc \\ & X0))) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (v4\_pre\_topc \\ & (k1\_connsp\_2 X0 X1) X0)) \end{aligned}$$