

# t1\_t\_1topsp (TM- FGJnYrM9ZZzqvSQAH3pBBaUMErX5wYwiD)

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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  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $m1\_eqrel\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k11\_borsuk\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k8\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k12\_borsuk\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_tarski : \iota \Rightarrow \iota$  be given. Let  $k13\_eqrel\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $l1\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v1\_pre\_topc : \iota \Rightarrow o$  be given. Let  $u1\_pre\_topc : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} \forall X0. (\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1. ((\neg v1\_xboole\_0 X1) \wedge \\ (m1\_eqrel\_1 X1 X0)) \Rightarrow (\forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 \\ X1)) \Rightarrow (k8\_relset\_1 X0 X1 (k13\_eqrel\_1 X0 X1) X2 = k3\_tarski X2))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0. ((\neg v2\_struct\_0 X0) \wedge (l1\_struct\_0 X0)) \Rightarrow (\neg v1\_xboole\_0 (u1\_struct\_0 X0)) \quad (2)$$

Assume the following.

$$\forall X0. (l1\_pre\_topc X0) \Rightarrow (l1\_struct\_0 X0) \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (((v2\_pre\_topc X0) \wedge (l1\_pre\_topc X0)) \wedge \\ (m1\_eqrel\_1 X1 (u1\_struct\_0 X0))) \Rightarrow ((v1\_pre\_topc (k11\_borsuk\_1 \\ X0 X1)) \wedge ((v2\_pre\_topc (k11\_borsuk\_1 X0 X1)) \wedge (l1\_pre\_topc (k11\_borsuk\_1 \\ X0 X1)))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc X0) \wedge (l1\_pre\_topc \\ X0))) \Rightarrow (\forall X1. ((\neg v1\_xboole\_0 X1) \wedge (m1\_eqrel\_1 X1 (u1\_struct\_0 \\ X0))) \Rightarrow (k12\_borsuk\_1 X0 X1 = k13\_eqrel\_1 (u1\_struct\_0 X0) X1)) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v2\_pre\_topc\ X0) \wedge (l1\_pre\_topc\ X0)) \Rightarrow (\forall X1. \\
& (m1\_eqrel\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X2.((v1\_pre\_topc\ X2) \wedge \\
& ((v2\_pre\_topc\ X2) \wedge (l1\_pre\_topc\ X2))) \Rightarrow ((X2 = k11\_borsuk\_1\ X0\ X1) \Leftrightarrow \\
& ((u1\_struct\_0\ X2 = X1) \wedge (u1\_pre\_topc\ X2 = ReplSep\ (toset\ (\lambda X3 : \\
& \iota.m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ X1)))\ (\lambda X3 : \iota.k3\_tarSKI \\
& X3 \in u1\_pre\_topc\ X0)\ (\lambda X3 : \iota.X3))))))
\end{aligned} \tag{6}$$

**Theorem 1**

$$\begin{aligned}
& \forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v2\_pre\_topc\ X0) \wedge (l1\_pre\_topc \\
& X0))) \Rightarrow (\forall X1.((\neg v1\_xboole\_0\ X1) \wedge (m1\_eqrel\_1\ X1\ (u1\_struct\_0 \\
& X0))) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0 \\
& (k11\_borsuk\_1\ X0\ X1)))) \Rightarrow (k8\_relset\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0 \\
& (k11\_borsuk\_1\ X0\ X1))\ (k12\_borsuk\_1\ X0\ X1)\ X2 = k3\_tarSKI\ X2)))
\end{aligned}$$