

l18\_yellow13  
(TMKNCfjFjzikEBx79J3Z9AdTvRfAD9gYpfl)

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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  $v1\_yellow\_8 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_tops\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_pre\_topc : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v3\_pre\_topc : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k8\_setfam\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((r1\_tarski X0 X1) \wedge (r1\_xboole\_0 X1 X2)) \Rightarrow (r1\_xboole\_0 X0 X2) \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. (l1\_pre\_topc X0) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 \\ (u1\_struct\_0 X0))) \Rightarrow (\forall X2. (m1\_subset\_1 X2 (u1\_struct\_0 \\ X0)) \Rightarrow ((X2 \in k2\_pre\_topc X0 X1) \Leftrightarrow ((\neg v2\_struct\_0 X0) \wedge (\forall X3. \\ (m1\_subset\_1 X3 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow (\neg (v3\_pre\_topc \\ X3 X0) \wedge ((X2 \in X3) \wedge (r1\_xboole\_0 X1 X3)))))))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (r1\_xboole\_0 X0 X1) \Rightarrow (r1\_xboole\_0 X1 X0) \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0. ((\neg v2\_struct\_0 X0) \wedge (l1\_pre\_topc X0)) \Rightarrow (\forall X1. \\ (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2. (m1\_subset\_1 X2 \\ (k1\_zfmisc\_1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow ((v1\_yellow\_8 \\ X2 X0 X1) \Leftrightarrow ((X1 \in k8\_setfam\_1 (u1\_struct\_0 X0) X2) \wedge (\forall X3. ( \\ m1\_subset\_1 X3 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow (\neg (v3\_pre\_topc \\ X3 X0) \wedge ((X1 \in X3) \wedge (\forall X4. (m1\_subset\_1 X4 (k1\_zfmisc\_1 (u1\_struct\_0 \\ X0))) \Rightarrow (\neg (X4 \in X2) \wedge (r1\_tarski X4 X3)))))))))))))) \end{aligned} \quad (4)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge (l1\_pre\_topc X0)) \Rightarrow (\forall X1. \\ & (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow (\forall X2. \\ & (m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow ((\exists X3.((v1\_yellow\_8 \\ & X3 X0 X2) \wedge ((v1\_tops\_2 X3 X0) \wedge (m1\_subset\_1 X3 (k1\_zfmisc\_1 (k1\_zfmisc\_1 \\ & (u1\_struct\_0 X0)))))) \wedge (\forall X4. (m1\_subset\_1 X4 (k1\_zfmisc\_1 \\ & (u1\_struct\_0 X0))) \Rightarrow (\neg (X4 \in X3) \wedge (r1\_xboole\_0 X1 X4)))) \Rightarrow (X2 \in k2\_pre\_topc \\ & X0 X1)))) \end{aligned}$$