

t27\_yellow19 (TM-  
RvuFPW2cxa9YboZ6bw1hbx6dGgM5ND05Z)

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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  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $v4\_pre\_topc : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_yellow\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $v2\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v13\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_waybel\_7 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_pre\_topc : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. \forall X1. \neg (X0 \in X1) \wedge (v1\_xboole\_0 X1) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 X2))) \Rightarrow (m1\_subset\_1 X0 X2) \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc X0) \wedge (l1\_pre\_topc X0))) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow (\forall X2. (m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow ((X2 \in k2\_pre\_topc X0 X1) \Leftrightarrow (\exists X3. ((\neg v1\_xboole\_0 X3) \wedge ((v1\_subset\_1 X3 (u1\_struct\_0 (k3\_yellow\_1 (k2\_struct\_0 X0)))) \wedge ((v2\_waybel\_0 X3 (k3\_yellow\_1 (k2\_struct\_0 X0))) \wedge ((v13\_waybel\_0 X3 (k3\_yellow\_1 (k2\_struct\_0 X0))) \wedge (m1\_subset\_1 X3 (k1\_zfmisc\_1 (u1\_struct\_0 (k3\_yellow\_1 (k2\_struct\_0 X0)))))))))) \wedge ((X1 \in X3) \wedge (r1\_waybel\_7 X0 X3 X2)))))) \quad (3) \end{aligned}$$

Assume the following.

$$\forall X0. (l1\_pre\_topc X0) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow (((v4\_pre\_topc X1 X0) \Rightarrow (k2\_pre\_topc X0 X1 = X1)) \wedge (((v2\_pre\_topc X0) \wedge (k2\_pre\_topc X0 X1 = X1)) \Rightarrow (v4\_pre\_topc X1 X0)))) \quad (4)$$

Assume the following.

$$\forall X0.(l1\_pre\_topc\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))\Rightarrow(r1\_tarski\ X1\ (k2\_pre\_topc\ X0\ X1))) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((l1\_pre\_topc\ X0)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0))))\Rightarrow(m1\_subset\_1\ (k2\_pre\_topc\ X0\ X1)\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0))) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.(r1\_tarski\ X0\ X1)\Leftrightarrow(\forall X2.(X2\in X0)\Rightarrow(X2\in X1)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(X0 = X1)\Leftrightarrow((r1\_tarski\ X0\ X1)\wedge(r1\_tarski\ X1\ X0)) \quad (8)$$

**Theorem 1**

$$\begin{aligned} &\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v2\_pre\_topc\ X0)\wedge(l1\_pre\_topc\ X0)))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))\Rightarrow((v4\_pre\_topc\ X1\ X0)\Leftrightarrow(\forall X2.((\neg v1\_xboole\_0\ X2)\wedge \\ &\quad (v1\_subset\_1\ X2\ (u1\_struct\_0\ (k3\_yellow\_1\ (k2\_struct\_0\ X0))))\wedge \\ &\quad ((v2\_waybel\_0\ X2\ (k3\_yellow\_1\ (k2\_struct\_0\ X0)))\wedge((v13\_waybel\_0\ X2\ (k3\_yellow\_1\ (k2\_struct\_0\ X0)))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0\ (k3\_yellow\_1\ (k2\_struct\_0\ X0))))))))))\Rightarrow((X1\in X2)\Rightarrow \\ &\quad (\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0))\Rightarrow((r1\_waybel\_7\ X0\ X2\ X3)\Rightarrow(X3\in X1)))))) \end{aligned}$$