

t15\_yellow17

(TMTQWF7EcQyZrQWCuGXZtrDPix8NGebLdtf)

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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  $v1\_tops\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v2\_cantor\_1 : \iota \Rightarrow \iota \Rightarrow o$  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  $v1\_compts\_1 : \iota \Rightarrow o$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k3\_tarski : \iota \Rightarrow \iota$  be given. Let  $v1\_finset\_1 : \iota \Rightarrow o$  be given. Let  $k2\_yellow\_1 : \iota \Rightarrow \iota$  be given. Let  $u1\_pre\_topc : \iota \Rightarrow \iota$  be given. Let  $v1\_waybel\_3 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_waybel\_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_orders\_2 : \iota \Rightarrow \iota$  be given. Let  $k1\_yellow\_1 : \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v1\_orders\_2 : \iota \Rightarrow o$  be given. Let  $v3\_orders\_2 : \iota \Rightarrow o$  be given. Let  $v4\_orders\_2 : \iota \Rightarrow o$  be given. Let  $v5\_orders\_2 : \iota \Rightarrow o$  be given. Let  $l1\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l1\_orders\_2 : \iota \Rightarrow o$  be given. Let  $k5\_setfam\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k9\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 X2))) \Rightarrow (m1\_subset\_1 X0 X2) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (m1\_subset\_1 X0 (k1\_zfmisc\_1 X1)) \Leftrightarrow (r1\_tarski X0 X1) \quad (2)$$

Assume the following.

$$\forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc X0) \wedge (l1\_pre\_topc X0))) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (u1\_struct\_0 (k2\_yellow\_1 (u1\_pre\_topc X0)))) \Rightarrow ((X1 = u1\_struct\_0 X0) \Rightarrow ((v1\_waybel\_3 X1 (k2\_yellow\_1 (u1\_pre\_topc X0))) \Leftrightarrow (v1\_compts\_1 X0)))) \quad (3)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc X0) \wedge (l1\_pre\_topc \\
& X0))) \Rightarrow (\forall X1.((v1\_tops\_2 X1 X0) \wedge ((v2\_cantor\_1 X1 X0) \wedge (m1\_subset\_1 \\
& X1 (k1\_zfmisc\_1 (k1\_zfmisc\_1 (u1\_struct\_0 X0)))))) \Rightarrow (\forall X2. \\
& (m1\_subset\_1 X2 (u1\_struct\_0 (k2\_yellow\_1 (u1\_pre\_topc X0)))) \Rightarrow \\
& (\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 (k2\_yellow\_1 (u1\_pre\_topc \\
& X0)))) \Rightarrow ((r1\_tarski X2 X3) \Rightarrow ((r1\_waybel\_3 (k2\_yellow\_1 (u1\_pre\_topc \\
& X0)) X2 X3) \Leftrightarrow (\forall X4.(m1\_subset\_1 X4 (k1\_zfmisc\_1 X1)) \Rightarrow (\neg( \\
& r1\_tarski X3 (k3\_tarski X4)) \wedge (\forall X5.((v1\_finset\_1 X5) \wedge ( \\
& m1\_subset\_1 X5 (k1\_zfmisc\_1 X4))) \Rightarrow (\neg r1\_tarski X2 (k3\_tarski X5)))))))))) \\
& \tag{4}
\end{aligned}$$

Assume the following.

$$\forall X0.(u1\_struct\_0 (k2\_yellow\_1 X0) = X0) \wedge (u1\_orders\_2 (k2\_yellow\_1 X0) = k1\_yellow\_1 X0) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.r1\_tarski X0 X0 \tag{6}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow ((\neg v2\_struct\_0 (k2\_yellow\_1 X0)) \wedge (v1\_orders\_2 (k2\_yellow\_1 X0))) \tag{7}$$

Assume the following.

$$\forall X0.(v1\_orders\_2 (k2\_yellow\_1 X0) \wedge ((v3\_orders\_2 (k2\_yellow\_1 X0) \wedge ((v4\_orders\_2 (k2\_yellow\_1 X0) \wedge (v5\_orders\_2 (k2\_yellow\_1 X0)))))) \tag{8}$$

Assume the following.

$$\forall X0.((v2\_pre\_topc X0) \wedge (l1\_pre\_topc X0)) \Rightarrow (\neg v1\_xboole\_0 (u1\_pre\_topc X0)) \tag{9}$$

Assume the following.

$$\forall X0.(l1\_pre\_topc X0) \Rightarrow (l1\_struct\_0 X0) \tag{10}$$

Assume the following.

$$\forall X0.(v1\_orders\_2 (k2\_yellow\_1 X0) \wedge (l1\_orders\_2 (k2\_yellow\_1 X0))) \tag{11}$$

Assume the following.

$$\forall X0.(l1\_struct\_0 X0) \Rightarrow (k2\_struct\_0 X0 = u1\_struct\_0 X0) \tag{12}$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v3\_orders\_2 X0) \wedge (l1\_orders\_2 \\ X0))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow ((v1\_waybel\_3 \\ X1 X0) \Leftrightarrow (r1\_waybel\_3 X0 X1 X1))) \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1\_pre\_topc X0) \Rightarrow ((v2\_pre\_topc X0) \Leftrightarrow ((u1\_struct\_0 \\ X0 \in u1\_pre\_topc X0) \wedge ((\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 \\ (k1\_zfmisc\_1 (u1\_struct\_0 X0)))) \Rightarrow ((r1\_tarski X1 (u1\_pre\_topc \\ X0)) \Rightarrow (k5\_setfam\_1 (u1\_struct\_0 X0) X1 \in u1\_pre\_topc X0))) \wedge (\forall X1. \\ (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow (\forall X2. \\ (m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow (((X1 \in u1\_pre\_topc \\ X0) \wedge (X2 \in u1\_pre\_topc X0)) \Rightarrow (k9\_subset\_1 (u1\_struct\_0 X0) X1 X2 \in \\ u1\_pre\_topc X0))))))) \end{aligned} \quad (14)$$

**Theorem 1**

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc X0) \wedge (l1\_pre\_topc \\ X0))) \Rightarrow (\forall X1.((v1\_tops\_2 X1 X0) \wedge ((v2\_cantor\_1 X1 X0) \wedge (m1\_subset\_1 \\ X1 (k1\_zfmisc\_1 (k1\_zfmisc\_1 (u1\_struct\_0 X0)))))) \Rightarrow ((v1\_compts\_1 \\ X0) \Leftrightarrow (\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 X1)) \Rightarrow (\neg(r1\_tarski \\ (k2\_struct\_0 X0) (k3\_tarski X2)) \wedge (\forall X3.((v1\_finset\_1 X3) \wedge \\ (m1\_subset\_1 X3 (k1\_zfmisc\_1 X2))) \Rightarrow (\neg r1\_tarski (k2\_struct\_0 \\ X0) (k3\_tarski X3))))))) \end{aligned}$$