

t19\_yellow12  
(TMX8G5fxhCUJHX96PhKG6ics7unxHL58m72)

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v3\_orders\_2 : \iota \Rightarrow o$  be given. Let  $v5\_orders\_2 : \iota \Rightarrow o$  be given. Let  $v24\_waybel\_0 : \iota \Rightarrow o$  be given. Let  $l1\_orders\_2 : \iota \Rightarrow o$  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  $g1\_orders\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $u1\_orders\_2 : \iota \Rightarrow \iota$  be given. Let  $v3\_waybel11 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v1\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_orders\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r2\_orders\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

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

Assume the following.

$$\begin{aligned} \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v3\_orders\_2 X0) \wedge ((v5\_orders\_2 \\ X0) \wedge (l1\_orders\_2 X0)))) \Rightarrow ((v24\_waybel\_0 X0) \Leftrightarrow (\forall X1. ((\neg \\ v1\_xboole\_0 X1) \wedge ((v1\_waybel\_0 X1 X0) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 \\ (u1\_struct\_0 X0)))))) \Rightarrow (r1\_yellow\_0 X0 X1))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 X2))) \Rightarrow (m1\_subset\_1 X0 X2) \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0. (l1\_orders\_2 X0) \Rightarrow (\forall X1. (l1\_orders\_2 X1) \Rightarrow (( \\ g1\_orders\_2 (u1\_struct\_0 X0) (u1\_orders\_2 X0) = g1\_orders\_2 (u1\_struct\_0 \\ X1) (u1\_orders\_2 X1)) \Rightarrow (\forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 \\ (u1\_struct\_0 X0))) \Rightarrow (\forall X3. (m1\_subset\_1 X3 (k1\_zfmisc\_1 \\ (u1\_struct\_0 X1))) \Rightarrow (((X2 = X3) \wedge (v1\_waybel\_0 X2 X0)) \Rightarrow (v1\_waybel\_0 \\ X3 X1)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1\_orders\_2 X0) \Rightarrow (\forall X1.(l1\_orders\_2 X1) \Rightarrow (( \\ g1\_orders\_2 (u1\_struct\_0 X0) (u1\_orders\_2 X0) = g1\_orders\_2 (u1\_struct\_0 \\ X1) (u1\_orders\_2 X1)) \Rightarrow (\forall X2.(r1\_yellow\_0 X0 X2) \Rightarrow (k1\_yellow\_0 \\ X0 X2 = k1\_yellow\_0 X1 X2)))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1\_orders\_2 X0) \Rightarrow (\forall X1.(l1\_orders\_2 X1) \Rightarrow (( \\ g1\_orders\_2 (u1\_struct\_0 X0) (u1\_orders\_2 X0) = g1\_orders\_2 (u1\_struct\_0 \\ X1) (u1\_orders\_2 X1)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 \\ X0)) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 X0)) \Rightarrow (\forall X4. \\ (m1\_subset\_1 X4 (u1\_struct\_0 X1)) \Rightarrow (\forall X5.(m1\_subset\_1 X5 \\ (u1\_struct\_0 X1)) \Rightarrow (((X2 = X4) \wedge (X3 = X5)) \Rightarrow (((r1\_orders\_2 X0 X2 X3) \Rightarrow \\ (r1\_orders\_2 X1 X4 X5)) \wedge ((r2\_orders\_2 X0 X2 X3) \Rightarrow (r2\_orders\_2 X1 \\ X4 X5)))))))))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ X0 X0))) \Rightarrow (\forall X2.\forall X3.(g1\_orders\_2 X0 X1 = g1\_orders\_2 \\ X2 X3) \Rightarrow ((X0 = X2) \wedge (X1 = X3))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.(l1\_orders\_2 X0) \Rightarrow (m1\_subset\_1 (u1\_orders\_2 X0) (k1\_zfmisc\_1 \\ (k2\_zfmisc\_1 (u1\_struct\_0 X0) (u1\_struct\_0 X0)))) \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v3\_orders\_2 X0) \wedge (l1\_orders\_2 \\ X0))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 \\ X0))) \Rightarrow ((v3\_waybel11 X1 X0) \Leftrightarrow (\forall X2.((\neg v1\_xboole\_0 X2) \wedge ( \\ v1\_waybel\_0 X2 X0) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 \\ X0)))) \Rightarrow (\neg (k1\_yellow\_0 X0 X2 \in X1) \wedge (\forall X3.(m1\_subset\_1 X3 \\ (u1\_struct\_0 X0)) \Rightarrow (\neg (X3 \in X2) \wedge (\forall X4.(m1\_subset\_1 X4 (u1\_struct\_0 \\ X0)) \Rightarrow (((X4 \in X2) \wedge (r1\_orders\_2 X0 X3 X4)) \Rightarrow (X4 \in X1)))))))))) \end{aligned} \quad (9)$$

**Theorem 1**

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v3\_orders\_2 X0) \wedge ((v5\_orders\_2 \\ X0) \wedge ((v24\_waybel\_0 X0) \wedge (l1\_orders\_2 X0)))) \Rightarrow (\forall X1.(( \\ \neg v2\_struct\_0 X1) \wedge ((v3\_orders\_2 X1) \wedge (l1\_orders\_2 X1))) \Rightarrow (\forall X2. \\ (m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow (\forall X3. \\ (m1\_subset\_1 X3 (k1\_zfmisc\_1 (u1\_struct\_0 X1))) \Rightarrow (((g1\_orders\_2 \\ (u1\_struct\_0 X0) (u1\_orders\_2 X0) = g1\_orders\_2 (u1\_struct\_0 X1) \\ (u1\_orders\_2 X1)) \wedge ((X2 = X3) \wedge (v3\_waybel11 X2 X0)) \Rightarrow (v3\_waybel11 \\ X3 X1)))))) \end{aligned}$$