

t15\_yellow14

(TMJX9c7UeYK9jyX6KoyPJakvDuiXp9bxFpJ)

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Let  $l1\_orders\_2 : \iota \Rightarrow o$  be given. Let  $r5\_waybel\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v2\_yellow\_0 : \iota \Rightarrow o$  be given. Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  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  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v23\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v2\_funct\_1 : \iota \Rightarrow o$  be given. Let  $k2\_reset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_orders\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_reset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k8\_reset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_reset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v5\_orders\_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r2\_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $l1\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_funct\_1 : \iota \Rightarrow \iota$  be given. Let  $v3\_yellow\_0 : \iota \Rightarrow o$  be given. Let  $v1\_yellow\_0 : \iota \Rightarrow o$  be given. Let  $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge (l1\_orders\_2 X0)) \Rightarrow (\forall X1. \\ & ((\neg v2\_struct\_0 X1) \wedge (l1\_orders\_2 X1)) \Rightarrow (\forall X2.((v1\_funct\_1 \\ & X2) \wedge ((v1\_funct\_2 X2 (u1\_struct\_0 X0) (u1\_struct\_0 X1)) \wedge (m1\_subset\_1 \\ & X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 X0) (u1\_struct\_0 X1)))))) \Rightarrow \\ & ((v23\_waybel\_0 X2 X0 X1) \Leftrightarrow ((v2\_funct\_1 X2) \wedge ((k2\_reset\_1 (u1\_struct\_0 \\ & X1) X2 = u1\_struct\_0 X1) \wedge (\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 \\ & X0)) \Rightarrow (\forall X4.(m1\_subset\_1 X4 (u1\_struct\_0 X0)) \Rightarrow ((r1\_orders\_2 \\ & X0 X3 X4) \Leftrightarrow (r1\_orders\_2 X1 (k3\_funct\_2 (u1\_struct\_0 X0) (u1\_struct\_0 \\ & X1) X2 X3) (k3\_funct\_2 (u1\_struct\_0 X0) (u1\_struct\_0 X1) X2 X4)))))))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 X0 X1))) \Rightarrow ((k7\_reset\_1 X0 X1 X2 X0 = k2\_reset\_1 X1 \\ & X2) \wedge (k8\_reset\_1 X0 X1 X2 X1 = k1\_reset\_1 X0 X2)) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2\_struct\_0 X0) \wedge (l1\_orders\_2 X0)) \Rightarrow (\forall X1. \\
& ((\neg v2\_struct\_0 X1) \wedge (l1\_orders\_2 X1)) \Rightarrow (\forall X2.((v1\_funct\_1 \\
& X2) \wedge ((v1\_funct\_2 X2 (u1\_struct\_0 X0) (u1\_struct\_0 X1)) \wedge (m1\_subset\_1 \\
& X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 X0) (u1\_struct\_0 X1)))))) \Rightarrow \\
& (\forall X3.(m1\_subset\_1 X3 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow \\
& (\forall X4.(m1\_subset\_1 X4 (u1\_struct\_0 X0)) \Rightarrow (((v5\_orders\_3 \\
& X2 X0 X1) \wedge (r2\_lattice3 X0 X3 X4)) \Rightarrow (r2\_lattice3 X1 (k7\_relset\_1 \\
& (u1\_struct\_0 X0) (u1\_struct\_0 X1) X2 X3) (k3\_funct\_2 (u1\_struct\_0 \\
& X0) (u1\_struct\_0 X1) X2 X4))))))
\end{aligned} \tag{3}$$

Assume the following.

$$\forall X0. \forall X1. ((l1\_orders\_2 X0) \wedge (l1\_orders\_2 X1)) \Rightarrow (r5\_waybel\_1 X0 X0) \tag{4}$$

Assume the following.

$$\forall X0. ((\neg v2\_struct\_0 X0) \wedge (l1\_struct\_0 X0)) \Rightarrow (\neg v1\_xboole\_0 (u1\_struct\_0 X0)) \tag{5}$$

Assume the following.

$$\forall X0. (l1\_orders\_2 X0) \Rightarrow (l1\_struct\_0 X0) \tag{6}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. \forall X3. ((\neg v1\_xboole\_0 X0) \wedge \\
& (((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 X0 X1) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 \\
& (k2\_zfmisc\_1 X0 X1)))) \wedge (m1\_subset\_1 X3 X0))) \Rightarrow (m1\_subset\_1 ( \\
& k3\_funct\_2 X0 X1 X2 X3) X1)
\end{aligned} \tag{7}$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_relat\_1 X1) \wedge (v5\_relat\_1 X1 X0)) \Rightarrow (m1\_subset\_1 (k2\_relset\_1 X0 X1) (k1\_zfmisc\_1 X0)) \tag{8}$$

Assume the following.

$$\begin{aligned}
& \forall X0. (l1\_orders\_2 X0) \Rightarrow (\forall X1. (l1\_orders\_2 X1) \Rightarrow (( \\
& r5\_waybel\_1 X0 X1) \Leftrightarrow (\exists X2. ((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 \\
& X2 (u1\_struct\_0 X0) (u1\_struct\_0 X1)) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 \\
& (k2\_zfmisc\_1 (u1\_struct\_0 X0) (u1\_struct\_0 X1)))))) \wedge (v23\_waybel\_0 \\
& X2 X0 X1)))
\end{aligned} \tag{9}$$

Assume the following.

$$\forall X0. (l1\_orders\_2 X0) \Rightarrow ((v2\_yellow\_0 X0) \Leftrightarrow (\exists X1. (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \wedge (r2\_lattice3 X0 (u1\_struct\_0 X0) X1))) \tag{10}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(l1\_orders\_2 X0) \Rightarrow (\forall X1.(l1\_orders\_2 X1) \Rightarrow (\forall X2. \\
& ((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 (u1\_struct\_0 X0) (u1\_struct\_0 \\
& X1)) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 \\
& X0) (u1\_struct\_0 X1)))))) \Rightarrow ((\neg(\neg v2\_struct\_0 X0) \wedge ((\neg v2\_struct\_0 \\
& X1) \wedge (\neg(v23\_waybel\_0 X2 X0 X1) \Leftrightarrow ((v2\_funct\_1 X2) \wedge ((v5\_orders\_3 \\
& X2 X0 X1) \wedge (\exists X3.((v1\_funct\_1 X3) \wedge ((v1\_funct\_2 X3 (u1\_struct\_0 \\
& X1) (u1\_struct\_0 X0)) \wedge (m1\_subset\_1 X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\
& (u1\_struct\_0 X1) (u1\_struct\_0 X0)))))) \wedge ((X3 = k2\_funct\_1 X2) \wedge \\
& (v5\_orders\_3 X3 X1 X0)))))) \wedge ((\neg(\neg v2\_struct\_0 X0) \wedge (\neg v2\_struct\_0 \\
& X1)) \Rightarrow ((v23\_waybel\_0 X2 X0 X1) \Leftrightarrow ((v2\_struct\_0 X0) \wedge (v2\_struct\_0 \\
& X1))))))
\end{aligned} \tag{11}$$

Assume the following.

$$\forall X0.(l1\_orders\_2 X0) \Rightarrow ((v3\_yellow\_0 X0) \Rightarrow ((v1\_yellow\_0 X0) \wedge (v2\_yellow\_0 X0))) \tag{12}$$

Assume the following.

$$\forall X0.(l1\_orders\_2 X0) \Rightarrow ((v2\_struct\_0 X0) \Rightarrow (v3\_yellow\_0 X0)) \tag{13}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))) \Rightarrow ((v4\_relat\_1 X2 X0) \wedge (v5\_relat\_1 X2 X1)) \tag{14}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))) \Rightarrow (v1\_relat\_1 X2) \tag{15}$$

**Theorem 1**

$$\forall X0.(l1\_orders\_2 X0) \Rightarrow (\forall X1.(l1\_orders\_2 X1) \Rightarrow ((v5\_waybel\_1 X0 X1) \wedge (v2\_yellow\_0 X0) \Rightarrow (v2\_yellow\_0 X1)))$$