

t16\_waybel\_3  
(TMNhcJx92P56HaRu2mWPutVoxtowrnEqekD)

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  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  $v24\_waybel\_0 : \iota \Rightarrow o$  be given. Let  $l1\_orders\_2 : \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v1\_finset\_1 : \iota \Rightarrow o$  be given. Let  $v1\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow o$  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  $k1\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r2\_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_orders\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v3\_orders\_2 X0) \wedge ((v5\_orders\_2 \\ X0) \wedge (l1\_orders\_2 X0)))) \Rightarrow ((v24\_waybel\_0 X0) \Leftrightarrow (\forall X1.((\neg \\ v1\_xboole\_0 X1) \wedge ((v1\_waybel\_0 X1 X0) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 \\ (u1\_struct\_0 X0)))))) \Rightarrow (r1\_yellow\_0 X0 X1))) \end{aligned} \quad (1)$$

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.

$$\forall X0. \forall X1. (m1\_subset\_1 X0 (k1\_zfmisc\_1 X1)) \Leftrightarrow (r1\_tarski X0 X1) \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0. ((v5\_orders\_2 X0) \wedge (l1\_orders\_2 X0)) \Rightarrow (\forall X1. \\ (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2. (((X1 = k1\_yellow\_0 \\ X0 X2) \wedge (r1\_yellow\_0 X0 X2)) \Rightarrow ((r2\_lattice3 X0 X2 X1) \wedge (\forall X3. \\ (m1\_subset\_1 X3 (u1\_struct\_0 X0)) \Rightarrow ((r2\_lattice3 X0 X2 X3) \Rightarrow (r1\_orders\_2 \\ X0 X1 X3)))))) \wedge (((r2\_lattice3 X0 X2 X1) \wedge (\forall X3. (m1\_subset\_1 \\ X3 (u1\_struct\_0 X0)) \Rightarrow ((r2\_lattice3 X0 X2 X3) \Rightarrow (r1\_orders\_2 X0 X1 \\ X3)))))) \Rightarrow ((X1 = k1\_yellow\_0 X0 X2) \wedge (r1\_yellow\_0 X0 X2))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v5\_orders\_2 X0) \wedge (l1\_orders\_2 X0)) \Rightarrow (\forall X1. \\ & (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 \\ & (u1\_struct\_0 X0)) \Rightarrow (((r1\_orders\_2 X0 X1 X2) \wedge (r1\_orders\_2 X0 X2 \\ & X1)) \Rightarrow (X1 = X2)))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v4\_orders\_2 X0) \wedge (l1\_orders\_2 \\ & X0))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 \\ & X0))) \Rightarrow (((\neg v1\_xboole\_0 X1) \wedge (v1\_waybel\_0 X1 X0)) \Leftrightarrow (\forall X2. \\ & ((v1\_finset\_1 X2) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 X1))) \Rightarrow (\exists X3. \\ & (m1\_subset\_1 X3 (u1\_struct\_0 X0)) \wedge ((X3 \in X1) \wedge (r2\_lattice3 X0 X2 \\ & X3))))) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0. \forall X1. r1\_tarski X0 X0 \quad (7)$$

Assume the following.

$$\forall X0. \forall X1. (l1\_orders\_2 X0) \Rightarrow (m1\_subset\_1 (k1\_yellow\_0 X0 X1) (u1\_struct\_0 X0)) \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0. (l1\_orders\_2 X0) \Rightarrow (\forall X1. \forall X2. (m1\_subset\_1 \\ & X2 (u1\_struct\_0 X0)) \Rightarrow ((r2\_lattice3 X0 X1 X2) \Leftrightarrow (\forall X3. (m1\_subset\_1 \\ & X3 (u1\_struct\_0 X0)) \Rightarrow ((X3 \in X1) \Rightarrow (r1\_orders\_2 X0 X3 X2)))) \end{aligned} \quad (9)$$

### Theorem 1

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v3\_orders\_2 X0) \wedge ((v4\_orders\_2 \\ & X0) \wedge ((v5\_orders\_2 X0) \wedge ((v24\_waybel\_0 X0) \wedge (l1\_orders\_2 X0))))) \Rightarrow \\ & (\forall X1. ((\neg v1\_xboole\_0 X1) \wedge ((v1\_finset\_1 X1) \wedge ((v1\_waybel\_0 \\ & X1 X0) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))))) \Rightarrow (k1\_yellow\_0 \\ & X0 X1 \in X1)) \end{aligned}$$