

## l4\_waybel17

(TMU81PWQuzTwxV2WDQY4uvibxbM2vTwuwLy)

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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  $v1\_lattice3 : \iota \Rightarrow o$  be given. Let  $v2\_lattice3 : \iota \Rightarrow o$  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  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $v2\_waybel11 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v1\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $r1\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_orders\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  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.

$$\begin{aligned} \forall X0.(l1\_orders\_2 X0) \Rightarrow (\forall X1. \forall X2. ((r1\_tarski \\ X1 X2) \wedge ((r1\_yellow\_0 X0 X1) \wedge (r1\_yellow\_0 X0 X2))) \Rightarrow (r1\_orders\_2 \\ X0 (k1\_yellow\_0 X0 X1) (k1\_yellow\_0 X0 X2))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v3\_orders\_2 X0) \wedge ((v4\_orders\_2 \\ X0) \wedge ((v5\_orders\_2 X0) \wedge (l1\_orders\_2 X0)))))) \Rightarrow (\forall X1.(m1\_subset\_1 \\ X1 (u1\_struct\_0 X0)) \Rightarrow ((r1\_yellow\_0 X0 (k5\_waybel\_0 X0 X1)) \wedge (k1\_yellow\_0 \\ X0 (k5\_waybel\_0 X0 X1) = X1))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge (l1\_orders\_2 X0)) \Rightarrow (\forall X1. \\ (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 \\ (u1\_struct\_0 X0)) \Rightarrow ((X2 \in k5\_waybel\_0 X0 X1) \Leftrightarrow (r1\_orders\_2 X0 X2 \\ X1)))) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2\_struct\_0 X0)\wedge(l1\_orders\_2 X0))\wedge(m1\_subset\_1 X1 (u1\_struct\_0 X0)))\Rightarrow(m1\_subset\_1 (k5\_waybel\_0 X0 X1) (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(l1\_orders\_2 X0)\Rightarrow(m1\_subset\_1 (k1\_yellow\_0 X0 X1) (u1\_struct\_0 X0)) \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0)\wedge((v3\_orders\_2 X0)\wedge(l1\_orders\_2 X0)))\Rightarrow(\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0)))\Rightarrow((v2\_waybel11 X1 X0)\Leftrightarrow(\forall X2.((\neg v1\_xboole\_0 X2)\wedge(v1\_waybel\_0 X2 X0)\wedge(m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 X0))))\Rightarrow((r1\_tarski X2 X1)\Rightarrow(k1\_yellow\_0 X0 X2 \in X1)))))) \quad (7) \end{aligned}$$

Assume the following.

$$\forall X0.(l1\_orders\_2 X0)\Rightarrow((v1\_lattice3 X0)\Rightarrow(\neg v2\_struct\_0 X0)) \quad (8)$$

**Theorem 1**

$$\forall X0.(((v3\_orders\_2 X0)\wedge((v4\_orders\_2 X0)\wedge((v5\_orders\_2 X0)\wedge((v1\_lattice3 X0)\wedge((v2\_lattice3 X0)\wedge((v24\_waybel\_0 X0)\wedge(l1\_orders\_2 X0))))))))\Rightarrow(\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0))\Rightarrow(v2\_waybel11 (k5\_waybel\_0 X0 X1) X0))$$