

## t2\_waybel\_2

(TMNKx FJ5AYVoVqJTdZAoyqW32bm1KE6rTBg)

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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  $v24\_waybel\_0 : \iota \Rightarrow o$  be given. Let  $v1\_lattice3 : \iota \Rightarrow o$  be given. Let  $l1\_orders\_2 : \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v1\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow o$  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  $r1\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_yellow\_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_domain\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v2\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Let  $k1\_yellow\_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  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.

$$\begin{aligned} \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v3\_orders\_2 X0) \wedge (l1\_orders\_2 \\ X0))) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow ((v1\_waybel\_0 \\ (k6\_domain\_1 (u1\_struct\_0 X0) X1) X0) \wedge (v2\_waybel\_0 (k6\_domain\_1 \\ (u1\_struct\_0 X0) X1) X0))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. ((\neg v1\_xboole\_0 X0) \wedge (m1\_subset\_1 X1 X0)) \Rightarrow \\ (k6\_domain\_1 X0 X1 = k1\_tarski X1) \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. (((v5\_orders\_2 X0) \wedge ((v1\_lattice3 \\ X0) \wedge (l1\_orders\_2 X0))) \wedge ((m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 \\ X0))) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 X0)))))) \Rightarrow (k2\_yellow\_4 \\ X0 X1 X2 = k1\_yellow\_4 X0 X1 X2) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((v4\_orders\_2 X0)\wedge((v5\_orders\_2 \\ & X0)\wedge((v1\_lattice3 X0)\wedge(l1\_orders\_2 X0))))\wedge(((v1\_waybel\_0 X1 \\ & X0)\wedge(m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))))\wedge((v1\_waybel\_0 \\ & X2 X0)\wedge(m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 X0))))))\Rightarrow(v1\_waybel\_0 \\ & (k1\_yellow\_4 X0 X1 X2) X0) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.\neg v1\_xboole\_0 (k1\_tarski X0) \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v2\_struct\_0 X0)\wedge(l1\_orders\_2 \\ & X0))\wedge(((\neg v1\_xboole\_0 X1)\wedge(m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 \\ & X0))))\wedge((\neg v1\_xboole\_0 X2)\wedge(m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 \\ & X0))))))\Rightarrow(\neg v1\_xboole\_0 (k1\_yellow\_4 X0 X1 X2)) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((\neg v1\_xboole\_0 X0)\wedge(m1\_subset\_1 X1 X0))\Rightarrow \\ & (m1\_subset\_1 (k6\_domain\_1 X0 X1) (k1\_zfmisc\_1 X0)) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((v5\_orders\_2 X0)\wedge((v1\_lattice3 \\ & X0)\wedge(l1\_orders\_2 X0))\wedge((m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 \\ & X0)))\wedge(m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 X0))))))\Rightarrow(m1\_subset\_1 \\ & (k2\_yellow\_4 X0 X1 X2) (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0.(v1\_xboole\_0 X0)\Rightarrow(\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 X0))\Rightarrow(v1\_xboole\_0 X1)) \quad (10)$$

Assume the following.

$$\forall X0.(l1\_orders\_2 X0)\Rightarrow((v1\_lattice3 X0)\Rightarrow(\neg v2\_struct\_0 X0)) \quad (11)$$

### Theorem 1

$$\begin{aligned} & \forall X0.((v3\_orders\_2 X0)\wedge((v4\_orders\_2 X0)\wedge((v5\_orders\_2 \\ & X0)\wedge((v24\_waybel\_0 X0)\wedge((v1\_lattice3 X0)\wedge(l1\_orders\_2 X0))))))\Rightarrow \\ & (\forall X1.((\neg v1\_xboole\_0 X1)\wedge((v1\_waybel\_0 X1 X0)\wedge(m1\_subset\_1 \\ & X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))))))\Rightarrow(\forall X2.(m1\_subset\_1 \\ & X2 (u1\_struct\_0 X0))\Rightarrow(r1\_yellow\_0 X0 (k2\_yellow\_4 X0 (k6\_domain\_1 \\ & (u1\_struct\_0 X0) X2) X1)))) \end{aligned}$$