

## t53\_waybel23

(TMYXfQn7c3gPCwZDFHiH3qM6NadapAxuLHS)

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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  $l1\_orders\_2 : \iota \Rightarrow o$  be given. Let  $v4\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k2\_yellow\_1 : \iota \Rightarrow \iota$  be given. Let  $k7\_waybel\_0 : \iota \Rightarrow \iota$  be given. Let  $k4\_waybel23 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $u1\_orders\_2 : \iota \Rightarrow \iota$  be given. Let  $k1\_yellow\_1 : \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k1\_xboole\_0 : \iota$  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  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0.(u1\_struct\_0 (k2\_yellow\_1 X0) = X0) \wedge (u1\_orders\_2 (k2\_yellow\_1 X0) = k1\_yellow\_1 X0) \quad (1)$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0 X0) \wedge ((v3\_orders\_2 X0) \wedge ((v4\_orders\_2 X0) \wedge (l1\_orders\_2 X0)))) \Rightarrow (\neg v1\_xboole\_0 (k7\_waybel\_0 X0)) \quad (2)$$

Assume the following.

$$v1\_xboole\_0 k1\_xboole\_0 \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2\_struct\_0 X0) \wedge ((v3\_orders\_2 X0) \wedge \\ & ((v4\_orders\_2 X0) \wedge (l1\_orders\_2 X0)))) \wedge ((\neg v2\_struct\_0 X1) \wedge \\ & (v4\_yellow\_0 X1 X0) \wedge (m1\_yellow\_0 X1 X0))) \Rightarrow ((v1\_funct\_1 (k4\_waybel23 \\ & X0 X1)) \wedge ((v1\_funct\_2 (k4\_waybel23 X0 X1) (u1\_struct\_0 (k2\_yellow\_1 \\ & (k7\_waybel\_0 X1))) (u1\_struct\_0 (k2\_yellow\_1 (k7\_waybel\_0 X0)))) \wedge \\ & (m1\_subset\_1 (k4\_waybel23 X0 X1) (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 \\ & (k2\_yellow\_1 (k7\_waybel\_0 X1)))) (u1\_struct\_0 (k2\_yellow\_1 (k7\_waybel\_0 \\ & X0))))))))) \quad (4) \end{aligned}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1 X1)\wedge(v5\_relat\_1 X1 X0))\Rightarrow(m1\_subset\_1 (k2\_relset\_1 X0 X1) (k1\_zfmisc\_1 X0)) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\Rightarrow(((X1\neq k1\_xboole\_0)\Rightarrow((v1\_funct\_2 X2 X0 X1)\Leftrightarrow(X0 = k1\_relset\_1 X0 X2)))\wedge((X1 = k1\_xboole\_0)\Rightarrow((v1\_funct\_2 X2 X0 X1)\Leftrightarrow(X2 = k1\_xboole\_0)))) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\Rightarrow((v4\_relat\_1 X2 X0)\wedge(v5\_relat\_1 X2 X1)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\Rightarrow(v1\_relat\_1 X2) \quad (8)$$

**Theorem 1**

$$\forall X0.((\neg v2\_struct\_0 X0)\wedge((v3\_orders\_2 X0)\wedge((v4\_orders\_2 X0)\wedge(l1\_orders\_2 X0))))\Rightarrow(\forall X1.((\neg v2\_struct\_0 X1)\wedge((v4\_yellow\_0 X1 X0)\wedge(m1\_yellow\_0 X1 X0)))\Rightarrow((k1\_relset\_1 (u1\_struct\_0 (k2\_yellow\_1 (k7\_waybel\_0 X1))) (k4\_waybel23 X0 X1) = k7\_waybel\_0 X1)\wedge(m1\_subset\_1 (k2\_relset\_1 (u1\_struct\_0 (k2\_yellow\_1 (k7\_waybel\_0 X0))) (k4\_waybel23 X0 X1)) (k1\_zfmisc\_1 (k7\_waybel\_0 X0))))))$$