

t10\_waybel\_7  
(TMdcJcxsJj6E55XSVkpyygyFSjQJheQKXX1)

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Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v12\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_yellow\_1 : \iota \Rightarrow \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $v1\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_finset\_1 : \iota \Rightarrow o$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_setfam\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  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  $v1\_lattice3 : \iota \Rightarrow o$  be given. Let  $l1\_orders\_2 : \iota \Rightarrow o$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $k1\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_tarski : \iota \Rightarrow \iota$  be given. Let  $k9\_setfam\_1 : \iota \Rightarrow \iota$  be given. Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v1\_yellow\_0 : \iota \Rightarrow o$  be given. Let  $k3\_yellow\_0 : \iota \Rightarrow \iota$  be given. Let  $v1\_orders\_2 : \iota \Rightarrow o$  be given. Let  $v11\_waybel\_1 : \iota \Rightarrow o$  be given. Let  $v2\_lattice3 : \iota \Rightarrow o$  be given. Let  $v3\_yellow\_0 : \iota \Rightarrow o$  be given. Let  $v2\_waybel\_1 : \iota \Rightarrow o$  be given. Let  $v10\_waybel\_1 : \iota \Rightarrow o$  be given. Let  $v2\_yellow\_0 : \iota \Rightarrow o$  be given. Let  $v2\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0.((v3\_orders\_2 X0) \wedge ((v4\_orders\_2 X0) \wedge ((v5\_orders\_2 \\ & X0) \wedge ((v1\_lattice3 X0) \wedge (l1\_orders\_2 X0)))) \Rightarrow (\forall X1.((\neg \\ v1\_xboole\_0 X1) \wedge ((v12\_waybel\_0 X1 X0) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 \\ (u1\_struct\_0 X0)))) \Rightarrow ((v1\_waybel\_0 X1 X0) \Leftrightarrow (\forall X2.((v1\_finset\_1 \\ X2) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 X1))) \Rightarrow ((X2 \neq k1\_xboole\_0) \Rightarrow ( \\ k1\_yellow\_0 X0 X2 \in X1)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. (m1\_subset\_1 X0 (k1\_zfmisc\_1 X1)) \Leftrightarrow (r1\_tarski X0 X1) \tag{2}$$

Assume the following.

$$k3\_tarski k1\_xboole\_0 = k1\_xboole\_0 \tag{3}$$

Assume the following.

$$\forall X0. u1\_struct\_0 (k3\_yellow\_1 X0) = k9\_setfam\_1 X0 \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 (k3\_yellow\_1 X0))))\Rightarrow(k1\_yellow\_0 (k3\_yellow\_1 X0) X1 = k3\_tarSKI X1) \quad (5)$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0 X0)\wedge((v3\_orders\_2 X0)\wedge((v4\_orders\_2 X0)\wedge((v5\_orders\_2 X0)\wedge((v1\_yellow\_0 X0)\wedge(l1\_orders\_2 X0))))))\Rightarrow(\forall X1.((\neg v1\_xboole\_0 X1)\wedge((v1\_waybel\_0 X1 X0)\wedge((v12\_waybel\_0 X1 X0)\wedge(m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))))))\Rightarrow(k3\_yellow\_0 X0 \in X1)) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((r1\_tarSKI X0 X1)\wedge(r1\_tarSKI X1 X2))\Rightarrow(r1\_tarSKI X0 X2) \quad (7)$$

Assume the following.

$$\forall X0.k3\_yellow\_0 (k3\_yellow\_1 X0) = k1\_xboole\_0 \quad (8)$$

Assume the following.

$$\forall X0.k9\_setfam\_1 X0 = k1\_zfmisc\_1 X0 \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 (k1\_zfmisc\_1 X0)))\Rightarrow(k5\_setfam\_1 X0 X1 = k3\_tarSKI X1) \quad (10)$$

Assume the following.

$$\forall X0.(\neg v2\_struct\_0 (k3\_yellow\_1 X0))\wedge((v1\_orders\_2 (k3\_yellow\_1 X0))\wedge((v3\_orders\_2 (k3\_yellow\_1 X0))\wedge((v4\_orders\_2 (k3\_yellow\_1 X0))\wedge(v5\_orders\_2 (k3\_yellow\_1 X0)))))) \quad (11)$$

Assume the following.

$$\forall X0.(v1\_orders\_2 (k3\_yellow\_1 X0))\wedge(v11\_waybel\_1 (k3\_yellow\_1 X0)) \quad (12)$$

Assume the following.

$$\forall X0.(v1\_orders\_2 (k3\_yellow\_1 X0))\wedge(l1\_orders\_2 (k3\_yellow\_1 X0)) \quad (13)$$

Assume the following.

$$\forall X0.(l1\_orders\_2 X0)\Rightarrow(((\neg v2\_struct\_0 X0)\wedge(v11\_waybel\_1 X0))\Rightarrow((\neg v2\_struct\_0 X0)\wedge((v3\_orders\_2 X0)\wedge((v4\_orders\_2 X0)\wedge((v5\_orders\_2 X0)\wedge((v1\_lattice3 X0)\wedge((v2\_lattice3 X0)\wedge((v3\_yellow\_0 X0)\wedge((v2\_waybel\_1 X0)\wedge(v10\_waybel\_1 X0)))))))))) \quad (14)$$

Assume the following.

$$\forall X0.(l1\_orders\_2 X0) \Rightarrow ((v3\_yellow\_0 X0) \Rightarrow ((v1\_yellow\_0 X0) \wedge (v2\_yellow\_0 X0))) \quad (15)$$

Assume the following.

$$\forall X0.(l1\_orders\_2 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow ((v1\_xboole\_0 X1) \Rightarrow ((v1\_waybel\_0 X1 X0) \wedge (v2\_waybel\_0 X1 X0)))) \quad (16)$$

**Theorem 1**

$$\forall X0.\forall X1.((\neg v1\_xboole\_0 X1) \wedge ((v12\_waybel\_0 X1 (k3\_yellow\_1 X0)) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 (k3\_yellow\_1 X0)))))) \Rightarrow ((v1\_waybel\_0 X1 (k3\_yellow\_1 X0)) \Leftrightarrow (\forall X2. ((v1\_finset\_1 X2) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k1\_zfmisc\_1 X0)))) \Rightarrow ((r1\_tarski X2 X1) \Rightarrow (k5\_setfam\_1 X0 X2 \in X1))))$$