t12_waybel_2 (TMVY2i77vHTVG7twrdgQuhdy6DeBykDFGah)

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Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $v3\_orders\_2 : \iota \Rightarrow o$ 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 $v1\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3\_yellow\_3 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k1\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7\_yellow\_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_yellow\_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5\_yellow\_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3\_lattice3 : \iota \Rightarrow o$ be given. Let $v1\_orders\_2 : \iota \Rightarrow o$ be given. Assume the following.

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

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v5\_orders\_2\ X0) \wedge (l1\_orders\_2\ X0))) \Rightarrow (\forall X1.((\neg v2\_struct\_0\ X1) \wedge ((v5\_orders\_2\ X1) \wedge (l1\_orders\_2\ X1))) \Rightarrow (\forall X2.((\neg v1\_xboole\_0\ X2) \wedge (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0\ (k3\_yellow\_3\ X0\ X1)))))) \Rightarrow (((v3\_lattice3\ (k3\_yellow\_3\ X0\ X1)) \vee (r1\_yellow\_0\ (k3\_yellow\_3\ X0\ X1)\ X2)) \Rightarrow (k1\_yellow\_0\ (k3\_yellow\_3\ X0\ X1)\ X2 = k7\_yellow\_3\ X0\ X1\ (k1\_yellow\_0\ X0\ (k4\_yellow\_3\ X0\ X1\ X2))\ (k1\_yellow\_0\ X1\ (k5\_yellow\_3\ X0\ X1\ X2))))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(((v5\_orders\_2\ X0) \wedge (l1\_orders\_2\ X0)) \wedge ((v5\_orders\_2\ X1) \wedge (l1\_orders\_2\ X1))) \Rightarrow ((v1\_orders\_2\ (k3\_yellow\_3\ X0\ X1)) \wedge (v5\_orders\_2\ (k3\_yellow\_3\ X0\ X1))) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.(((v3\_orders\_2\ X0) \wedge (l1\_orders\_2\ X0)) \wedge ((v3\_orders\_2\ X1) \wedge (l1\_orders\_2\ X1))) \Rightarrow ((v1\_orders\_2\ (k3\_yellow\_3\ X0\ X1)) \wedge (v3\_orders\_2\ (k3\_yellow\_3\ X0\ X1))) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2\_struct\_0\ X0)\wedge(l1\_orders\_2\ X0))\wedge((\neg v2\_struct\_0\ X1)\wedge(l1\_orders\_2\ X1)))\Rightarrow((\neg v2\_struct\_0\ (k3\_yellow\_3\ X0\ X1))\wedge(v1\_orders\_2\ (k3\_yellow\_3\ X0\ X1))) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2\_struct\_0\ X0)\wedge((v3\_orders\_2\ X0)\wedge((v24\_waybel\_0\ X0)\wedge(l1\_orders\_2\ X0))))\wedge((\neg v2\_struct\_0\ X1)\wedge((v3\_orders\_2\ X1)\wedge((v24\_waybel\_0\ X1)\wedge(l1\_orders\_2\ X1)))))\Rightarrow((v1\_orders\_2\ (k3\_yellow\_3\ X0\ X1))\wedge(v24\_waybel\_0\ (k3\_yellow\_3\ X0\ X1))) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((l1\_orders\_2\ X0)\wedge(l1\_orders\_2\ X1))\Rightarrow((v1\_orders\_2\ (k3\_yellow\_3\ X0\ X1))\wedge(l1\_orders\_2\ (k3\_yellow\_3\ X0\ X1))) \quad (7)$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v3\_orders\_2\ X0)\wedge((v5\_orders\_2\ X0)\wedge((v24\_waybel\_0\ X0)\wedge(l1\_orders\_2\ X0)))))\Rightarrow(\forall X1.((\neg v1\_xboole\_0\ X1)\wedge((v1\_waybel\_0\ X1\ (k3\_yellow\_3\ X0\ X0))\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ (k3\_yellow\_3\ X0\ X0))))))\Rightarrow(k1\_yellow\_0\ (k3\_yellow\_3\ X0\ X0)\ X1 = k7\_yellow\_3\ X0\ X0\ (k1\_yellow\_0\ X0\ (k4\_yellow\_3\ X0\ X0\ X1))\ (k1\_yellow\_0\ X0\ (k5\_yellow\_3\ X0\ X0\ X1))))$$