t25_waybel_4 (TMPfvS-MguXKkhk6ePXfu4hGYkmVowbLNFNA)

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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 $v1\_yellow\_0 : \iota \Rightarrow o$ be given. Let $v1\_lattice3 : \iota \Rightarrow o$ be given. Let $l1\_orders\_2 : \iota \Rightarrow o$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $k8\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k6\_domain\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_yellow\_0 : \iota \Rightarrow \iota$ be given. Let $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_yellow\_1 : \iota \Rightarrow \iota$ be given. Let $k7\_waybel\_0 : \iota \Rightarrow \iota$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $k5\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $v1\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1\_struct\_0 : \iota \Rightarrow o$ be given. Let $v12\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.(X2 \in X1) \Rightarrow ((v1\_funct\_1\ (k2\_funcop\_1\ X0\ X2)) \wedge ((v1\_funct\_2\ (k2\_funcop\_1\ X0\ X2)\ X0\ X1) \wedge (m1\_subset\_1\ (k2\_funcop\_1\ X0\ X2)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1))))) \tag{1}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v3\_orders\_2\ X0) \wedge ((v4\_orders\_2\ X0) \wedge ((v5\_orders\_2\ X0) \wedge ((v1\_yellow\_0\ X0) \wedge (l1\_orders\_2\ X0)))))) \Rightarrow (k5\_waybel\_0\ X0\ (k3\_yellow\_0\ X0) = k6\_domain\_1\ (u1\_struct\_0\ X0)\ (k3\_yellow\_0\ X0)) \tag{2}$$

Assume the following.

$$\forall X0.(u1\_struct\_0\ (k2\_yellow\_1\ X0) = X0) \wedge (u1\_orders\_2\ (k2\_yellow\_1\ X0) = k1\_yellow\_1\ X0) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1\_xboole\_0\ X0) \wedge (m1\_subset\_1\ X2\ X0)) \Rightarrow (k8\_funcop\_1\ X0\ X1\ X2 = k2\_funcop\_1\ X1\ X2) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2\_struct\_0\ X0)\wedge((v3\_orders\_2\ X0)\wedge (l1\_orders\_2\ X0)))\wedge(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)))\Rightarrow((\neg v1\_xboole\_0\ (k5\_waybel\_0\ X0\ X1))\wedge(v1\_waybel\_0\ (k5\_waybel\_0\ X0\ X1)\ X0)) \tag{5}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l1\_struct\_0\ X0))\Rightarrow(\neg v1\_xboole\_0\ (u1\_struct\_0\ X0)) \tag{6}$$

Assume the following.

$$\forall X0.\neg v1\_xboole\_0\ (k1\_zfmisc\_1\ X0) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2\_struct\_0\ X0)\wedge((v4\_orders\_2\ X0)\wedge (l1\_orders\_2\ X0)))\wedge(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)))\Rightarrow(v12\_waybel\_0\ (k5\_waybel\_0\ X0\ X1)\ X0) \tag{8}$$

Assume the following.

$$\forall X0.(l1\_orders\_2\ X0)\Rightarrow(l1\_struct\_0\ X0) \tag{9}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1\_xboole\_0\ X0)\wedge(m1\_subset\_1\ X2\ X0))\Rightarrow((v1\_funct\_1\ (k8\_funcop\_1\ X0\ X1\ X2))\wedge((v1\_funct\_2\ (k8\_funcop\_1\ X0\ X1\ X2)\ X1\ X0)\wedge(m1\_subset\_1\ (k8\_funcop\_1\ X0\ X1\ X2)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X1\ X0))))) \tag{10}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0)\wedge(m1\_subset\_1\ X1\ X0))\Rightarrow (m1\_subset\_1\ (k6\_domain\_1\ X0\ X1)\ (k1\_zfmisc\_1\ X0)) \tag{11}$$

Assume the following.

$$\forall X0.(l1\_orders\_2\ X0)\Rightarrow(m1\_subset\_1\ (k3\_yellow\_0\ X0)\ (u1\_struct\_0\ X0)) \tag{12}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v3\_orders\_2\ X0)\wedge((v4\_orders\_2\ X0)\wedge(l1\_orders\_2\ X0))))\Rightarrow(k7\_waybel\_0\ X0 = ReplSep\ (toset\ (\lambda X1 : \iota.(\neg v1\_xboole\_0\ X1)\wedge((v1\_waybel\_0\ X1\ X0)\wedge((v12\_waybel\_0\ X1\ X0)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))))))\ (\lambda X1 : \iota.True)\ (\lambda X1 : \iota.X1)) \tag{13}$$

Assume the following.

$$\forall X0.(l1\_orders\_2\ X0)\Rightarrow((v1\_lattice3\ X0)\Rightarrow(\neg v2\_struct\_0\ X0)) \tag{14}$$

Theorem 1

$$\forall X0.((v3\_orders\_2\ X0)\wedge((v4\_orders\_2\ X0)\wedge((v5\_orders\_2\ X0)\wedge((v1\_yellow\_0\ X0)\wedge((v1\_lattice3\ X0)\wedge(l1\_orders\_2\ X0)))))\Rightarrow((v1\_funct\_1\ (k8\_funcop\_1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0))\ (u1\_struct\_0\ X0)\ (k6\_domain\_1\ (u1\_struct\_0\ X0)\ (k3\_yellow\_0\ X0))))\wedge((v1\_funct\_2\ (k8\_funcop\_1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0))\ (u1\_struct\_0\ X0)\ (k6\_domain\_1\ (u1\_struct\_0\ X0)\ (k3\_yellow\_0\ X0)))\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ (k2\_yellow\_1\ (k7\_waybel\_0\ X0))))\wedge(m1\_subset\_1\ (k8\_funcop\_1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0))\ (u1\_struct\_0\ X0)\ (k6\_domain\_1\ (u1\_struct\_0\ X0)\ (k3\_yellow\_0\ X0)))\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ (k2\_yellow\_1\ (k7\_waybel\_0\ X0))))))))$$