t22_waybel10 (TMH8sXKK992h9vAAWUNW43Fnp7xAnBr6FoD)

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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 $v1\_lattice3 : \iota \Rightarrow o$ be given. Let $v2\_lattice3 : \iota \Rightarrow o$ be given. Let $v3\_lattice3 : \iota \Rightarrow o$ be given. Let $l1\_orders\_2 : \iota \Rightarrow o$ be given. Let $r5\_waybel\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_waybel10 : \iota \Rightarrow \iota$ be given. Let $k1\_waybel10 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_waybel10 : \iota \Rightarrow \iota$ be given. Let $k4\_waybel10 : \iota \Rightarrow \iota$ 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 $k7\_lattice3 : \iota \Rightarrow \iota$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $k5\_waybel10 : \iota \Rightarrow \iota$ be given. Let $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $v23\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_orders\_2 : \iota \Rightarrow o$ be given. Let $k7\_yellow\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6\_yellow\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.((l1\_orders\_2\ X0) \wedge ((v4\_yellow\_0\ X1\ X0) \wedge (m1\_yellow\_0\ X1\ X0))) \Rightarrow (k1\_waybel10\ X0\ X1 = k7\_lattice3\ X1) \tag{1}$$

Assume the following.

$$\forall X0.((v3\_orders\_2\ X0) \wedge ((v4\_orders\_2\ X0) \wedge ((v5\_orders\_2\ X0) \wedge ((v1\_lattice3\ X0) \wedge ((v2\_lattice3\ X0) \wedge ((v3\_lattice3\ X0) \wedge (l1\_orders\_2\ X0)))))) \Rightarrow ((v1\_funct\_1\ (k5\_waybel10\ X0)) \wedge ((v1\_funct\_2\ (k5\_waybel10\ X0)\ (u1\_struct\_0\ (k2\_waybel10\ X0))\ (u1\_struct\_0\ (k1\_waybel10\ (k3\_waybel10\ X0)\ (k4\_waybel10\ X0)))) \wedge (v23\_waybel\_0\ (k5\_waybel10\ X0)\ (k2\_waybel10\ X0)\ (k1\_waybel10\ (k3\_waybel10\ X0)\ (k4\_waybel10\ X0)))))) \tag{2}$$

Assume the following.

$$\forall X0.(l1\_orders\_2\ X0) \Rightarrow (\forall X1.(m1\_yellow\_0\ X1\ X0) \Rightarrow (l1\_orders\_2\ X1)) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.((l1\_orders\_2\ X0)\wedge(l1\_orders\_2\ X1))\Rightarrow(\\(v1\_orders\_2\ (k7\_yellow\_1\ X0\ X1))\wedge((v4\_yellow\_0\ (k7\_yellow\_1\\ X0\ X1)\ (k6\_yellow\_1\ (u1\_struct\_0\ X0)\ X1))\wedge(m1\_yellow\_0\ (k7\_yellow\_1\\ X0\ X1)\ (k6\_yellow\_1\ (u1\_struct\_0\ X0)\ X1))))\tag{4}$$

Assume the following.

$$\forall X0.(l1\_orders\_2\ X0)\Rightarrow((v1\_orders\_2\ (k7\_lattice3\ X0))\wedge\\(l1\_orders\_2\ (k7\_lattice3\ X0)))\tag{5}$$

Assume the following.

$$\forall X0.\forall X1.(l1\_orders\_2\ X1)\Rightarrow((v1\_orders\_2\ (k6\_yellow\_1\\ X0\ X1))\wedge(l1\_orders\_2\ (k6\_yellow\_1\ X0\ X1)))\tag{6}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v3\_orders\_2\ X0)\wedge((v4\_orders\_2\\ X0)\wedge((v5\_orders\_2\ X0)\wedge(l1\_orders\_2\ X0)))))\Rightarrow((v1\_funct\_1\ (k5\_waybel10\\ X0))\wedge((v1\_funct\_2\ (k5\_waybel10\ X0)\ (u1\_struct\_0\ (k2\_waybel10\\ X0))\ (u1\_struct\_0\ (k1\_waybel10\ (k3\_waybel10\ X0)\ (k4\_waybel10\\ X0))))\wedge(m1\_subset\_1\ (k5\_waybel10\ X0)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\\ (u1\_struct\_0\ (k2\_waybel10\ X0))\ (u1\_struct\_0\ (k1\_waybel10\ (k3\_waybel10\\ X0)\ (k4\_waybel10\ X0)))))))\tag{7}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l1\_orders\_2\ X0))\Rightarrow((\neg v2\_struct\_0\\ (k4\_waybel10\ X0))\wedge((v1\_orders\_2\ (k4\_waybel10\ X0))\wedge((v4\_yellow\_0\\ (k4\_waybel10\ X0)\ (k3\_waybel10\ X0))\wedge(m1\_yellow\_0\ (k4\_waybel10\\ X0)\ (k3\_waybel10\ X0)))))\tag{8}$$

Assume the following.

$$\forall X0.(l1\_orders\_2\ X0)\Rightarrow((\neg v2\_struct\_0\ (k3\_waybel10\ X0))\wedge\\((v1\_orders\_2\ (k3\_waybel10\ X0))\wedge(l1\_orders\_2\ (k3\_waybel10\ X0))))\tag{9}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v3\_orders\_2\ X0)\wedge(l1\_orders\_2\\ X0)))\Rightarrow((\neg v2\_struct\_0\ (k2\_waybel10\ X0))\wedge((v1\_orders\_2\ (k2\_waybel10\\ X0))\wedge((v4\_yellow\_0\ (k2\_waybel10\ X0)\ (k7\_yellow\_1\ X0\ X0))\wedge(m1\_yellow\_0\\ (k2\_waybel10\ X0)\ (k7\_yellow\_1\ X0\ X0)))))\tag{10}$$

Assume the following.

$$\forall X0.(l1\_orders\_2\ X0)\Rightarrow(\forall X1.(l1\_orders\_2\ X1)\Rightarrow((r5\_waybel\_1\ X0\ X1)\Leftrightarrow(\exists X2.((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1))))))\wedge(v23\_waybel\_0\ X2\ X0\ X1))))) \tag{11}$$

Assume the following.

$$\forall X0.(l1\_orders\_2\ X0)\Rightarrow((v1\_lattice3\ X0)\Rightarrow(\neg v2\_struct\_0\ X0)) \tag{12}$$

Theorem 1

$$\forall X0.((v3\_orders\_2\ X0)\wedge((v4\_orders\_2\ X0)\wedge((v5\_orders\_2\ X0)\wedge((v1\_lattice3\ X0)\wedge((v2\_lattice3\ X0)\wedge((v3\_lattice3\ X0)\wedge(l1\_orders\_2\ X0)))))))\Rightarrow(r5\_waybel\_1\ (k2\_waybel10\ X0)\ (k1\_waybel10\ (k3\_waybel10\ X0)\ (k4\_waybel10\ X0)))$$