t75_waybel_1 (TMRn4x3MFHHzYcZKJDyctnToUxib31Ya9VD)

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Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $l1\_orders\_2 : \iota \Rightarrow o$ be given. Let $v9\_waybel\_1 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $r1\_orders\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6\_waybel\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11\_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v4\_orders\_2 : \iota \Rightarrow o$ be given. Let $v5\_orders\_2 : \iota \Rightarrow o$ be given. Let $v2\_lattice3 : \iota \Rightarrow o$ be given. Let $k12\_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3\_orders\_2 : \iota \Rightarrow o$ be given. Let $v1\_lattice3 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge (l1\_orders\_2\ X0)) \Rightarrow ((v9\_waybel\_1\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0)) \Rightarrow ((r1\_orders\_2\ X0\ (k11\_lattice3\ X0\ X2\ X3)\ X1) \Leftrightarrow (r1\_orders\_2\ X0\ X3\ (k6\_waybel\_1\ X0\ X2\ X1)))))))) \tag{1}$$

Assume the following.

$$\forall X0.((v4\_orders\_2\ X0) \wedge (l1\_orders\_2\ X0)) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0)) \Rightarrow (((r1\_orders\_2\ X0\ X1\ X2) \wedge (r1\_orders\_2\ X0\ X2\ X3)) \Rightarrow (r1\_orders\_2\ X0\ X1\ X3))))) \tag{2}$$

Assume the following.

$$\forall X0.((v4\_orders\_2\ X0) \wedge ((v5\_orders\_2\ X0) \wedge ((v2\_lattice3\ X0) \wedge (l1\_orders\_2\ X0)))) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0)) \Rightarrow ((r1\_orders\_2\ X0\ X1\ X2) \Rightarrow (r1\_orders\_2\ X0\ (k12\_lattice3\ X0\ X1\ X3)\ (k12\_lattice3\ X0\ X2\ X3)))))) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((v5\_orders\_2\ X0)\wedge((v2\_lattice3\ X0)\wedge(l1\_orders\_2\ X0)))\wedge((m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\wedge(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))))\Rightarrow(k12\_lattice3\ X0\ X1\ X2 = k11\_lattice3\ X0\ X1\ X2) \tag{4}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l1\_orders\_2\ X0))\Rightarrow((v9\_waybel\_1\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow(r1\_orders\_2\ X0\ (k11\_lattice3\ X0\ X1\ (k6\_waybel\_1\ X0\ X1\ X2))\ X2)))) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2\_struct\_0\ X0)\wedge(l1\_orders\_2\ X0))\wedge((m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\wedge(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))))\Rightarrow(m1\_subset\_1\ (k6\_waybel\_1\ X0\ X1\ X2)\ (u1\_struct\_0\ X0)) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((l1\_orders\_2\ X0)\wedge((m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\wedge(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))))\Rightarrow(m1\_subset\_1\ (k11\_lattice3\ X0\ X1\ X2)\ (u1\_struct\_0\ X0)) \tag{7}$$

Assume the following.

$$\forall X0.(l1\_orders\_2\ X0)\Rightarrow(((\neg v2\_struct\_0\ X0)\wedge(v9\_waybel\_1\ X0))\Rightarrow((\neg v2\_struct\_0\ X0)\wedge((v3\_orders\_2\ X0)\wedge((v4\_orders\_2\ X0)\wedge((v5\_orders\_2\ X0)\wedge((v1\_lattice3\ X0)\wedge(v2\_lattice3\ X0))))))) \tag{8}$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l1\_orders\_2\ X0))\Rightarrow((v9\_waybel\_1\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0))\Rightarrow((r1\_orders\_2\ X0\ X1\ X2)\Rightarrow(r1\_orders\_2\ X0\ (k6\_waybel\_1\ X0\ X2\ X3)\ (k6\_waybel\_1\ X0\ X1\ X3))))))))$$