t24_waybel_6 (TM-PJDGT5KCVmYvfVBqEnnPtNGVLx7Qg53U6)

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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 $l1\_orders\_2 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $v5\_waybel\_6 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2\_waybel\_6 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k12\_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1\_orders\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $r3\_orders\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k11\_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.((v5\_orders\_2\ X0) \wedge ((v2\_lattice3\ X0) \wedge (l1\_orders\_2\ X0))) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0)) \Rightarrow ((X3 = k12\_lattice3\ X0\ X1\ X2) \Leftrightarrow ((r1\_orders\_2\ X0\ X3\ X1) \wedge ((r1\_orders\_2\ X0\ X3\ X2) \wedge (\forall X4.(m1\_subset\_1\ X4\ (u1\_struct\_0\ X0)) \Rightarrow (((r1\_orders\_2\ X0\ X4\ X1) \wedge (r1\_orders\_2\ X0\ X4\ X2)) \Rightarrow (r1\_orders\_2\ X0\ X4\ X3)))))))))) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2\_struct\_0\ X0) \wedge ((v3\_orders\_2\ X0) \wedge (l1\_orders\_2\ X0))) \wedge ((m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \wedge (m1\_subset\_1\ X2\ (u1\_struct\_0\ X0)))) \Rightarrow (r3\_orders\_2\ X0\ X1\ X1) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2\_struct\_0\ X0) \wedge ((v3\_orders\_2\ X0) \wedge (l1\_orders\_2\ X0))) \wedge ((m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \wedge (m1\_subset\_1\ X2\ (u1\_struct\_0\ X0)))) \Rightarrow ((r3\_orders\_2\ X0\ X1\ X2) \Leftrightarrow (r1\_orders\_2\ X0\ X1\ X2)) \tag{3}$$

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.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l1\_orders\_2\ X0))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow((v5\_waybel\_6\ X1\ X0)\Leftrightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0))\Rightarrow(\neg(r1\_orders\_2\ X0\ (k11\_lattice3\ X0\ X2\ X3)\ X1)\wedge((\neg r1\_orders\_2\ X0\ X2\ X1)\wedge(\neg r1\_orders\_2\ X0\ X3\ X1)))))))) \tag{5}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l1\_orders\_2\ X0))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow((v2\_waybel\_6\ X1\ X0)\Leftrightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0))\Rightarrow(\neg(X1 = k11\_lattice3\ X0\ X2\ X3)\wedge((X2\neq X1)\wedge(X3\neq X1)))))))) \tag{6}$$

Assume the following.

$$\forall X0.(l1\_orders\_2\ X0)\Rightarrow((v1\_lattice3\ X0)\Rightarrow(\neg v2\_struct\_0\ X0)) \tag{7}$$

Theorem 1

$$\forall X0.((v3\_orders\_2\ X0)\wedge((v4\_orders\_2\ X0)\wedge((v5\_orders\_2\ X0)\wedge((v1\_lattice3\ X0)\wedge((v2\_lattice3\ X0)\wedge(l1\_orders\_2\ X0))))))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow((v5\_waybel\_6\ X1\ X0)\Rightarrow(v2\_waybel\_6\ X1\ X0)))$$