t87_waybel_1 (TMYumJ3crMHgspnPboma5vXnFNkacyXBtf1)

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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 $v3\_yellow\_0 : \iota \Rightarrow o$ be given. Let $l1\_orders\_2 : \iota \Rightarrow o$ be given. Let $v2\_waybel\_1 : \iota \Rightarrow o$ be given. Let $v10\_waybel\_1 : \iota \Rightarrow o$ 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 $k7\_waybel\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r6\_waybel\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r3\_orders\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k12\_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k13\_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((v3\_orders\_2\ X0) \wedge ((v4\_orders\_2\ X0) \wedge ((v5\_orders\_2\ X0) \wedge ((v1\_lattice3\ X0) \wedge ((v2\_lattice3\ X0) \wedge ((v3\_yellow\_0\ X0) \wedge (l1\_orders\_2\ X0)))))) \Rightarrow (((v9\_waybel\_1\ X0) \wedge (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (k7\_waybel\_1\ X0\ (k7\_waybel\_1\ X0\ X1) = X1))) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (r6\_waybel\_1\ X0\ X1\ (k7\_waybel\_1\ X0\ X1))))) \tag{1}$$

Assume the following.

$$\forall X0.((v3\_orders\_2\ X0) \wedge ((v4\_orders\_2\ X0) \wedge ((v5\_orders\_2\ X0) \wedge ((v1\_lattice3\ X0) \wedge ((v2\_lattice3\ X0) \wedge ((v3\_yellow\_0\ X0) \wedge (l1\_orders\_2\ X0)))))) \Rightarrow ((\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (\exists X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0)) \wedge (\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0)) \Rightarrow ((r3\_orders\_2\ X0\ (k12\_lattice3\ X0\ (k13\_lattice3\ X0\ X3\ X2)\ X1)\ X3) \wedge (r3\_orders\_2\ X0\ X3\ (k13\_lattice3\ X0\ (k12\_lattice3\ X0\ X3\ X1)\ X2)))))) \Rightarrow ((v9\_waybel\_1\ X0) \wedge (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (k7\_waybel\_1\ X0\ (k7\_waybel\_1\ X0\ X1) = X1)))) \tag{2}$$

Assume the following.

$$\forall X0.((v3\_orders\_2\ X0)\wedge((v4\_orders\_2\ X0)\wedge((v5\_orders\_2\ X0)\wedge((v1\_lattice3\ X0)\wedge((v2\_lattice3\ X0)\wedge((v3\_yellow\_0\ X0)\wedge(l1\_orders\_2\ X0)))))))\Rightarrow(((v2\_waybel\_1\ X0)\wedge(v10\_waybel\_1\ X0))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\exists X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\wedge(\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0))\Rightarrow((r3\_orders\_2\ X0\ (k12\_lattice3\ X0\ (k13\_lattice3\ X0\ X3\ X2)\ X1)\ X3)\wedge(r3\_orders\_2\ X0\ X3\ (k13\_lattice3\ X0\ (k12\_lattice3\ X0\ X3\ X1)\ X2))))))) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2\_struct\_0\ X0)\wedge(l1\_orders\_2\ X0))\wedge(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)))\Rightarrow(m1\_subset\_1\ (k7\_waybel\_1\ X0\ X1)\ (u1\_struct\_0\ X0)) \tag{4}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l1\_orders\_2\ X0))\Rightarrow((v10\_waybel\_1\ X0)\Leftrightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\exists X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\wedge(r6\_waybel\_1\ X0\ X1\ X2)))) \tag{5}$$

Assume the following.

$$\forall X0.(l1\_orders\_2\ X0)\Rightarrow(((\neg v2\_struct\_0\ X0)\wedge(v9\_waybel\_1\ X0))\Rightarrow((\neg v2\_struct\_0\ X0)\wedge(v2\_waybel\_1\ X0))) \tag{6}$$

Assume the following.

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

Theorem 1

$$\forall X0.((v3\_orders\_2\ X0)\wedge((v4\_orders\_2\ X0)\wedge((v5\_orders\_2\ X0)\wedge((v1\_lattice3\ X0)\wedge((v2\_lattice3\ X0)\wedge((v3\_yellow\_0\ X0)\wedge(l1\_orders\_2\ X0)))))))\Rightarrow((((v2\_waybel\_1\ X0)\wedge(v10\_waybel\_1\ X0))\Rightarrow((v9\_waybel\_1\ X0)\wedge(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(k7\_waybel\_1\ X0\ (k7\_waybel\_1\ X0\ X1) = X1))))\wedge(((v9\_waybel\_1\ X0)\wedge(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(k7\_waybel\_1\ X0\ (k7\_waybel\_1\ X0\ X1) = X1)))\Rightarrow((v2\_waybel\_1\ X0)\wedge(v10\_waybel\_1\ X0))))$$