t29_lattice4 (TMWn-mbC2UzLrykp2pVNxxBnyJExRUYLS1Dw)

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Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $v10\_lattices : \iota \Rightarrow o$ be given. Let $v17\_lattices : \iota \Rightarrow o$ be given. Let $l3\_lattices : \iota \Rightarrow o$ be given. Let $k7\_lattices : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6\_lattices : \iota \Rightarrow \iota$ be given. Let $k5\_lattices : \iota \Rightarrow \iota$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k3\_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v10\_lattices\ X0) \wedge ((v17\_lattices\ X0) \wedge (l3\_lattices\ X0)))) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0)) \Rightarrow (k7\_lattices\ X0\ (k3\_lattices\ X0\ X1\ X2) = k4\_lattices\ X0\ (k7\_lattices\ X0\ X1)\ (k7\_lattices\ X0\ X2)))) \tag{1}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v10\_lattices\ X0) \wedge ((v17\_lattices\ X0) \wedge (l3\_lattices\ X0)))) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (k3\_lattices\ X0\ (k7\_lattices\ X0\ X1)\ X1 = k6\_lattices\ X0)) \tag{2}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v10\_lattices\ X0) \wedge ((v17\_lattices\ X0) \wedge (l3\_lattices\ X0)))) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (k4\_lattices\ X0\ (k7\_lattices\ X0\ X1)\ X1 = k5\_lattices\ X0)) \tag{3}$$

Assume the following.

$$\forall X0.\exists X1.m1\_subset\_1\ X1\ X0 \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2\_struct\_0\ X0) \wedge (l3\_lattices\ X0)) \wedge (m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))) \Rightarrow (m1\_subset\_1\ (k7\_lattices\ X0\ X1)\ (u1\_struct\_0\ X0)) \tag{5}$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v10\_lattices\ X0)\wedge((v17\_lattices\ X0)\wedge(l3\_lattices\ X0))))\Rightarrow(k7\_lattices\ X0\ (k6\_lattices\ X0) = k5\_lattices\ X0)$$