

l85_rbsub_2

(TMS73ZWHWkVmxS7yvp7mi7vRTqvtJURQff)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v10_lattices : \iota \Rightarrow o$ be given. Let $l3_lattices : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k4_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_lattices : \iota \Rightarrow \iota$ be given. Let $v6_lattices : \iota \Rightarrow o$ be given. Let $l1_lattices : \iota \Rightarrow o$ be given. Let $k2_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v13_lattices : \iota \Rightarrow o$ be given. Let $l2_lattices : \iota \Rightarrow o$ be given. Let $v4_lattices : \iota \Rightarrow o$ be given. Let $v5_lattices : \iota \Rightarrow o$ be given. Let $v7_lattices : \iota \Rightarrow o$ be given. Let $v8_lattices : \iota \Rightarrow o$ be given. Let $v9_lattices : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. (&((\neg v2_struct_0 X0) \wedge ((v6_lattices \\ &X0) \wedge (l1_lattices X0))) \wedge ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge (\\ &m1_subset_1 X2 (u1_struct_0 X0)))) \Rightarrow (k4_lattices X0 X1 X2 = k2_lattices \\ &X0 X1 X2) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (&((\neg v2_struct_0 X0) \wedge ((v10_lattices X0) \wedge \\ &((v13_lattices X0) \wedge (l3_lattices X0)))) \wedge (m1_subset_1 X1 (u1_struct_0 \\ &X0))) \Rightarrow (k4_lattices X0 (k5_lattices X0) X1 = k5_lattices X0) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0. (l3_lattices X0) \Rightarrow ((l1_lattices X0) \wedge (l2_lattices X0)) \tag{3}$$

Assume the following.

$$\forall X0. ((\neg v2_struct_0 X0) \wedge (l1_lattices X0)) \Rightarrow (m1_subset_1 (k5_lattices X0) (u1_struct_0 X0)) \tag{4}$$

Assume the following.

$$\begin{aligned} \forall X0. (&((\neg v2_struct_0 X0) \wedge (l1_lattices X0)) \Rightarrow ((v13_lattices \\ &X0) \Leftrightarrow (\exists X1. (m1_subset_1 X1 (u1_struct_0 X0)) \wedge (\forall X2. \\ &(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow ((k2_lattices X0 X1 X2 = X1) \wedge \\ &(k2_lattices X0 X2 X1 = X1))))) \end{aligned} \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0)\wedge(v6_lattices X0)\wedge(l1_lattices X0))\wedge((m1_subset_1 X1 (u1_struct_0 X0))\wedge(m1_subset_1 X2 (u1_struct_0 X0))))\Rightarrow(k4_lattices X0 X1 X2 = k4_lattices X0 X2 X1) \quad (6)$$

Assume the following.

$$\forall X0.(l3_lattices X0)\Rightarrow(((\neg v2_struct_0 X0)\wedge(v10_lattices X0))\Rightarrow((\neg v2_struct_0 X0)\wedge((v4_lattices X0)\wedge((v5_lattices X0)\wedge((v6_lattices X0)\wedge((v7_lattices X0)\wedge((v8_lattices X0)\wedge(v9_lattices X0)))))))) \quad (7)$$

Theorem 1

$$\forall X0.((\neg v2_struct_0 X0)\wedge((v10_lattices X0)\wedge(l3_lattices X0)))\Rightarrow(\forall X1.(m1_subset_1 X1 (u1_struct_0 X0))\Rightarrow((\forall X2.(m1_subset_1 X2 (u1_struct_0 X0))\Rightarrow(k4_lattices X0 X2 X1 = X1))\Rightarrow(X1 = k5_lattices X0)))$$