

l84_rlsb_2
(TMSjtV9ySnSBgLgn72ambn8MQZjgHqrMiFc)

October 27, 2020

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 $r2_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_lattices : \iota \Rightarrow \iota$ 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 $v4_lattices : \iota \Rightarrow o$ be given. Let $l2_lattices : \iota \Rightarrow o$ be given. Let $k1_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge (v4_lattices \\ & X0) \wedge (l2_lattices X0))) \wedge ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge (\\ & m1_subset_1 X2 (u1_struct_0 X0))) \Rightarrow (k3_lattices X0 X1 X2 = k1_lattices \\ & X0 X1 X2) \end{aligned} \tag{2}$$

Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge (l3_lattices X0)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. (m1_subset_1 X2 \\ & (u1_struct_0 X0)) \Rightarrow ((r2_lattices X0 X1 X2) \Leftrightarrow ((k1_lattices X0 X1 \\ & X2 = k6_lattices X0) \wedge ((k1_lattices X0 X2 X1 = k6_lattices X0) \wedge (\\ & k2_lattices X0 X1 X2 = k5_lattices X0) \wedge (k2_lattices X0 X2 X1 = k5_lattices \\ & X0)))))) \end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0)\wedge(v6_lattices \\ X0)\wedge(l1_lattices X0))\wedge((m1_subset_1 X1 (u1_struct_0 X0))\wedge(\\ m1_subset_1 X2 (u1_struct_0 X0))))\Rightarrow(k4_lattices X0 X1 X2 = k4_lattices \\ X0 X2 X1) \end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0)\wedge(v4_lattices \\ X0)\wedge(l2_lattices X0))\wedge((m1_subset_1 X1 (u1_struct_0 X0))\wedge(\\ m1_subset_1 X2 (u1_struct_0 X0))))\Rightarrow(k3_lattices X0 X1 X2 = k3_lattices \\ X0 X2 X1) \end{aligned} \tag{6}$$

Assume the following.

$$\begin{aligned} \forall X0.(l3_lattices X0)\Rightarrow(((\neg v2_struct_0 X0)\wedge(v10_lattices \\ X0))\Rightarrow((\neg v2_struct_0 X0)\wedge((v4_lattices X0)\wedge((v5_lattices X0)\wedge \\ ((v6_lattices X0)\wedge((v7_lattices X0)\wedge((v8_lattices X0)\wedge(v9_lattices \\ X0)))))))) \end{aligned} \tag{7}$$

Theorem 1

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0)\wedge((v10_lattices X0)\wedge(l3_lattices \\ X0)))\Rightarrow(\forall X1.(m1_subset_1 X1 (u1_struct_0 X0))\Rightarrow(\forall X2. \\ (m1_subset_1 X2 (u1_struct_0 X0))\Rightarrow((r2_lattices X0 X1 X2)\Leftrightarrow((k3_lattices \\ X0 X1 X2 = k6_lattices X0)\wedge(k4_lattices X0 X1 X2 = k5_lattices X0)))))) \end{aligned}$$