

t13_sheffer1

(TMdRfmtsSunRg6TE8eSYS5d3QU318Vfd8AZ)

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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 $v1_sheffer1 : \iota \Rightarrow o$ be given. Let $v8_lattices : \iota \Rightarrow o$ be given. Let $v9_lattices : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $r1_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v14_lattices : \iota \Rightarrow o$ be given. Let $r3_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_lattices : \iota \Rightarrow \iota$ be given. Let $v6_lattices : \iota \Rightarrow o$ be given. Let $l1_lattices : \iota \Rightarrow o$ be given. Let $k4_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l2_lattices : \iota \Rightarrow o$ be given. Let $v11_lattices : \iota \Rightarrow o$ be given. Let $v15_lattices : \iota \Rightarrow o$ be given. Let $v16_lattices : \iota \Rightarrow o$ be given. Let $v13_lattices : \iota \Rightarrow o$ 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. Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v8_lattices X0) \wedge ((v9_lattices \\ X0) \wedge (l3_lattices X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow ((r1_lattices \\ X0 X1 X2) \Leftrightarrow (k2_lattices X0 X1 X2 = X1)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v10_lattices X0) \wedge ((v14_lattices \\ X0) \wedge (l3_lattices X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ X0)) \Rightarrow (r3_lattices X0 X1 (k6_lattices X0))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge ((v6_lattices \\ X0) \wedge ((v8_lattices X0) \wedge ((v9_lattices X0) \wedge (l3_lattices X0)))) \wedge \\ ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge (m1_subset_1 X2 (u1_struct_0 \\ X0)))) \Rightarrow ((r3_lattices X0 X1 X2) \Leftrightarrow (r1_lattices X0 X1 X2)) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0)\wedge(v6_lattices X0)\wedge(l1_lattices X0)))\wedge((m1_subset_1 X1 (u1_struct_0 X0))\wedge(m1_subset_1 X2 (u1_struct_0 X0)))\Rightarrow(k4_lattices X0 X1 X2 = k2_lattices X0 X1 X2) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2_struct_0 X0)\wedge(v10_lattices X0)\wedge((v14_lattices X0)\wedge(l3_lattices X0))))\wedge(m1_subset_1 X1 (u1_struct_0 X0))\Rightarrow(k4_lattices X0 (k6_lattices X0) X1 = X1) \quad (5)$$

Assume the following.

$$\forall X0.(l3_lattices X0)\Rightarrow((l1_lattices X0)\wedge(l2_lattices X0)) \quad (6)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0)\wedge(l2_lattices X0))\Rightarrow(m1_subset_1 (k6_lattices X0) (u1_struct_0 X0)) \quad (7)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0)\wedge(l3_lattices X0))\Rightarrow((v1_shef_fer1 X0)\Leftrightarrow(\exists X1.(m1_subset_1 X1 (u1_struct_0 X0))\wedge(\forall X2.(m1_subset_1 X2 (u1_struct_0 X0))\Rightarrow((k2_lattices X0 X1 X2 = X2)\wedge(k2_lattices X0 X2 X1 = X2)))))) \quad (8)$$

Assume the following.

$$\forall X0.(l3_lattices X0)\Rightarrow(((\neg v2_struct_0 X0)\wedge(v17_lattices X0))\Rightarrow((\neg v2_struct_0 X0)\wedge((v11_lattices X0)\wedge((v15_lattices X0)\wedge(v16_lattices X0)))))) \quad (9)$$

Assume the following.

$$\forall X0.(l3_lattices X0)\Rightarrow(((\neg v2_struct_0 X0)\wedge(v15_lattices X0))\Rightarrow((\neg v2_struct_0 X0)\wedge((v13_lattices X0)\wedge(v14_lattices X0)))) \quad (10)$$

Assume the following.

$$\forall X0.(l3_lattices X0)\Rightarrow(((\neg v2_struct_0 X0)\wedge(v10_lattices X0))\Rightarrow((\neg v2_struct_0 X0)\wedge((v4_lattices X0)\wedge((v5_lattices X0)\wedge((v6_lattices X0)\wedge((v7_lattices X0)\wedge((v8_lattices X0)\wedge(v9_lattices X0)))))))))) \quad (11)$$

Theorem 1

$$\forall X0.((\neg v2_struct_0 X0)\wedge((v10_lattices X0)\wedge((v17_lattices X0)\wedge(l3_lattices X0))))\Rightarrow(v1_shef_fer1 X0)$$