

t35_sheffer1 (TM- RKTP2mpNPWpnamfFBRWHNowkMmVrQXjfK)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v9_sheffer1 : \iota \Rightarrow o$ be given. Let $v10_sheffer1 : \iota \Rightarrow o$ be given. Let $v11_sheffer1 : \iota \Rightarrow o$ be given. Let $v12_sheffer1 : \iota \Rightarrow o$ be given. Let $l3_sheffer1 : \iota \Rightarrow o$ be given. Let $v11_lattices : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k5_sheffer1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l4_robbins1 : \iota \Rightarrow o$ be given. Let $l2_robbins1 : \iota \Rightarrow o$ be given. Let $l3_lattices : \iota \Rightarrow o$ be given. Let $l1_sheffer1 : \iota \Rightarrow o$ be given. Let $l2_lattices : \iota \Rightarrow o$ be given. Let $l1_robbins1 : \iota \Rightarrow o$ be given. Let $k3_robbins1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v9_sheffer1 X0) \wedge ((v10_sheffer1 \\ & X0) \wedge ((v11_sheffer1 X0) \wedge ((v12_sheffer1 X0) \wedge (l3_sheffer1 X0)))))) \Rightarrow \\ & (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 \\ & X2 (u1_struct_0 X0)) \Rightarrow (k5_sheffer1 X0 X1 X2 = k5_sheffer1 X0 X2 X1))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.(l4_robbins1 X0) \Rightarrow ((l2_robbins1 X0) \wedge (l3_lattices X0)) \quad (2)$$

Assume the following.

$$\forall X0.(l3_sheffer1 X0) \Rightarrow ((l1_sheffer1 X0) \wedge (l4_robbins1 X0)) \quad (3)$$

Assume the following.

$$\forall X0.(l2_robbins1 X0) \Rightarrow ((l2_lattices X0) \wedge (l1_robbins1 X0)) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0) \wedge (l1_sheffer1 \\ & X0)) \wedge ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge (m1_subset_1 X2 (u1_struct_0 \\ & X0)))) \Rightarrow (m1_subset_1 (k5_sheffer1 X0 X1 X2) (u1_struct_0 X0)) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2_struct_0 X0)\wedge(l1_robbins1 X0))\wedge(m1_subset_1 X1 (u1_struct_0 X0)))\Rightarrow(m1_subset_1 (k3_robbins1 X0 X1) (u1_struct_0 X0)) \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0)\wedge(l1_sheffer1 X0))\Rightarrow((v12_sheffer1 X0)\Leftrightarrow(\forall X1.(m1_subset_1 X1 (u1_struct_0 X0))\Rightarrow(\forall X2. \\ (m1_subset_1 X2 (u1_struct_0 X0))\Rightarrow(\forall X3.(m1_subset_1 X3 \\ (u1_struct_0 X0))\Rightarrow(k5_sheffer1 X0 (k5_sheffer1 X0 X1 (k5_sheffer1 \\ X0 X2 X3)) (k5_sheffer1 X0 X1 (k5_sheffer1 X0 X2 X3)) = k5_sheffer1 \\ X0 (k5_sheffer1 X0 (k5_sheffer1 X0 X2 X2) X1) (k5_sheffer1 X0 (k5_sheffer1 \\ X0 X3 X3) X1)))))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0)\wedge(l1_sheffer1 X0))\Rightarrow((v10_sheffer1 X0)\Leftrightarrow(\forall X1.(m1_subset_1 X1 (u1_struct_0 X0))\Rightarrow(k5_sheffer1 X0 (k5_sheffer1 X0 X1 X1) (k5_sheffer1 X0 X1 X1) = X1))) \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0)\wedge(l3_sheffer1 X0))\Rightarrow((v9_sheffer1 X0)\Leftrightarrow((\forall X1.(m1_subset_1 X1 (u1_struct_0 X0))\Rightarrow(k5_sheffer1 \\ X0 X1 X1 = k3_robbins1 X0 X1))\wedge((\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ X0))\Rightarrow(\forall X2.(m1_subset_1 X2 (u1_struct_0 X0))\Rightarrow(k1_lattices \\ X0 X1 X2 = k5_sheffer1 X0 (k5_sheffer1 X0 X1 X1) (k5_sheffer1 X0 X2 \\ X2))))\wedge((\forall X1.(m1_subset_1 X1 (u1_struct_0 X0))\Rightarrow(\forall X2. \\ (m1_subset_1 X2 (u1_struct_0 X0))\Rightarrow(k2_lattices X0 X1 X2 = k5_sheffer1 \\ X0 (k5_sheffer1 X0 X1 X2) (k5_sheffer1 X0 X1 X2))))\wedge(\forall X1. \\ (m1_subset_1 X1 (u1_struct_0 X0))\Rightarrow(\forall X2.(m1_subset_1 X2 \\ (u1_struct_0 X0))\Rightarrow(k5_sheffer1 X0 X1 X2 = k1_lattices X0 (k3_robbins1 \\ X0 X1) (k3_robbins1 X0 X2)))))))))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0)\wedge(l3_lattices X0))\Rightarrow((v11_lattices X0)\Leftrightarrow(\forall X1.(m1_subset_1 X1 (u1_struct_0 X0))\Rightarrow(\forall X2. \\ (m1_subset_1 X2 (u1_struct_0 X0))\Rightarrow(\forall X3.(m1_subset_1 X3 \\ (u1_struct_0 X0))\Rightarrow(k2_lattices X0 X1 (k1_lattices X0 X2 X3) = k1_lattices \\ X0 (k2_lattices X0 X1 X2) (k2_lattices X0 X1 X3)))))) \end{aligned} \quad (10)$$

Theorem 1

$$\forall X0.((\neg v2_struct_0 X0)\wedge((v9_sheffer1 X0)\wedge((v10_sheffer1 X0)\wedge((v11_sheffer1 X0)\wedge((v12_sheffer1 X0)\wedge(l3_sheffer1 X0))))))\Rightarrow(v11_lattices X0)$$