

t27_sheffer1
(TMKgL59HWKqKE5UE68hPJVfL9QNdgZonLJs)

October 27, 2020

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 $v8_robbins1 : \iota \Rightarrow o$ be given. Let $v9_sheffer1 : \iota \Rightarrow o$ be given. Let $l3_sheffer1 : \iota \Rightarrow o$ be given. Let $v11_sheffer1 : \iota \Rightarrow o$ be given. Let $v4_lattices : \iota \Rightarrow o$ be given. Let $v5_lattices : \iota \Rightarrow o$ be given. Let $v6_robbins1 : \iota \Rightarrow o$ be given. Let $l2_robbins1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k6_robbins1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_robbins1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_robbins1 : \iota \Rightarrow \iota$ be given. Let $k5_robbins1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_robbins1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l4_robbins1 : \iota \Rightarrow o$ 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 $k5_sheffer1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v6_lattices : \iota \Rightarrow o$ be given. Let $v11_lattices : \iota \Rightarrow o$ be given. Let $v1_sheffer1 : \iota \Rightarrow o$ be given. Let $v2_sheffer1 : \iota \Rightarrow o$ be given. Let $v3_sheffer1 : \iota \Rightarrow o$ be given. Let $v4_sheffer1 : \iota \Rightarrow o$ 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.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v4_lattices X0) \wedge ((v5_lattices \\ & X0) \wedge ((v6_robbins1 X0) \wedge (l2_robbins1 X0)))))) \Rightarrow (\forall X1. (m1_subset_1 \\ & X1 (u1_struct_0 X0)) \Rightarrow (k6_robbins1 X0 X1 (k3_robbins1 X0 X1) = k7_robbins1 \\ & X0)) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v4_lattices X0) \wedge ((v5_lattices \\ & X0) \wedge ((v6_robbins1 X0) \wedge (l2_robbins1 X0)))))) \Rightarrow (\forall X1. (m1_subset_1 \\ & X1 (u1_struct_0 X0)) \Rightarrow (k5_robbins1 X0 X1 (k7_robbins1 X0) = X1)) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge ((v4_lattices \\ & X0) \wedge ((v5_lattices X0) \wedge (l2_robbins1 X0)))) \wedge ((m1_subset_1 X1 \\ & (u1_struct_0 X0)) \wedge (m1_subset_1 X2 (u1_struct_0 X0)))) \Rightarrow (k6_robbins1 \\ & X0 X1 X2 = k4_robbins1 X0 X1 X2) \end{aligned} \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0)\wedge(v4_lattices X0)\wedge(l2_robbins1 X0)))\wedge((m1_subset_1 X1 (u1_struct_0 X0))\wedge(m1_subset_1 X2 (u1_struct_0 X0)))\Rightarrow(k5_robbins1 X0 X1 X2 = k1_lattices X0 X1 X2) \quad (4)$$

Assume the following.

$$\forall X0.(l4_robbins1 X0)\Rightarrow((l2_robbins1 X0)\wedge(l3_lattices X0)) \quad (5)$$

Assume the following.

$$\forall X0.(l3_sheffer1 X0)\Rightarrow((l1_sheffer1 X0)\wedge(l4_robbins1 X0)) \quad (6)$$

Assume the following.

$$\forall X0.(l2_robbins1 X0)\Rightarrow((l2_lattices X0)\wedge(l1_robbins1 X0)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0)\wedge(l1_sheffer1 X0))\wedge((m1_subset_1 X1 (u1_struct_0 X0))\wedge(m1_subset_1 X2 (u1_struct_0 X0))))\Rightarrow(m1_subset_1 (k5_sheffer1 X0 X1 X2) (u1_struct_0 X0)) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2_struct_0 X0)\wedge(l1_robbins1 X0))\wedge(m1_subset_1 X1 (u1_struct_0 X0)))\Rightarrow(m1_subset_1 (k3_robbins1 X0 X1) (u1_struct_0 X0)) \quad (9)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0)\wedge(l2_robbins1 X0))\Rightarrow(\forall X1.(m1_subset_1 X1 (u1_struct_0 X0))\Rightarrow(\forall X2.(m1_subset_1 X2 (u1_struct_0 X0))\Rightarrow(k4_robbins1 X0 X1 X2 = k3_robbins1 X0 (k1_lattices X0 (k3_robbins1 X0 X1) (k3_robbins1 X0 X2)))))) \quad (10)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0)\wedge(l1_sheffer1 X0))\Rightarrow((v11_sheffer1 X0)\Leftrightarrow(\forall X1.(m1_subset_1 X1 (u1_struct_0 X0))\Rightarrow(\forall X2.(m1_subset_1 X2 (u1_struct_0 X0))\Rightarrow(k5_sheffer1 X0 X1 (k5_sheffer1 X0 X2 (k5_sheffer1 X0 X2 X2)) = k5_sheffer1 X0 X1 X1)))) \quad (11)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge (l3_sheffer1 X0)) \Rightarrow ((v9_sheffer1 \\
& X0) \Leftrightarrow ((\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (k5_sheffer1 \\
& X0 X1 X1 = k3_robbins1 X0 X1)) \wedge ((\forall X1.(m1_subset_1 X1 (u1_struct_0 \\
& X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (k1_lattices \\
& X0 X1 X2 = k5_sheffer1 X0 (k5_sheffer1 X0 X1 X1) (k5_sheffer1 X0 X2 \\
& X2)))) \wedge ((\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\
& (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (k2_lattices X0 X1 X2 = k5_sheffer1 \\
& X0 (k5_sheffer1 X0 X1 X2) (k5_sheffer1 X0 X1 X2)))) \wedge (\forall X1. \\
& (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 \\
& (u1_struct_0 X0)) \Rightarrow (k5_sheffer1 X0 X1 X2 = k1_lattices X0 (k3_robbins1 \\
& X0 X1) (k3_robbins1 X0 X2)))))))))
\end{aligned} \tag{12}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(l4_robbins1 X0) \Rightarrow (((\neg v2_struct_0 X0) \wedge ((v10_lattices \\
& X0) \wedge ((v17_lattices X0) \wedge (v8_robbins1 X0)))) \Rightarrow ((\neg v2_struct_0 \\
& X0) \wedge ((v10_lattices X0) \wedge ((v6_robbins1 X0) \wedge (v8_robbins1 X0))))))
\end{aligned} \tag{13}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(l3_lattices X0) \Rightarrow (((\neg v2_struct_0 X0) \wedge ((v10_lattices \\
& X0) \wedge (v17_lattices X0))) \Rightarrow ((\neg v2_struct_0 X0) \wedge ((v4_lattices X0) \wedge \\
& ((v6_lattices X0) \wedge ((v11_lattices X0) \wedge ((v1_sheffer1 X0) \wedge ((v2_sheffer1 \\
& X0) \wedge ((v3_sheffer1 X0) \wedge (v4_sheffer1 X0))))))))))
\end{aligned} \tag{14}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(l3_lattices X0) \Rightarrow (((\neg v2_struct_0 X0) \wedge (v10_lattices \\
& X0)) \Rightarrow ((\neg v2_struct_0 X0) \wedge ((v4_lattices X0) \wedge ((v5_lattices X0) \wedge \\
& ((v6_lattices X0) \wedge ((v7_lattices X0) \wedge ((v8_lattices X0) \wedge (v9_lattices \\
& X0))))))))))
\end{aligned} \tag{15}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v10_lattices X0) \wedge ((v17_lattices \\
& X0) \wedge ((v8_robbins1 X0) \wedge ((v9_sheffer1 X0) \wedge (l3_sheffer1 X0)))))) \Rightarrow \\
& (v11_sheffer1 X0)
\end{aligned}$$