

t34\_sheffer1 (TMK-  
tfhF66DmemX973A1VX5nVHUWtYuKrpQm)

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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  $v6\_lattices : \iota \Rightarrow o$  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  $l1\_lattices : \iota \Rightarrow o$  be given. Let  $l2\_lattices : \iota \Rightarrow o$  be given. Let  $k2\_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_robbins1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  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.

$$\forall X0.(l3\_lattices X0) \Rightarrow ((l1\_lattices X0) \wedge (l2\_lattices X0)) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge (l1\_lattices X0)) \Rightarrow ((v6\_lattices \\ & X0) \Leftrightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2. \\ & (m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (k2\_lattices X0 X1 X2 = k2\_lattices \\ & X0 X2 X1)))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2\_struct\_0 X0) \wedge (l3\_sheffer1 X0)) \Rightarrow ((v9\_sheffer1 \\
& X0) \Leftrightarrow ((\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (k5\_sheffer1 \\
& X0 X1 X1 = k3\_robbins1 X0 X1)) \wedge ((\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 \\
& X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (k1\_lattices \\
& X0 X1 X2 = k5\_sheffer1 X0 (k5\_sheffer1 X0 X1 X1) (k5\_sheffer1 X0 X2 \\
& X2)))) \wedge ((\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2. \\
& (m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (k2\_lattices X0 X1 X2 = k5\_sheffer1 \\
& X0 (k5\_sheffer1 X0 X1 X2) (k5\_sheffer1 X0 X1 X2)))) \wedge (\forall X1. \\
& (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 \\
& (u1\_struct\_0 X0)) \Rightarrow (k5\_sheffer1 X0 X1 X2 = k1\_lattices X0 (k3\_robbins1 \\
& X0 X1) (k3\_robbins1 X0 X2)))))))))
\end{aligned} \tag{6}$$

**Theorem 1**

$$\begin{aligned}
& \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v9\_sheffer1 X0) \wedge ((v10\_sheffer1 \\
& X0) \wedge ((v11\_sheffer1 X0) \wedge ((v12\_sheffer1 X0) \wedge (l3\_sheffer1 X0)))))) \Rightarrow \\
& (v6\_lattices X0)
\end{aligned}$$