

t24\_sheffer1  
(TMdFZ4qGDICKfixEEi8z8Rf3xebEDFJbFDR)

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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  $v1\_sheffer1 : \iota \Rightarrow o$  be given. Let  $v2\_sheffer1 : \iota \Rightarrow o$  be given. Let  $v3\_sheffer1 : \iota \Rightarrow o$  be given. Let  $l3\_lattices : \iota \Rightarrow o$  be given. Let  $v4\_sheffer1 : \iota \Rightarrow o$  be given. Let  $v11\_lattices : \iota \Rightarrow o$  be given. Let  $v13\_lattices : \iota \Rightarrow o$  be given. Let  $v14\_lattices : \iota \Rightarrow o$  be given. Let  $v16\_lattices : \iota \Rightarrow o$  be given. Let  $k5\_lattices : \iota \Rightarrow \iota$  be given. Let  $k2\_sheffer1 : \iota \Rightarrow \iota$  be given. Let  $k6\_lattices : \iota \Rightarrow \iota$  be given. Let  $k1\_sheffer1 : \iota \Rightarrow \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $r1\_sheffer1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  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. Let  $r2\_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v15\_lattices : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} \forall X0. (&(\neg v2\_struct\_0 X0) \wedge ((v10\_lattices X0) \wedge ((v11\_lattices \\ X0) \wedge &((v13\_lattices X0) \wedge ((v14\_lattices X0) \wedge ((v16\_lattices X0) \wedge \\ ((v17\_lattices &X0) \wedge ((v3\_sheffer1 X0) \wedge (l3\_lattices X0)))))))))) \Rightarrow \\ &(k5\_lattices X0 = k2\_sheffer1 X0) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. (&(\neg v2\_struct\_0 X0) \wedge ((v10\_lattices X0) \wedge ((v17\_lattices \\ X0) \wedge &((v3\_sheffer1 X0) \wedge (l3\_lattices X0)))))) \Rightarrow (k6\_lattices X0 = \\ &k1\_sheffer1 X0) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. (&(\neg v2\_struct\_0 X0) \wedge (l3\_lattices X0)) \Rightarrow ((v4\_sheffer1 \\ X0) \Leftrightarrow &(\forall X1. (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\exists X2. \\ (m1\_subset\_1 &X2 (u1\_struct\_0 X0)) \wedge (r1\_sheffer1 X0 X2 X1)))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge (l3\_lattices X0)) \Rightarrow (\forall X1. \\ & (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 \\ & (u1\_struct\_0 X0)) \Rightarrow ((r1\_sheffer1 X0 X1 X2) \Leftrightarrow ((k1\_lattices X0 X2 \\ & X1 = k1\_sheffer1 X0) \wedge ((k1\_lattices X0 X1 X2 = k1\_sheffer1 X0) \wedge (( \\ & k2\_lattices X0 X2 X1 = k2\_sheffer1 X0) \wedge (k2\_lattices X0 X1 X2 = k2\_sheffer1 \\ & X0)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge (l3\_lattices X0)) \Rightarrow ((v16\_lattices \\ & X0) \Leftrightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\exists X2. \\ & (m1\_subset\_1 X2 (u1\_struct\_0 X0)) \wedge (r2\_lattices X0 X2 X1)))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge (l3\_lattices X0)) \Rightarrow (\forall X1. \\ & (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 \\ & (u1\_struct\_0 X0)) \Rightarrow ((r2\_lattices X0 X1 X2) \Leftrightarrow ((k1\_lattices X0 X1 \\ & X2 = k6\_lattices X0) \wedge ((k1\_lattices X0 X2 X1 = k6\_lattices X0) \wedge (( \\ & k2\_lattices X0 X1 X2 = k5\_lattices X0) \wedge (k2\_lattices X0 X2 X1 = k5\_lattices \\ & X0)))))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.(l3\_lattices X0) \Rightarrow (((\neg v2\_struct\_0 X0) \wedge (v17\_lattices \\ & X0)) \Rightarrow ((\neg v2\_struct\_0 X0) \wedge ((v11\_lattices X0) \wedge ((v15\_lattices \\ & X0) \wedge (v16\_lattices X0)))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.(l3\_lattices X0) \Rightarrow (((\neg v2\_struct\_0 X0) \wedge (v15\_lattices \\ & X0)) \Rightarrow ((\neg v2\_struct\_0 X0) \wedge ((v13\_lattices X0) \wedge (v14\_lattices X0)))) \end{aligned} \quad (8)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v10\_lattices X0) \wedge ((v17\_lattices \\ & X0) \wedge ((v1\_sheffer1 X0) \wedge ((v2\_sheffer1 X0) \wedge ((v3\_sheffer1 X0) \wedge \\ & (l3\_lattices X0)))))) \Rightarrow (v4\_sheffer1 X0) \end{aligned}$$