# t22_sheffer1 (TMHW2Net1T6UDwnjP5JzQWtQk3r6isdFQ1P)

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Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $v4\_lattices : \iota \Rightarrow o$ be given. Let $v6\_lattices : \iota \Rightarrow o$ be given. Let $v11\_lattices : \iota \Rightarrow o$ be given. Let $v7\_robbins1 : \iota \Rightarrow o$ 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 $l3\_lattices : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $r1\_sheffer1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2\_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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 $k1\_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v4\_lattices\ X0) \wedge ((v6\_lattices\ X0) \wedge ((v11\_lattices\ X0) \wedge ((v7\_robbins1\ X0) \wedge ((v1\_sheffer1\ X0) \wedge ((v2\_sheffer1\ X0) \wedge ((v3\_sheffer1\ X0) \wedge ((v4\_sheffer1\ X0) \wedge (l3\_lattices\ X0))))))))) \Rightarrow (k5\_lattices\ X0 = k2\_sheffer1\ X0) \tag{1}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v4\_lattices\ X0) \wedge ((v6\_lattices\ X0) \wedge ((v11\_lattices\ X0) \wedge ((v7\_robbins1\ X0) \wedge ((v1\_sheffer1\ X0) \wedge ((v2\_sheffer1\ X0) \wedge ((v3\_sheffer1\ X0) \wedge ((v4\_sheffer1\ X0) \wedge (l3\_lattices\ X0))))))))) \Rightarrow (k6\_lattices\ X0 = k1\_sheffer1\ X0) \tag{2}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge (l3\_lattices\ X0)) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0)) \Rightarrow ((r1\_sheffer1\ X0\ X1\ X2) \Leftrightarrow ((k1\_lattices\ X0\ X2\ X1 = k1\_sheffer1\ X0) \wedge ((k1\_lattices\ X0\ X1\ X2 = k1\_sheffer1\ X0) \wedge ((k2\_lattices\ X0\ X2\ X1 = k2\_sheffer1\ X0) \wedge (k2\_lattices\ X0\ X1\ X2 = k2\_sheffer1\ X0)))))))) \tag{3}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l3\_lattices\ X0))\Rightarrow(\forall X1.\ (m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow((r2\_lattices\ X0\ X1\ X2)\Leftrightarrow((k1\_lattices\ X0\ X1\ X2 = k6\_lattices\ X0)\wedge((k1\_lattices\ X0\ X2\ X1 = k6\_lattices\ X0)\wedge(( k2\_lattices\ X0\ X1\ X2 = k5\_lattices\ X0)\wedge(k2\_lattices\ X0\ X2\ X1 = k5\_lattices\ X0)))))))) \tag{4}$$

**Theorem 1**

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v4\_lattices\ X0)\wedge((v6\_lattices\ X0)\wedge((v11\_lattices\ X0)\wedge((v7\_robbins1\ X0)\wedge((v1\_sheffer1\ X0)\wedge((v2\_sheffer1\ X0)\wedge((v3\_sheffer1\ X0)\wedge((v4\_sheffer1\ X0)\wedge(l3\_lattices\ X0)))))))))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow((r1\_sheffer1\ X0\ X1\ X2)\Leftrightarrow(r2\_lattices\ X0\ X1\ X2))))$$