

## t143\_sheffer2

(TMZuxXHs9KnZrG1ny8CKPdkSQM6WMsc29pC)

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  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  $l1\_sheffer1 : \iota \Rightarrow o$  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. Assume the following.

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v10\_sheffer1 X0) \wedge ((v11\_sheffer1 \\ X0) \wedge ((v12\_sheffer1 X0) \wedge (l1\_sheffer1 X0)))))) \Rightarrow (\forall X1.(m1\_subset\_1 \\ X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 \\ X0)) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 X0)) \Rightarrow (k5\_sheffer1 \\ X0 (k5\_sheffer1 X0 X1 (k5\_sheffer1 X0 (k5\_sheffer1 X0 X3 X3) X2)) \\ X2 = k5\_sheffer1 X0 X2 (k5\_sheffer1 X0 X3 X1)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge (l1\_sheffer1 X0)) \Rightarrow ((v11\_sheffer1 \\ X0) \Leftrightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2. \\ (m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (k5\_sheffer1 X0 X1 (k5\_sheffer1 \\ X0 X2 (k5\_sheffer1 X0 X2 X2)) = k5\_sheffer1 X0 X1 X1)))) \end{aligned} \quad (2)$$

### Theorem 1

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v10\_sheffer1 X0) \wedge ((v11\_sheffer1 \\ X0) \wedge ((v12\_sheffer1 X0) \wedge (l1\_sheffer1 X0)))))) \Rightarrow (\forall X1.(m1\_subset\_1 \\ X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 \\ X0)) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 X0)) \Rightarrow (\forall X4. \\ (m1\_subset\_1 X4 (u1\_struct\_0 X0)) \Rightarrow (k5\_sheffer1 X0 X2 (k5\_sheffer1 \\ X0 X4 X1) = k5\_sheffer1 X0 (k5\_sheffer1 X0 X1 (k5\_sheffer1 X0 (k5\_sheffer1 \\ X0 X4 (k5\_sheffer1 X0 X3 (k5\_sheffer1 X0 X3 X3))) X2)) X2)))))) \end{aligned}$$