

## t98\_sheffer2

(TMcwrJuhug8gGmhP6uEZsfqzSS7n7WQAb9v)

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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.

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

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge (l1\_sheffer1 X0)) \Rightarrow ((v12\_sheffer1 \\ & X0) \Leftrightarrow (\forall X1. (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2. \\ & (m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3. (m1\_subset\_1 X3 \\ & (u1\_struct\_0 X0)) \Rightarrow (k5\_sheffer1 X0 (k5\_sheffer1 X0 X1 (k5\_sheffer1 \\ & X0 X2 X3)) (k5\_sheffer1 X0 X1 (k5\_sheffer1 X0 X2 X3)) = k5\_sheffer1 \\ & X0 (k5\_sheffer1 X0 (k5\_sheffer1 X0 X2 X2) X1) (k5\_sheffer1 X0 (k5\_sheffer1 \\ & X0 X3 X3) X1)))))) \end{aligned} \quad (2)$$

### Theorem 1

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