

# t115\_sheffer2

## (TMEwa7x2riPwCJwwAowdoeATMWpAtF7zdpJ)

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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.

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

Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge (l1\_sheffer1 X0)) \Rightarrow ((v10\_sheffer1 \\ & X0) \Leftrightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (k5\_sheffer1 \\ & X0 (k5\_sheffer1 X0 X1 X1) (k5\_sheffer1 X0 X1 X1) = X1))) \end{aligned} \tag{3}$$

**Theorem 1**

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