

t69_sheffer2

(TMd2qEFoT3ADQojcSt9oQAXeLE2WyXfJM4s)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_sheffer1 : \iota \Rightarrow o$ be given. Let $v1_sheffer2 : \iota \Rightarrow o$ be given. Let $v12_sheffer1 : \iota \Rightarrow o$ 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.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v1_sheffer2 X0) \wedge (l1_sheffer1 X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 \\ & (u1_struct_0 X0)) \Rightarrow (k5_sheffer1 X0 (k5_sheffer1 X0 (k5_sheffer1 \\ & X0 X1 X1) X2) (k5_sheffer1 X0 (k5_sheffer1 X0 X3 X3) X2) = k5_sheffer1 \\ & X0 (k5_sheffer1 X0 X2 (k5_sheffer1 X0 X1 X3)) (k5_sheffer1 X0 X2 (\\ & k5_sheffer1 X0 X1 X3)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l1_sheffer1 X0)) \Rightarrow ((v12_sheffer1 X0) \Leftrightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 \\ & (u1_struct_0 X0)) \Rightarrow (k5_sheffer1 X0 (k5_sheffer1 X0 X1 (k5_sheffer1 \\ & X0 X2 X3)) (k5_sheffer1 X0 X1 (k5_sheffer1 X0 X2 X3)) = k5_sheffer1 \\ & X0 (k5_sheffer1 X0 (k5_sheffer1 X0 X2 X2) X1) (k5_sheffer1 X0 (k5_sheffer1 \\ & X0 X3 X3) X1)))))) \end{aligned} \tag{2}$$

Theorem 1

$$\forall X0.((\neg v2_struct_0 X0) \wedge (l1_sheffer1 X0)) \Rightarrow ((v1_sheffer2 X0) \Rightarrow (v12_sheffer1 X0))$$