

t113_sheffer2

(TMQ4xZgdqK4AAc4H443HSqkAbkb31D3snu9)

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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.

$$\begin{aligned} \forall X0. (&(\neg v2_struct_0 X0) \wedge ((v10_sheffer1 X0) \wedge ((v11_sheffer1 \\ &X0) \wedge ((v12_sheffer1 X0) \wedge (l1_sheffer1 X0)))) \Rightarrow (\forall X1. (m1_subset_1 \\ &X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 \\ &X0)) \Rightarrow (k5_sheffer1 X0 (k5_sheffer1 X0 X2 (k5_sheffer1 X0 X1 X1)) \\ &(k5_sheffer1 X0 X2 X1) = X2)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} \forall X0. (&(\neg v2_struct_0 X0) \wedge (l1_sheffer1 X0)) \Rightarrow ((v11_sheffer1 \\ &X0) \Leftrightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\ &(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (k5_sheffer1 X0 X1 (k5_sheffer1 \\ &X0 X2 (k5_sheffer1 X0 X2 X2)) = k5_sheffer1 X0 X1 X1)))) \end{aligned} \tag{2}$$

Theorem 1

$$\begin{aligned} \forall X0. (&(\neg v2_struct_0 X0) \wedge ((v10_sheffer1 X0) \wedge ((v11_sheffer1 \\ &X0) \wedge ((v12_sheffer1 X0) \wedge (l1_sheffer1 X0)))) \Rightarrow (\forall X1. (m1_subset_1 \\ &X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 \\ &X0)) \Rightarrow (\forall X3. (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (k5_sheffer1 \\ &X0 (k5_sheffer1 X0 X1 (k5_sheffer1 X0 X3 (k5_sheffer1 X0 X2 (k5_sheffer1 \\ &X0 X2 X2)))) (k5_sheffer1 X0 X1 X3) = X1)))) \end{aligned}$$