

t140_sheffer2

(TMa7V2yCiFpKmwueHvVKRjUMLazvqPa6RUx)

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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.

$$\begin{aligned}
 & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v10_sheffer1 X0) \wedge ((v11_sheffer1 \\
 & X0) \wedge ((v12_sheffer1 X0) \wedge (l1_sheffer1 X0)))))) \Rightarrow (\forall X1. (m1_subset_1 \\
 & X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 \\
 & X0)) \Rightarrow (\forall X3. (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\forall X4. \\
 & (m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow (k5_sheffer1 X0 (k5_sheffer1 \\
 & X0 (k5_sheffer1 X0 X4 (k5_sheffer1 X0 X3 (k5_sheffer1 X0 X3 X3))) \\
 & X2) (k5_sheffer1 X0 (k5_sheffer1 X0 X1 X1) X2) = k5_sheffer1 X0 (k5_sheffer1 \\
 & X0 X2 (k5_sheffer1 X0 X4 X1)) (k5_sheffer1 X0 X2 (k5_sheffer1 X0 X4 \\
 & X1))))))))) \\
 & \tag{1}
 \end{aligned}$$

Assume the following.

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

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v10_sheffer1 X0) \wedge ((v11_sheffer1 \\ & X0) \wedge ((v12_sheffer1 X0) \wedge (l1_sheffer1 X0)))))) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\forall X4. \\ & (m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow (\forall X5.(m1_subset_1 X5 \\ & (u1_struct_0 X0)) \Rightarrow (k5_sheffer1 X0 (k5_sheffer1 X0 (k5_sheffer1 \\ & X0 (k5_sheffer1 X0 X5 (k5_sheffer1 X0 X4 (k5_sheffer1 X0 X4 X4))) \\ & X3) (k5_sheffer1 X0 (k5_sheffer1 X0 X1 X1) X3)) (k5_sheffer1 X0 (\\ & k5_sheffer1 X0 X3 (k5_sheffer1 X0 X5 X1)) (k5_sheffer1 X0 X3 (k5_sheffer1 \\ & X0 X5 X1))) = k5_sheffer1 X0 (k5_sheffer1 X0 (k5_sheffer1 X0 (k5_sheffer1 \\ & X0 X1 X1) (k5_sheffer1 X0 X2 (k5_sheffer1 X0 X2 X2))) (k5_sheffer1 \\ & X0 (k5_sheffer1 X0 X5 (k5_sheffer1 X0 X4 (k5_sheffer1 X0 X4 X4))) \\ & X3)) (k5_sheffer1 X0 (k5_sheffer1 X0 X3 X3) (k5_sheffer1 X0 (k5_sheffer1 \\ & X0 X5 (k5_sheffer1 X0 X4 (k5_sheffer1 X0 X4 X4))) X3))))))))) \end{aligned}$$