

t150_sheffer2 (TMQMSCuavZ- goLvBe5SskKaJhSnEnoHyZUZQ)

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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.

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

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v10_sheffer1 X0) \wedge ((v11_sheffer1 \\
& X0) \wedge ((v12_sheffer1 X0) \wedge (l1_sheffer1 X0)))))) \Rightarrow (\forall X1.(m1_subset_1 \\
& X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 \\
& X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\forall X4. \\
& (m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow (\forall X5.(m1_subset_1 X5 \\
& (u1_struct_0 X0)) \Rightarrow (k5_sheffer1 X0 (k5_sheffer1 X0 X2 (k5_sheffer1 \\
& X0 X3 (k5_sheffer1 X0 X5 X4)) (k5_sheffer1 X0 (k5_sheffer1 X0 (k5_sheffer1 \\
& X0 X5 (k5_sheffer1 X0 X1 (k5_sheffer1 X0 X1 X1))) X3) (k5_sheffer1 \\
& X0 (k5_sheffer1 X0 X4 X4) X3)) = k5_sheffer1 X0 X3 (k5_sheffer1 X0 \\
& X5 X4))))))))) \\
& \tag{2}
\end{aligned}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0)\wedge(l1_sheffer1 X0))\wedge((m1_subset_1 X1 (u1_struct_0 X0))\wedge(m1_subset_1 X2 (u1_struct_0 X0))))\Rightarrow(m1_subset_1 (k5_sheffer1 X0 X1 X2) (u1_struct_0 X0)) \quad (3)$$

Theorem 1

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