

t64_semi_af1
(TMSme3yPAnyAghu7dz3Ab6NHZ9xrMoHD5z7)

October 27, 2020

Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v1_semi_af1 : \iota \Rightarrow o$ be given. Let $l1_analoaf : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $r3_semi_af1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2_semi_af1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v1_semi_af1 X0) \wedge (l1_analoaf \\ & \quad X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\ & \quad (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 \\ & \quad (u1_struct_0 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow \\ & \quad ((r2_semi_af1 X0 X1 X2 X3 X4) \Rightarrow ((r2_semi_af1 X0 X1 X3 X2 X4) \wedge ((r2_semi_af1 \\ & \quad X0 X3 X4 X1 X2) \wedge ((r2_semi_af1 X0 X2 X1 X4 X3) \wedge ((r2_semi_af1 X0 X3 X1 \\ & \quad X4 X2) \wedge ((r2_semi_af1 X0 X4 X2 X3 X1) \wedge (r2_semi_af1 X0 X2 X4 X1 X3)))))))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v1_semi_af1 X0) \wedge (l1_analoaf \\ & \quad X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\ & \quad (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\neg(X1 \neq X2) \wedge (\forall X3.(m1_subset_1 \\ & \quad X3 (u1_struct_0 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 \\ & \quad X0)) \Rightarrow (\neg r2_semi_af1 X0 X1 X2 X3 X4)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v1_semi_af1 X0) \wedge (l1_analoaf \\ & \quad X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\ & \quad (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 \\ & \quad (u1_struct_0 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow \\ & \quad ((r3_semi_af1 X0 X1 X2 X3 X4) \Leftrightarrow (\neg(\neg(X1 = X2) \wedge (X3 = X4)) \wedge (\forall X5. \\ & \quad (m1_subset_1 X5 (u1_struct_0 X0)) \Rightarrow (\forall X6.(m1_subset_1 X6 \\ & \quad (u1_struct_0 X0)) \Rightarrow (\neg(r2_semi_af1 X0 X5 X6 X1 X2) \wedge (r2_semi_af1 \\ & \quad X0 X5 X6 X3 X4)))))))))) \end{aligned} \tag{3}$$

Theorem 1

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((v1_semi_af1 X0) \wedge (l1_analoaf X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (r3_semi_af1 X0 X1 X2 X1 X2)))$$