

t11_dirort
(TMUKcS2dLZDSfrJE6EtDBwfeYhVz9tUzonA)

October 27, 2020

Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v1_dirort : \iota \Rightarrow o$ be given. Let $l1_analoaf : \iota \Rightarrow o$ be given. Let $v2_dirort : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $r2_analoaf : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2_dirort : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v1_dirort X0) \wedge (l1_analoaf X0))) \Rightarrow \\ & ((v2_dirort X0) \Leftrightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow \\ & (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 \\ & X3 (u1_struct_0 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X5.(m1_subset_1 X5 (u1_struct_0 X0)) \Rightarrow (\forall X6. \\ & (m1_subset_1 X6 (u1_struct_0 X0)) \Rightarrow (\forall X7.(m1_subset_1 X7 \\ & (u1_struct_0 X0)) \Rightarrow (\forall X8.(m1_subset_1 X8 (u1_struct_0 X0)) \Rightarrow \\ & (\neg(r2_analoaf X0 X1 X2 X4 X5) \wedge (r2_analoaf X0 X7 X8 X4 X5) \wedge ((r2_analoaf \\ & X0 X7 X8 X3 X6) \wedge ((X7 \neq X8) \wedge ((X4 \neq X5) \wedge (\neg r2_analoaf X0 X1 X2 X3 X6))))))))))))) \\ & (1) \end{aligned}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v1_dirort X0) \wedge (l1_analoaf X0))) \Rightarrow \\ & (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 \\ & X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow ((r2_dirort \\ & X0 X1 X2 X3 X4) \Leftrightarrow (\exists X5.(m1_subset_1 X5 (u1_struct_0 X0)) \wedge (\\ & \exists X6.(m1_subset_1 X6 (u1_struct_0 X0)) \wedge ((X5 \neq X6) \wedge ((r2_analoaf \\ & X0 X5 X6 X1 X2) \wedge (r2_analoaf X0 X5 X6 X3 X4)))))))))) \\ & (2) \end{aligned}$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v1_dirort X0) \wedge (l1_analoaf X0))) \Rightarrow \\ & ((v2_dirort X0) \Leftrightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow \\ & (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 \\ & X3 (u1_struct_0 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X5.(m1_subset_1 X5 (u1_struct_0 X0)) \Rightarrow (\forall X6. \\ & (m1_subset_1 X6 (u1_struct_0 X0)) \Rightarrow (((r2_analoaf X0 X1 X2 X4 X5) \wedge \\ & (r2_dirort X0 X4 X5 X3 X6)) \Rightarrow ((X4 = X5) \vee (r2_analoaf X0 X1 X2 X3 X6)))))))))) \\ & \end{aligned}$$