

t43_diraf (TMVAFWq- TAqjSzJN7CsdD2ndDChNZiYqyTc4)

October 27, 2020

Let $v7_struct_0 : \iota \Rightarrow o$ be given. Let $v2_analoaf : \iota \Rightarrow o$ be given. Let $v3_analoaf : \iota \Rightarrow o$ 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 $r2_diraf : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $r2_analoaf : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(l1_analoaf X0) \Rightarrow (l1_struct_0 X0) \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v7_struct_0 X0) \wedge ((v2_analoaf X0) \wedge (l1_analoaf \\ & X0))) \Rightarrow ((v3_analoaf X0) \Leftrightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 \\ & (u1_struct_0 X0)) \Rightarrow (\neg(\neg r2_analoaf X0 X1 X2 X3 X4) \wedge (\neg r2_analoaf \\ & X0 X1 X2 X4 X3) \wedge (\forall X5.(m1_subset_1 X5 (u1_struct_0 X0)) \Rightarrow (\\ & \neg((r2_analoaf X0 X1 X2 X1 X5) \vee (r2_analoaf X0 X1 X2 X5 X1)) \wedge ((r2_analoaf \\ & X0 X3 X4 X3 X5) \vee (r2_analoaf X0 X3 X4 X5 X3)))))))))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l1_analoaf X0)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 \\ & (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow \\ & (\forall X4.(m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow ((r2_diraf X0 X1 \\ & X2 X3 X4) \Leftrightarrow ((r2_analoaf X0 X1 X2 X3 X4) \vee (r2_analoaf X0 X1 X2 X4 X3)))))) \end{aligned} \tag{3}$$

Assume the following.

$$\forall X0.(l1_struct_0 X0) \Rightarrow ((v2_struct_0 X0) \Rightarrow (v7_struct_0 X0)) \tag{4}$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v7_struct_0 X0) \wedge ((v2_analoaf X0) \wedge ((v3_analoaf \\ & X0) \wedge (l1_analoaf X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 \\ & (u1_struct_0 X0)) \Rightarrow (\neg(\neg r2_diraf X0 X1 X2 X3 X4) \wedge (\forall X5.(m1_subset_1 \\ & X5 (u1_struct_0 X0)) \Rightarrow (\neg(r2_diraf X0 X1 X2 X1 X5) \wedge (r2_diraf X0 X3 \\ & X4 X3 X5)))))))))) \end{aligned}$$