

l12_afvect01 (TMZP-
MvBAst4HrJw56U7aDGQcqtIFkNpmChG)

October 27, 2020

Let $v7_struct_0 : \iota \Rightarrow o$ be given. Let $v1_afvect0 : \iota \Rightarrow o$ 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 $r2_diraf : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2_analoaf : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v7_struct_0 X0) \wedge ((v1_afvect0 X0) \wedge (l1_analoaf \\
 & X0))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\
 & (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. (m1_subset_1 X3 \\
 & (u1_struct_0 X0)) \Rightarrow (\forall X4. (m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow \\
 & (\forall X5. (m1_subset_1 X5 (u1_struct_0 X0)) \Rightarrow (\forall X6. (m1_subset_1 \\
 & X6 (u1_struct_0 X0)) \Rightarrow (((r2_analoaf X0 X1 X2 X3 X4) \wedge (r2_analoaf \\
 & X0 X1 X5 X6 X4)) \Rightarrow (r2_analoaf X0 X2 X5 X6 X3)))))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v7_struct_0 X0) \wedge ((v1_afvect0 X0) \wedge (l1_analoaf \\
 & X0))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\
 & (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow ((r2_analoaf X0 X1 X2 X2 X1) \Leftrightarrow \\
 & (\exists X3. (m1_subset_1 X3 (u1_struct_0 X0)) \wedge (\exists X4. (m1_subset_1 \\
 & X4 (u1_struct_0 X0)) \wedge ((r2_diraf X0 X1 X2 X3 X4) \wedge ((r2_diraf X0 X1 \\
 & X3 X3 X2) \wedge (r2_diraf X0 X1 X4 X4 X2)))))))))
 \end{aligned} \tag{2}$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_afvect0 X0) \wedge (l1_analoaf \\ & X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 \\ & (u1_struct_0 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow \\ & (\forall X5.(m1_subset_1 X5 (u1_struct_0 X0)) \Rightarrow (\forall X6.(m1_subset_1 \\ & X6 (u1_struct_0 X0)) \Rightarrow (\forall X7.(m1_subset_1 X7 (u1_struct_0 \\ & X0)) \Rightarrow (\neg(r2_diraf X0 X1 X2 X4 X5) \wedge (r2_diraf X0 X1 X3 X6 X7) \wedge (r2_diraf \\ & X0 X1 X4 X4 X2) \wedge (r2_diraf X0 X1 X6 X6 X3) \wedge (r2_diraf X0 X1 X5 X5 X2) \wedge \\ & (r2_diraf X0 X1 X7 X7 X3) \wedge (\forall X8.(m1_subset_1 X8 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X9.(m1_subset_1 X9 (u1_struct_0 X0)) \Rightarrow (\neg(r2_diraf \\ & X0 X2 X3 X8 X9) \wedge (r2_diraf X0 X2 X8 X8 X3) \wedge (r2_diraf X0 X2 X9 X9 X3)))))))))))))) \end{aligned}$$