

t16_diraf

(TMF7sFAXUiWa32nyNU73cykCfmEZLZ1JuYa)

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Let $v7_struct_0 : \iota \Rightarrow o$ be given. Let $v2_analoaf : \iota \Rightarrow o$ 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 $r1_diraf : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0.((\neg v7_struct_0 X0) \wedge ((v2_analoaf X0) \wedge (l1_analoaf \\
 & \quad X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\
 & \quad (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 \\
 & \quad (u1_struct_0 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow \\
 & \quad (\neg(X1 \neq X2) \wedge ((r1_diraf X0 X1 X2 X3) \wedge ((r1_diraf X0 X1 X2 X4) \wedge ((\neg r1_diraf \\
 & \quad X0 X2 X3 X4) \wedge (\neg r1_diraf X0 X2 X4 X3))))))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0.((\neg v7_struct_0 X0) \wedge ((v2_analoaf X0) \wedge (l1_analoaf \\
 & \quad X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\
 & \quad (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 \\
 & \quad (u1_struct_0 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow \\
 & \quad (((r1_diraf X0 X3 X1 X2) \wedge (r1_diraf X0 X1 X2 X4)) \Rightarrow ((X1 = X2) \vee (r1_diraf \\
 & \quad X0 X3 X2 X4))))))
 \end{aligned} \tag{2}$$

Theorem 1

$$\begin{aligned}
 & \forall X0.((\neg v7_struct_0 X0) \wedge ((v2_analoaf X0) \wedge (l1_analoaf \\
 & \quad X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\
 & \quad (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 \\
 & \quad (u1_struct_0 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow \\
 & \quad (\neg(X1 \neq X2) \wedge ((r1_diraf X0 X1 X2 X3) \wedge ((r1_diraf X0 X1 X2 X4) \wedge ((\neg r1_diraf \\
 & \quad X0 X1 X3 X4) \wedge (\neg r1_diraf X0 X1 X4 X3))))))))))
 \end{aligned}$$