

l8_afvect01

(TMTKwq7tKHMjW5jTDEx9HxHNciaqDs1Vr)

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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 $r2_afvect0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2_analoaf : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_afvect0 X0) \wedge (l1_analoaf \\ & X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 \\ & (u1_struct_0 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow \\ & (\forall X5.(m1_subset_1 X5 (u1_struct_0 X0)) \Rightarrow (((r2_afvect0 \\ & X0 X1 X2 X3) \wedge (r2_afvect0 X0 X4 X2 X5)) \Rightarrow (r2_analoaf X0 X1 X4 X5 X3))))))))) \end{aligned} \quad (1)$$

Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_afvect0 X0) \wedge (l1_analoaf \\ & X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 \\ & (u1_struct_0 X0)) \Rightarrow ((r2_diraf X0 X1 X2 X2 X3) \Rightarrow ((X1 = X3) \vee (r2_analoaf \\ & X0 X1 X2 X2 X3))))))))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.(l1_analoaf X0) \Rightarrow (l1_struct_0 X0) \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge (l1_analoaf X0)) \Rightarrow (\forall X1. \\ (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 \\ (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow \\ (\forall X4.(m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow ((r2_diraf X0 X1 \\ X2 X3 X4) \Leftrightarrow ((r2_analoaf X0 X1 X2 X3 X4) \vee (r2_analoaf X0 X1 X2 X4 X3))))))))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_afvect0 X0) \wedge (l1_analoaf \\ X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\ (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 \\ (u1_struct_0 X0)) \Rightarrow ((r2_afvect0 X0 X1 X2 X3) \Leftrightarrow (r2_analoaf X0 X1 X2 \\ X2 X3)))))) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0.(l1_struct_0 X0) \Rightarrow ((v2_struct_0 X0) \Rightarrow (v7_struct_0 X0)) \quad (7)$$

Theorem 1

$$\begin{aligned} \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_afvect0 X0) \wedge (l1_analoaf \\ X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\ (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 \\ (u1_struct_0 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow \\ (\forall X5.(m1_subset_1 X5 (u1_struct_0 X0)) \Rightarrow (((r2_diraf X0 \\ X5 X1 X5 X2) \wedge (r2_diraf X0 X5 X3 X5 X4)) \Rightarrow ((X1 = X2) \vee ((X3 = X4) \vee (r2_diraf \\ X0 X1 X3 X2 X4)))))))))) \end{aligned}$$