

t4_grsolv_1
(TMS163ShfwknU2y4tgVR6tKjVwfttV9Ef3e)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v15_algstr_0 : \iota \Rightarrow o$ be given. Let $v2_group_1 : \iota \Rightarrow o$ be given. Let $v3_group_1 : \iota \Rightarrow o$ be given. Let $l3_algstr_0 : \iota \Rightarrow o$ be given. Let $m1_group_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_group_3 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_group_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_group_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10_group_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_group_6 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_group_6 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v15_algstr_0 X0) \wedge ((v2_group_1 \\ & X0) \wedge ((v3_group_1 X0) \wedge (l3_algstr_0 X0)))))) \Rightarrow (\forall X1.((v15_algstr_0 \\ & X1) \wedge (m1_group_2 X1 X0)) \Rightarrow (\forall X2.((v15_algstr_0 X2) \wedge (m1_group_2 \\ & X2 X0)) \Rightarrow (\forall X3.((v15_algstr_0 X3) \wedge ((v1_group_3 X3 X2) \wedge (\\ & m1_group_6 X3 X0 X2)))) \Rightarrow (\forall X4.((v15_algstr_0 X4) \wedge (m1_group_2 \\ & X4 X0)) \Rightarrow ((r1_group_2 X0 X4 (k10_group_2 X0 X1 X2)) \Rightarrow (\forall X5. \\ & ((v1_group_3 X5 X4) \wedge (m1_group_6 X5 X0 X4)) \Rightarrow (\neg (X5 = k10_group_2 \\ & X0 X1 X3) \wedge (\forall X6.(m1_group_2 X6 (k5_group_6 X2 X3)) \Rightarrow (\neg r1_group_6 \\ & (k5_group_6 X4 X5 X6)))))))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge \\ & ((v3_group_1 X0) \wedge (l3_algstr_0 X0)))) \wedge (m1_group_2 X1 X0)) \Rightarrow (\forall X2. \\ & (m1_group_6 X2 X0 X1) \Rightarrow (m1_group_2 X2 X0)) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge ((v2_group_1 \\ & X0) \wedge ((v3_group_1 X0) \wedge (l3_algstr_0 X0)))) \wedge ((m1_group_2 X1 X0) \wedge \\ & (m1_group_2 X2 X0))) \Rightarrow (k10_group_2 X0 X1 X2 = k10_group_2 X0 X2 X1) \end{aligned} \tag{3}$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v15_algstr_0 X0) \wedge ((v2_group_1 \\ & X0) \wedge ((v3_group_1 X0) \wedge (l3_algstr_0 X0)))))) \Rightarrow (\forall X1.((v15_algstr_0 \\ & X1) \wedge (m1_group_2 X1 X0)) \Rightarrow (\forall X2.((v15_algstr_0 X2) \wedge (m1_group_2 \\ & X2 X0)) \Rightarrow (\forall X3.((v15_algstr_0 X3) \wedge ((v1_group_3 X3 X2) \wedge (\\ & m1_group_6 X3 X0 X2))) \Rightarrow (\forall X4.((v15_algstr_0 X4) \wedge (m1_group_2 \\ & X4 X0)) \Rightarrow ((r1_group_2 X0 X4 (k10_group_2 X0 X2 X1)) \Rightarrow (\forall X5. \\ & ((v1_group_3 X5 X4) \wedge (m1_group_6 X5 X0 X4)) \Rightarrow (\neg(X5 = k10_group_2 \\ & X0 X3 X1) \wedge (\forall X6.(m1_group_2 X6 (k5_group_6 X2 X3)) \Rightarrow (\neg r1_group_6 \\ & (k5_group_6 X4 X5) X6)))))))))) \end{aligned}$$