

t4_mod_2

(TMcM2dgFiY1BNht17VdnAd54h8W9D8CKoZp)

October 27, 2020

Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v13_algstr_0 : \iota \Rightarrow o$ be given. Let $v3_group_1 : \iota \Rightarrow o$ be given. Let $v4_vectsp_1 : \iota \Rightarrow o$ be given. Let $v5_vectsp_1 : \iota \Rightarrow o$ be given. Let $v2_rlvect_1 : \iota \Rightarrow o$ be given. Let $v3_rlvect_1 : \iota \Rightarrow o$ be given. Let $v4_rlvect_1 : \iota \Rightarrow o$ be given. Let $l6_algstr_0 : \iota \Rightarrow o$ be given. Let $v3_mod_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_mod_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v13_vectsp_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u3_mod_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_mod_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u2_mod_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_mod_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_mod_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_mod_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_mod_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v3_group_1 \\ & X0) \wedge ((v4_vectsp_1 X0) \wedge ((v5_vectsp_1 X0) \wedge ((v2_rlvect_1 X0) \wedge \\ & ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow \\ & (\forall X1. (l1_mod_2 X1 X0) \Rightarrow ((v3_mod_2 X1 X0) \Leftrightarrow ((v13_vectsp_1 \\ & (k4_mod_2 X0 X1) (k2_mod_2 X0 X1) (k3_mod_2 X0 X1)) \wedge (v1_mod_2 (k4_mod_2 \\ & X0 X1) X0 (k2_mod_2 X0 X1) (k3_mod_2 X0 X1)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v3_group_1 \\ & X0) \wedge ((v4_vectsp_1 X0) \wedge ((v5_vectsp_1 X0) \wedge ((v2_rlvect_1 X0) \wedge \\ & ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow \\ & (\forall X1. (l1_mod_2 X1 X0) \Rightarrow (k4_mod_2 X0 X1 = u3_mod_2 X0 X1)) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v3_group_1 \\ & X0) \wedge ((v4_vectsp_1 X0) \wedge ((v5_vectsp_1 X0) \wedge ((v2_rlvect_1 X0) \wedge \\ & ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow \\ & (\forall X1. (l1_mod_2 X1 X0) \Rightarrow (k3_mod_2 X0 X1 = u2_mod_2 X0 X1)) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v3_group_1 \\ & X0) \wedge ((v4_vectsp_1 X0) \wedge ((v5_vectsp_1 X0) \wedge ((v2_rlvect_1 X0) \wedge \\ & ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow \\ & (\forall X1. (l1_mod_2 X1 X0) \Rightarrow (k2_mod_2 X0 X1 = u1_mod_2 X0 X1)) \end{aligned} \tag{4}$$

Theorem 1

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge (v13_algstr_0 X0) \wedge (v3_group_1 \\ & X0) \wedge (v4_vectsp_1 X0) \wedge (v5_vectsp_1 X0) \wedge (v2_rlvect_1 X0) \wedge \\ & ((v3_rlvect_1 X0) \wedge (v4_rlvect_1 X0) \wedge (l6_algstr_0 X0)))))) \Rightarrow \\ & (\forall X1. ((v3_mod_2 X1 X0) \wedge (l1_mod_2 X1 X0)) \Rightarrow ((v13_vectsp_1 \\ & (u3_mod_2 X0 X1) (u1_mod_2 X0 X1) (u2_mod_2 X0 X1)) \wedge (v1_mod_2 (u3_mod_2 \\ & X0 X1) X0 (u1_mod_2 X0 X1) (u2_mod_2 X0 X1)))) \end{aligned}$$