

t78_rmod_2

(TMbk9gXWDs4iDfzruBWQ1nx8G4waDh5mXWs)

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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 $v4_vectsp_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_vectsp_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $m1_rmod_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_rmod_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_rmod_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v3_group_1 \\ & X0) \wedge ((v4_vectsp_1 X0) \wedge ((v5_vectsp_1 X0) \wedge ((v2_rlvect_1 X0) \wedge \\ & ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow \\ & (\forall X1.((\neg v2_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge ((v2_rlvect_1 \\ & X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 X1) \wedge ((v4_vectsp_2 X1 X0) \wedge \\ & (l1_vectsp_2 X1 X0)))))))))) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 \\ & X1)) \Rightarrow (\forall X3.(m1_rmod_2 X3 X0 X1) \Rightarrow (\forall X4.(m2_rmod_2 \\ & X4 X0 X1 X3) \Rightarrow ((X2 \in X4) \Leftrightarrow (X4 = k3_rmod_2 X0 X1 X2 X3)))))) \end{aligned} \tag{1}$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v3_group_1 \\ & X0) \wedge ((v4_vectsp_1 X0) \wedge ((v5_vectsp_1 X0) \wedge ((v2_rlvect_1 X0) \wedge \\ & ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow \\ & (\forall X1.((\neg v2_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge ((v2_rlvect_1 \\ & X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 X1) \wedge ((v4_vectsp_2 X1 X0) \wedge \\ & (l1_vectsp_2 X1 X0)))))))))) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 \\ & X1)) \Rightarrow (\forall X3.(m1_rmod_2 X3 X0 X1) \Rightarrow (\forall X4.(m2_rmod_2 \\ & X4 X0 X1 X3) \Rightarrow (\forall X5.(m2_rmod_2 X5 X0 X1 X3) \Rightarrow (((X2 \in X4) \wedge (X2 \in \\ & X5)) \Rightarrow (X4 = X5)))))) \end{aligned}$$