

t68_rlvect_2
(TMay97sdyoeUVJGRYe2xqKhGidguyZx8arV)

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Let $v2_struct.0 : \iota \Rightarrow o$ be given. Let $v13_algstr.0 : \iota \Rightarrow o$ 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 $v3_group.1 : \iota \Rightarrow o$ be given. Let $v4_vectsp.1 : \iota \Rightarrow o$ be given. Let $v5_vectsp.1 : \iota \Rightarrow o$ be given. Let $l6_algstr.0 : \iota \Rightarrow o$ be given. Let $l1_vectsp.1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_finseq.1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct.0 : \iota \Rightarrow \iota$ be given. Let $k3_finseq.1 : \iota \Rightarrow \iota$ be given. Let $m1_subset.1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $k1_relset.1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct.1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_algstr.0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_rlvect.1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l2_algstr.0 : \iota \Rightarrow o$ be given. Let $l5_algstr.0 : \iota \Rightarrow o$ be given. Let $l2_struct.0 : \iota \Rightarrow o$ be given. Let $l1_algstr.0 : \iota \Rightarrow o$ be given. Let $l1_struct.0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct.0 X0) \wedge ((v13_algstr.0 X0) \wedge ((v2_rlvect.1 \\ & X0) \wedge ((v3_rlvect.1 X0) \wedge ((v4_rlvect.1 X0) \wedge (l2_algstr.0 X0)))))) \Rightarrow \\ & (\forall X1.(m2_finseq.1 X1 (u1_struct.0 X0)) \Rightarrow (\forall X2.(m2_finseq.1 \\ & X2 (u1_struct.0 X0)) \Rightarrow (\forall X3.(m2_finseq.1 X3 (u1_struct.0 \\ & X0)) \Rightarrow (((k3_finseq.1 X1 = k3_finseq.1 X2) \wedge ((k3_finseq.1 X1 = k3_finseq.1 \\ & X3) \wedge (\forall X4.(m1_subset.1 X4 k5_numbers) \Rightarrow ((X4 \in k1_relset.1 \\ & k5_numbers X1) \Rightarrow (k1_funct.1 X3 X4 = k5_algstr.0 X0 (k7_partfun1 \\ & (u1_struct.0 X0) X1 X4) (k7_partfun1 (u1_struct.0 X0) X2 X4)))))) \Rightarrow \\ & (k4_rlvect.1 X0 X3 = k5_algstr.0 X0 (k4_rlvect.1 X0 X1) (k4_rlvect.1 \\ & X0 X2)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0.(l6_algstr.0 X0) \Rightarrow ((l2_algstr.0 X0) \wedge (l5_algstr.0 X0)) \tag{2}$$

Assume the following.

$$\forall X0.(l2_algstr.0 X0) \Rightarrow ((l2_struct.0 X0) \wedge (l1_algstr.0 X0)) \tag{3}$$

Assume the following.

$$\forall X0.(l1_struct.0 X0) \Rightarrow (\forall X1.(l1_vectsp.1 X1 X0) \Rightarrow (l2_algstr.0 X1)) \tag{4}$$

Assume the following.

$$\forall X0.(l1_algstr_0 X0) \Rightarrow (l1_struct_0 X0) \quad (5)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\ & X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v3_group_1 X0) \wedge (\\ & (v4_vectsp_1 X0) \wedge ((v5_vectsp_1 X0) \wedge (l6_algstr_0 X0))))))) \Rightarrow \\ & (\forall X1.((\neg v2_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge ((v2_rlvect_1 \\ & X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 X1) \wedge (l1_vectsp_1 X1 X0)))))) \Rightarrow \\ & (\forall X2.(m2_finseq_1 X2 (u1_struct_0 X1)) \Rightarrow (\forall X3.(m2_finseq_1 \\ & X3 (u1_struct_0 X1)) \Rightarrow (\forall X4.(m2_finseq_1 X4 (u1_struct_0 \\ & X1)) \Rightarrow (((k3_finseq_1 X2 = k3_finseq_1 X3) \wedge ((k3_finseq_1 X2 = k3_finseq_1 \\ & X4) \wedge (\forall X5.(m1_subset_1 X5 k5_numbers) \Rightarrow ((X5 \in k1_relset_1 \\ & k5_numbers X2) \Rightarrow (k1_funct_1 X4 X5 = k5_algstr_0 X1 (k7_partfun1 \\ & (u1_struct_0 X1) X2 X5) (k7_partfun1 (u1_struct_0 X1) X3 X5)))))) \Rightarrow \\ & (k4_rlvect_1 X1 X4 = k5_algstr_0 X1 (k4_rlvect_1 X1 X2) (k4_rlvect_1 \\ & X1 X3)))))) \end{aligned}$$