

t9_rlvect_5

(TMYVLd51dZC7UCKkcaFPK2UYYYenZdSCKwhR)

October 27, 2020

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 $v5_rlvect.1 : \iota \Rightarrow o$ be given. Let $v6_rlvect.1 : \iota \Rightarrow o$ be given. Let $v7_rlvect.1 : \iota \Rightarrow o$ be given. Let $v8_rlvect.1 : \iota \Rightarrow o$ be given. Let $l1_rlvect.1 : \iota \Rightarrow o$ be given. Let $m1_rlvect.2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset.1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc.1 : \iota \Rightarrow \iota$ be given. Let $u1_struct.0 : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_rlvect.2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_rlvect.3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m2_rlvect.2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_rlvect.2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m2_finseq.1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10_xtuple.0 : \iota \Rightarrow \iota$ be given. Let $k4_rlvect.1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_rlvect.2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat.1 : \iota \Rightarrow o$ be given. Let $v5_relat.1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_relset.1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_funct.1 : \iota \Rightarrow o$ be given. Let $v1_finseq.1 : \iota \Rightarrow o$ be given. Let $k2_zfmisc.1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Let $v2_funct.1 : \iota \Rightarrow o$ be given. Let $v4_relat.1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct.0 X0) \wedge ((v13_algstr.0 X0) \wedge ((v2_rlvect.1 \\ & X0) \wedge ((v3_rlvect.1 X0) \wedge ((v4_rlvect.1 X0) \wedge ((v5_rlvect.1 X0) \wedge \\ & ((v6_rlvect.1 X0) \wedge ((v7_rlvect.1 X0) \wedge ((v8_rlvect.1 X0) \wedge (l1_rlvect.1 \\ & X0)))))))))) \Rightarrow (\forall X1.(m1_rlvect.2 X1 X0) \Rightarrow (\forall X2.(m1_subset.1 \\ & X2 (k1_zfmisc.1 (u1_struct.0 X0))) \Rightarrow (\forall X3.(m2_finseq.1 \\ & X3 (u1_struct.0 X0) \Rightarrow (\neg(r1_tarski (k10_xtuple.0 X3) (u1_struct.0 \\ & (k1_rlvect.3 X0 X2))) \wedge (\forall X4.(m2_rlvect.2 X4 X0 X2) \Rightarrow (k4_rlvect.1 \\ & X0 (k5_rlvect.2 X0 X3 X1) \neq k6_rlvect.2 X0 X4)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_relat.1 X1) \wedge (v5_relat.1 X1 X0)) \Rightarrow (k2_relset.1 X0 X1 = k10_xtuple.0 X1) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (m2_finseq.1 X1 X0) \Rightarrow ((v1_funct.1 X1) \wedge (v1_finseq.1 X1) \wedge (m1_subset.1 X1 (k1_zfmisc.1 (k2_zfmisc.1 k5_numbers X0)))) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge (v13_algstr_0 X0) \wedge \\ & ((v2_rlvect_1 X0) \wedge (v3_rlvect_1 X0) \wedge (v4_rlvect_1 X0) \wedge (v5_rlvect_1 \\ & X0) \wedge (v6_rlvect_1 X0) \wedge (v7_rlvect_1 X0) \wedge (v8_rlvect_1 X0) \wedge \\ & (l1_rlvect_1 X0)))))) \wedge (m1_rlvect_2 X1 X0) \Rightarrow (m1_subset_1 \\ & (k6_rlvect_2 X0 X1) (u1_struct_0 X0)) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge (v13_algstr_0 X0) \wedge (v2_rlvect_1 \\ & X0) \wedge (v3_rlvect_1 X0) \wedge (v4_rlvect_1 X0) \wedge (v5_rlvect_1 X0) \wedge \\ & ((v6_rlvect_1 X0) \wedge (v7_rlvect_1 X0) \wedge (v8_rlvect_1 X0) \wedge (l1_rlvect_1 \\ & X0)))))) \Rightarrow (\forall X1. (m1_rlvect_2 X1 X0) \Rightarrow (\forall X2. (m1_subset_1 \\ & X2 (u1_struct_0 X0) \Rightarrow ((X2 = k6_rlvect_2 X0 X1) \Leftrightarrow (\exists X3. (m2_finseq_1 \\ & X3 (u1_struct_0 X0) \wedge (v2_funct_1 X3) \wedge (k2_relset_1 (u1_struct_0 \\ & X0) X3 = k3_rlvect_2 X0 X1) \wedge (X2 = k4_rlvect_1 X0 (k5_rlvect_2 X0 X3 \\ & X1))))))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1))) \Rightarrow ((v4_relat_1 X2 X0) \wedge (v5_relat_1 X2 X1)) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1))) \Rightarrow (v1_relat_1 X2) \end{aligned} \quad (7)$$

Theorem 1

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge (v13_algstr_0 X0) \wedge (v2_rlvect_1 \\ & X0) \wedge (v3_rlvect_1 X0) \wedge (v4_rlvect_1 X0) \wedge (v5_rlvect_1 X0) \wedge \\ & ((v6_rlvect_1 X0) \wedge (v7_rlvect_1 X0) \wedge (v8_rlvect_1 X0) \wedge (l1_rlvect_1 \\ & X0)))))) \Rightarrow (\forall X1. (m1_rlvect_2 X1 X0) \Rightarrow (\forall X2. (m1_subset_1 \\ & X2 (k1_zfmisc_1 (u1_struct_0 X0)) \Rightarrow (\neg (r1_tarski (k3_rlvect_2 \\ & X0 X1) (u1_struct_0 (k1_rlvect_3 X0 X2))) \wedge (\forall X3. (m2_rlvect_2 \\ & X3 X0 X2) \Rightarrow (k6_rlvect_2 X0 X1 \neq k6_rlvect_2 X0 X3)))))) \end{aligned}$$