

t39_rlvect_5

(TMV93f78v4Wk5Sydgy3a52HBjnfBVxcLz5g)

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Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ be given. 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 $v1_rlvect_5 : \iota \Rightarrow o$ be given. Let $l1_rlvect_1 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_rlvect_5 : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k2_rlvect_5 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_rlvect_1 : \iota \Rightarrow o$ be given. Let $m1_rlsub_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. \neg(X0 \in X1) \wedge (v1_xboole_0 X1) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. (m2_subset_1 X0 k1_numbers k5_numbers) \Rightarrow (\forall X1. \\ & ((\neg v2_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge ((v2_rlvect_1 X1) \wedge ((\\ & v3_rlvect_1 X1) \wedge ((v4_rlvect_1 X1) \wedge ((v5_rlvect_1 X1) \wedge ((v6_rlvect_1 \\ & X1) \wedge ((v7_rlvect_1 X1) \wedge ((v8_rlvect_1 X1) \wedge ((v1_rlvect_5 X1) \wedge \\ & (l1_rlvect_1 X1)))))))))) \Rightarrow (\neg(r1_xxreal_0 X0 (k1_rlvect_5 X1)) \wedge \\ & (\forall X2. ((v1_rlvect_1 X2) \wedge (m1_rlsub_1 X2 X1)) \Rightarrow (k1_rlvect_5 \\ & X2 \neq X0)))) \quad (2) \end{aligned}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\ & X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\ & ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge ((v1_rlvect_5 \\ & X0) \wedge (l1_rlvect_1 X0)))))))))) \Rightarrow (\forall X1. (m2_subset_1 X1 \\ & k1_numbers k5_numbers) \Rightarrow (\forall X2. (X2 = k2_rlvect_5 X0 X1) \Leftrightarrow (\\ & \forall X3. (X3 \in X2) \Leftrightarrow (\exists X4. ((v1_rlvect_1 X4) \wedge (m1_rlsub_1 \\ & X4 X0)) \wedge ((X4 = X3) \wedge (k1_rlvect_5 X4 = X1)))))) \quad (3) \end{aligned}$$

Theorem 1

$$\begin{aligned} & \forall X0.(m2_subset_1 X0 k1_numbers k5_numbers) \Rightarrow (\forall X1. \\ & ((\neg v2_struct_0 X1) \wedge (v13_algstr_0 X1) \wedge (v2_rlvect_1 X1) \wedge (\\ & v3_rlvect_1 X1) \wedge (v4_rlvect_1 X1) \wedge (v5_rlvect_1 X1) \wedge (v6_rlvect_1 \\ & X1) \wedge (v7_rlvect_1 X1) \wedge (v8_rlvect_1 X1) \wedge (v1_rlvect_5 X1) \wedge \\ & (l1_rlvect_1 X1)))))) \Rightarrow (\neg(r1_xreal_0 X0 (k1_rlvect_5 X1)) \wedge \\ & (v1_xboole_0 (k2_rlvect_5 X1 X0))) \end{aligned}$$