

t36_scmring3
(TML8ipEecHnMth3HsVgwtZiskhgr7JC2vm1)

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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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k3_amistd_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $k1_scmring2 : \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_ordinal1 : \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k1_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\ & X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v3_group_1 X0) \wedge (\\ & (v4_vectsp_1 X0) \wedge ((v5_vectsp_1 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow \quad (1) \\ & (\forall X1. (m1_subset_1 X1 k5_numbers) \Rightarrow (k3_amistd_1 np_2 (\\ & k1_scmring2 X0) X1 = k2_tarski X1 (k1_ordinal1 X1))) \end{aligned}$$

Assume the following.

$$\forall X0. (v7_ordinal1 X0) \Rightarrow (\forall X1. (v7_ordinal1 X1) \Rightarrow (r1_xxreal_0 X0 (k2_xcmplx_0 X0 X1))) \quad (2)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 np_1) \wedge (m2_subset_1 np_1 k1_numbers k5_numbers)) \wedge \\ & ((m1_subset_1 np_1 k5_numbers) \wedge (m1_subset_1 np_1 k1_numbers)) \quad (3) \end{aligned}$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k5_numbers)\wedge(v7_ordinal1 X1))\Rightarrow(k2_nat_1 X0 X1 = k2_xcmplx_0 X0 X1) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1 X0)\wedge(m1_subset_1 X1 k5_numbers))\Rightarrow(k1_nat_1 X0 X1 = k2_xcmplx_0 X0 X1) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(X2 = k2_tarski X0 X1)\Leftrightarrow(\forall X3.(X3 \in X2)\Leftrightarrow((X3 = X0)\vee(X3 = X1))) \quad (7)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0)\Rightarrow(k1_ordinal1 X0 = k1_nat_1 X0 np_1) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0)\wedge(v1_xxreal_0 X1))\Rightarrow((r1_xxreal_0 X0 X1)\vee(r1_xxreal_0 X1 X0)) \quad (9)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1)\Rightarrow(v7_ordinal1 X0) \quad (10)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0)\Rightarrow(v1_xxreal_0 X0) \quad (11)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0)\Rightarrow(v1_xreal_0 X0) \quad (12)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0)\wedge((v13_algstr_0 X0)\wedge((v2_rlvect_1 X0)\wedge((v3_rlvect_1 X0)\wedge((v4_rlvect_1 X0)\wedge((v3_group_1 X0)\wedge \\ & (v4_vectsp_1 X0)\wedge((v5_vectsp_1 X0)\wedge(l6_algstr_0 X0))))))))\Rightarrow \\ & (\forall X1.(m1_subset_1 X1 k5_numbers)\Rightarrow((k2_nat_1 X1 np_1 \in k3_amistd_1 np_2 (k1_scmring2 X0) X1)\wedge(\forall X2.(m1_subset_1 X2 k5_numbers)\Rightarrow((X2 \in k3_amistd_1 np_2 (k1_scmring2 X0) X1)\Rightarrow(r1_xxreal_0 X1 X2)))))) \end{aligned}$$