

l1_scmfsa8b (TMLnKpFJmXoJtuLWiRJH- sKCfLLjkoQJShVc)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_compos_1 : \iota \Rightarrow \iota$ be given. Let $k1_scmfsa_2 : \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $v1_afinsq_1 : \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_compos_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_card_1 : \iota \Rightarrow \iota$ be given. Let $k3_scmfsa6a : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $l1_compos_1 : \iota \Rightarrow o$ be given. Let $k63_valued_1 : \iota \Rightarrow \iota$ be given. Let $k10_compos_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1_extpro_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_memstr_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_scmfsa6a : \iota \Rightarrow \iota$ be given. Let $v1_extpro_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_3 : \iota$ be given. Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow (r1_tarski X0 (k1_funct_4 X1 X0))) \quad (1)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. ((l1_compos_1 X0) \wedge ((v1_relat_1 X1) \wedge ((v4_relat_1 X1 k5_numbers) \wedge ((v5_relat_1 X1 (u1_compos_1 X0)) \wedge ((v1_funct_1 X1) \wedge ((v1_finset_1 X1) \wedge (v1_afinsq_1 X1))))))) \Rightarrow (k63_valued_1 (k10_compos_1 X0 X1) = X1) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (l1_extpro_1 X1 X0) \Rightarrow ((l1_memstr_0 X1 X0) \wedge (l1_compos_1 X1)) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((l1_compos_1 X0)\wedge(((v1_relat_1 \\ & X1)\wedge((v4_relat_1 X1 k5_numbers)\wedge((v5_relat_1 X1 (u1_compos_1 \\ & X0))\wedge((v1_funct_1 X1)\wedge(v1_finset_1 X1))))))\wedge(v7_ordinal1 X2)))\Rightarrow \\ & ((v1_relat_1 (k6_compos_1 X0 X1 X2))\wedge((v4_relat_1 (k6_compos_1 \\ & X0 X1 X2) k5_numbers)\wedge((v5_relat_1 (k6_compos_1 X0 X1 X2) (u1_compos_1 \\ & X0))\wedge((v1_funct_1 (k6_compos_1 X0 X1 X2))\wedge(v1_finset_1 (k6_compos_1 \\ & X0 X1 X2))))))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.(v1_finset_1 X0)\Rightarrow(m1_subset_1 (k5_card_1 X0) k4_ordinal1) \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0)\wedge((v4_relat_1 X0 k5_numbers)\wedge((v5_relat_1 \\ & X0 (u1_compos_1 k1_scmfsa_2))\wedge((v1_funct_1 X0)\wedge(v1_finset_1 \\ & X0))))))\Rightarrow((v1_relat_1 (k2_scmfsa6a X0))\wedge((v4_relat_1 (k2_scmfsa6a \\ & X0) k5_numbers)\wedge((v5_relat_1 (k2_scmfsa6a X0) (u1_compos_1 k1_scmfsa_2))\wedge \\ & ((v1_funct_1 (k2_scmfsa6a X0))\wedge(v1_finset_1 (k2_scmfsa6a X0)))))) \end{aligned} \quad (7)$$

Assume the following.

$$(v1_extpro_1 k1_scmfsa_2 np_3)\wedge(l1_extpro_1 k1_scmfsa_2 np_3) \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0)\wedge((v4_relat_1 X0 k5_numbers)\wedge((v5_relat_1 \\ & X0 (u1_compos_1 k1_scmfsa_2))\wedge((\neg v1_xboole_0 X0)\wedge((v1_funct_1 \\ & X0)\wedge((v1_finset_1 X0)\wedge(v1_afinsq_1 X0)))))))\Rightarrow(\forall X1.(\\ & (v1_relat_1 X1)\wedge((v4_relat_1 X1 k5_numbers)\wedge((v5_relat_1 X1 \\ & (u1_compos_1 k1_scmfsa_2))\wedge((\neg v1_xboole_0 X1)\wedge((v1_funct_1 \\ & X1)\wedge((v1_finset_1 X1)\wedge(v1_afinsq_1 X1)))))))\Rightarrow(k3_scmfsa6a \\ & X0 X1 = k1_funct_4 (k2_scmfsa6a (k63_valued_1 (k10_compos_1 k1_scmfsa_2 \\ & X0))) (k6_compos_1 k1_scmfsa_2 X1 (k5_card_1 X0))) \end{aligned} \quad (9)$$

Assume the following.

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

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v1_xboole_0 X0)\wedge((v1_relat_1 X0)\wedge((v4_relat_1 \\ & X0 k5_numbers)\wedge((v5_relat_1 X0 (u1_compos_1 k1_scmfsa_2))\wedge(\\ & (v1_funct_1 X0)\wedge((v1_finset_1 X0)\wedge(v1_afinsq_1 X0)))))))\Rightarrow(\\ & \forall X1.((\neg v1_xboole_0 X1)\wedge((v1_relat_1 X1)\wedge((v4_relat_1 \\ & X1 k5_numbers)\wedge((v5_relat_1 X1 (u1_compos_1 k1_scmfsa_2))\wedge(\\ & (v1_funct_1 X1)\wedge((v1_finset_1 X1)\wedge(v1_afinsq_1 X1)))))))\Rightarrow(\\ & r1_tarski (k6_compos_1 k1_scmfsa_2 X1 (k5_card_1 X0)) (k3_scmfsa6a \\ & X0 X1))) \end{aligned}$$