

t55_scmfsa8c

(TMb5mYvfR8mm58Nd58z4VYfztpYJRHF4eJ5)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_compos_1 : \iota \Rightarrow \iota$ be given. Let $k1_scmfsa_2 : \iota$ be given. Let $v1_ami_2 : \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $r3_scmfsa7b : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r4_scmfsa7b : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_scmfsa6a : \iota \Rightarrow \iota \Rightarrow \iota$ be given. 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 $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $v1_afinsq_1 : \iota \Rightarrow o$ be given. Let $k3_scmfsa6a : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11_compos_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1_compos_1 : \iota \Rightarrow o$ 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 $v1_extpro_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_3 : \iota$ be given. Assume the following.

$$\begin{aligned}
& \forall X0. ((\neg v1_xboole_0 X0) \wedge ((v1_relat_1 X0) \wedge ((v4_relat_1 \\
& X0 k5_numbers) \wedge ((v5_relat_1 X0 (u1_compos_1 k1_scmfsa_2)) \wedge (\\
& (v1_funct_1 X0) \wedge ((v1_finset_1 X0) \wedge (v1_afinsq_1 X0)))))) \Rightarrow (\\
& \forall X1. ((\neg v1_xboole_0 X1) \wedge ((v1_relat_1 X1) \wedge ((v4_relat_1 \\
& X1 k5_numbers) \wedge ((v5_relat_1 X1 (u1_compos_1 k1_scmfsa_2)) \wedge (\\
& (v1_funct_1 X1) \wedge ((v1_finset_1 X1) \wedge (v1_afinsq_1 X1)))))) \Rightarrow (\\
& \forall X2. ((v1_ami_2 X2) \wedge (m1_subset_1 X2 (u1_struct_0 k1_scmfsa_2))) \Rightarrow \\
& (\neg(\neg r4_scmfsa7b X0 X2) \wedge ((\neg r4_scmfsa7b X1 X2) \wedge (r4_scmfsa7b (k3_scmfsa6a \\
& X0 X1) X2))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0. (m1_subset_1 X0 (u1_compos_1 k1_scmfsa_2)) \Rightarrow (\forall X1. \\
& ((v1_ami_2 X1) \wedge (m1_subset_1 X1 (u1_struct_0 k1_scmfsa_2))) \Rightarrow \\
& (\neg(\neg r3_scmfsa7b X0 X1) \wedge (r4_scmfsa7b (k11_compos_1 k1_scmfsa_2 \\
& X0) X1)))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((l1_compos_1 X0)\wedge(m1_subset_1 X1 (u1_compos_1 \\ X0)))\Rightarrow((\neg v1_xboole_0 (k11_compos_1 X0 X1))\wedge((v1_relat_1 (k11_compos_1 \\ X0 X1))\wedge((v4_relat_1 (k11_compos_1 X0 X1) k5_numbers)\wedge((v5_relat_1 \\ (k11_compos_1 X0 X1) (u1_compos_1 X0))\wedge((v1_funct_1 (k11_compos_1 \\ X0 X1))\wedge((v1_finset_1 (k11_compos_1 X0 X1))\wedge(v1_afinsq_1 (k11_compos_1 \\ X0 X1)))))))))) \end{aligned} \quad (3)$$

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.

$$(v1_extpro_1 k1_scmfsa_2 np_3)\wedge(l1_extpro_1 k1_scmfsa_2 np_3) \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((l1_compos_1 X0)\wedge(m1_subset_1 X1 (u1_compos_1 \\ X0)))\Rightarrow((v1_relat_1 (k11_compos_1 X0 X1))\wedge((v4_relat_1 (k11_compos_1 \\ X0 X1) k5_numbers)\wedge((v5_relat_1 (k11_compos_1 X0 X1) (u1_compos_1 \\ X0))\wedge((v1_funct_1 (k11_compos_1 X0 X1))\wedge(v1_finset_1 (k11_compos_1 \\ X0 X1)))))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_subset_1 X0 (u1_compos_1 k1_scmfsa_2))\Rightarrow(\forall X1. \\ (m1_subset_1 X1 (u1_compos_1 k1_scmfsa_2))\Rightarrow(k6_scmfsa6a X0 X1 = \\ k3_scmfsa6a (k11_compos_1 k1_scmfsa_2 X0) (k11_compos_1 k1_scmfsa_2 \\ X1))) \end{aligned} \quad (7)$$

Theorem 1

$$\begin{aligned} \forall X0.(m1_subset_1 X0 (u1_compos_1 k1_scmfsa_2))\Rightarrow(\forall X1. \\ (m1_subset_1 X1 (u1_compos_1 k1_scmfsa_2))\Rightarrow(\forall X2.((v1_ami_2 \\ X2)\wedge(m1_subset_1 X2 (u1_struct_0 k1_scmfsa_2)))\Rightarrow(\neg(\neg r3_scmfsa7b \\ X0 X2)\wedge((\neg r3_scmfsa7b X1 X2)\wedge(r4_scmfsa7b (k6_scmfsa6a X0 X1) \\ X2)))))) \end{aligned}$$