

t84_scmpds_6

(TMZxAittPy11GCu3FbQasA87zbhFjmmjEHV)

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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 $k1_scmpds_2 : \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v5_funct_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_memstr_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $v1_afinsq_1 : \iota \Rightarrow o$ be given. Let $v1_ami_2 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_int_1 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_scmpds_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k6_scmpds_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_scmpds_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_memstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_memstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_card_1 : \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ 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 $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v5_relat_1 \\
 & X0 (u1_compos_1 k1_scmpds_2)) \wedge ((v1_funct_1 X0) \wedge (v1_partfun1 \\
 & X0 k5_numbers)))) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge ((v4_relat_1 \\
 & X1 (u1_struct_0 k1_scmpds_2)) \wedge ((v1_funct_1 X1) \wedge ((v5_funct_1 \\
 & X1 (k2_memstr_0 np_2 k1_scmpds_2)) \wedge (v1_partfun1 X1 (u1_struct_0 \\
 & k1_scmpds_2)))))) \Rightarrow (\forall X2.((\neg v1_xboole_0 X2) \wedge ((v1_relat_1 \\
 & X2) \wedge ((v4_relat_1 X2 k5_numbers) \wedge ((v5_relat_1 X2 (u1_compos_1 \\
 & k1_scmpds_2)) \wedge ((v1_funct_1 X2) \wedge ((v1_finset_1 X2) \wedge (v1_afinsq_1 \\
 & X2)))))) \Rightarrow (\forall X3.((v1_ami_2 X3) \wedge (m1_subset_1 X3 (u1_struct_0 \\
 & k1_scmpds_2))) \Rightarrow (\forall X4.(v1_int_1 X4) \Rightarrow ((r1_xxreal_0 (k1_funct_1 \\
 & X1 (k2_scmpds_2 (k1_funct_1 X1 X3) X4)) k6_numbers) \Rightarrow (k6_scmpds_4 \\
 & (k7_scmpds_6 X3 X4 X2) (k8_memstr_0 np_2 k1_scmpds_2 X1) X0 = k1_funct_4 \\
 & X1 (k7_memstr_0 np_2 k1_scmpds_2 (k2_nat_1 (k5_card_1 X2) np_1)))))))))
 \end{aligned}$$

(1)

Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 (u1_struct_0 k1_scmpds_2)) \wedge \\ & ((v1_funct_1 X0) \wedge ((v5_funct_1 X0 (k2_memstr_0 np_2 k1_scmpds_2)) \wedge \\ & (v1_partfun1 X0 (u1_struct_0 k1_scmpds_2)))))) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 k5_numbers) \Rightarrow (\forall X2.((v1_ami_2 X2) \wedge (m1_subset_1 \\ & X2 (u1_struct_0 k1_scmpds_2))) \Rightarrow (k1_funct_1 X0 X2 = k1_funct_1 \\ & (k1_funct_4 X0 (k7_memstr_0 np_2 k1_scmpds_2 X1)) X2))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. \neg (X0 \in X1) \wedge ((m1_subset_1 X1 (k1_zfmisc_1 X2)) \wedge (v1_xboole_0 X2)) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \quad (4)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 np_1) \wedge (m2_subset_1 np_1 k1_numbers k5_numbers)) \wedge \\ & ((m1_subset_1 np_1 k5_numbers) \wedge (m1_subset_1 np_1 k1_numbers)) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2. (m2_subset_1 \\ & X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \end{aligned} \quad (6)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (7)$$

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1) \wedge (v3_ordinal1 k4_ordinal1) \quad (8)$$

Assume the following.

$$\forall X0. \exists X1. m1_subset_1 X1 X0 \quad (9)$$

Assume the following.

$$m1_subset_1 k5_numbers (k1_zfmisc_1 k1_numbers) \quad (10)$$

Assume the following.

$$\forall X0. (v1_finset_1 X0) \Rightarrow (m1_subset_1 (k5_card_1 X0) k4_ordinal1) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k5_numbers)\wedge(v7_ordinal1 X1))\Rightarrow(m2_subset_1 (k2_nat_1 X0 X1) k1_numbers k5_numbers) \quad (12)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1)\Rightarrow(v7_ordinal1 X0) \quad (13)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v1_relat_1 X0)\wedge((v4_relat_1 X0 k5_numbers)\wedge((v5_relat_1 \\ & X0 (u1_compos_1 k1_scmpds_2))\wedge((v1_funct_1 X0)\wedge(v1_partfun1 \\ & X0 k5_numbers))))))\Rightarrow(\forall X1.((v1_relat_1 X1)\wedge((v4_relat_1 \\ & X1 (u1_struct_0 k1_scmpds_2))\wedge((v1_funct_1 X1)\wedge((v5_funct_1 \\ & X1 (k2_memstr_0 np_2 k1_scmpds_2))\wedge(v1_partfun1 X1 (u1_struct_0 \\ & k1_scmpds_2))))))\Rightarrow(\forall X2.((\neg v1_xboole_0 X2)\wedge((v1_relat_1 \\ & X2)\wedge((v4_relat_1 X2 k5_numbers)\wedge((v5_relat_1 X2 (u1_compos_1 \\ & k1_scmpds_2))\wedge((v1_funct_1 X2)\wedge((v1_finset_1 X2)\wedge(v1_afinsq_1 \\ & X2))))))\Rightarrow(\forall X3.((v1_ami_2 X3)\wedge(m1_subset_1 X3 (u1_struct_0 \\ & k1_scmpds_2)))\Rightarrow(\forall X4.((v1_ami_2 X4)\wedge(m1_subset_1 X4 (\\ & u1_struct_0 k1_scmpds_2)))\Rightarrow(\forall X5.(v1_int_1 X5)\Rightarrow((r1_xreal_0 \\ & (k1_funct_1 X1 (k2_scmpds_2 (k1_funct_1 X1 X3) X5)) k6_numbers)\Rightarrow \\ & (k1_funct_1 (k6_scmpds_4 (k7_scmpds_6 X3 X5 X2) (k8_memstr_0 np_2 \\ & k1_scmpds_2 X1) X0) X4 = k1_funct_1 X1 X4))))))))) \end{aligned}$$