

t47_scmfsa8c (TM-
MAQaQpQYMuPQLMU6FiVfYMJX8cu9CT4p7)

October 27, 2020

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 $v1_ami_2 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $r4_scmfsa7b : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_scmfsa6a : \iota \Rightarrow \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k1_scmfsa6a : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $k5_card_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v5_relat_1 \\ & X0 (u1_compos_1 k1_scmfsa_2)) \wedge ((v1_funct_1 X0) \wedge (v1_finset_1 \\ & X0)))))) \Rightarrow (\forall X1.(m2_subset_1 X1 k1_numbers k5_numbers) \Rightarrow \\ & (\forall X2.((v1_ami_2 X2) \wedge (m1_subset_1 X2 (u1_struct_0 k1_scmfsa_2)))) \Rightarrow \\ & (\neg(\neg r4_scmfsa7b X0 X2) \wedge (r4_scmfsa7b (k1_scmfsa6a X0 X1) X2)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2.(m2_subset_1 \\ & X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \end{aligned} \quad (2)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (3)$$

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1) \wedge (v3_ordinal1 k4_ordinal1) \quad (4)$$

Assume the following.

$$\neg v1_xboole_0 k1_numbers \quad (5)$$

Assume the following.

$$m1_subset_1\ k5_numbers\ (k1_zfmisc_1\ k1_numbers) \quad (6)$$

Assume the following.

$$\forall X0.(v1_finset_1\ X0)\Rightarrow(m1_subset_1\ (k5_card_1\ X0)\ k4_ordinal1) \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1\ X0)\wedge((v4_relat_1\ X0\ k5_numbers)\wedge((v5_relat_1 \\ X0\ (u1_compos_1\ k1_scmfsa_2))\wedge((v1_funct_1\ X0)\wedge(v1_finset_1 \\ X0))))))\Rightarrow(k2_scmfsa6a\ X0 = k1_scmfsa6a\ X0\ (k5_card_1\ X0)) \end{aligned} \quad (8)$$

Theorem 1

$$\begin{aligned} \forall X0.((\neg v1_xboole_0\ X0)\wedge((v1_relat_1\ X0)\wedge((v4_relat_1 \\ X0\ k5_numbers)\wedge((v5_relat_1\ X0\ (u1_compos_1\ k1_scmfsa_2))\wedge(\\ (v1_funct_1\ X0)\wedge((v1_finset_1\ X0)\wedge(v1_afinsq_1\ X0)))))))\Rightarrow(\\ \forall X1.((v1_ami_2\ X1)\wedge(m1_subset_1\ X1\ (u1_struct_0\ k1_scmfsa_2)))\Rightarrow \\ (\neg(\neg r4_scmfsa7b\ X0\ X1)\wedge(r4_scmfsa7b\ (k2_scmfsa6a\ X0)\ X1))) \end{aligned}$$