

t16_scmfsa8a
(TMP5QhJg2F8MpLvp4E8gW8Y3X6WVmBBiaec)

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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 $k1_scmfsa_2 : \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_compos_1 : \iota \Rightarrow \iota$ be given. Let $k2_scmfsa6a : \iota \Rightarrow \iota$ be given. Let $k11_scmfsa_2 : \iota \Rightarrow \iota$ be given. Let $k5_card_1 : \iota \Rightarrow \iota$ 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 $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ 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. Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v5_relat_1 \\ & X0 (u1_compos_1 k1_scmfsa_2)) \wedge ((v1_funct_1 X0) \wedge (v1_finset_1 \\ & X0)))))) \Rightarrow (\forall X1.(m2_subset_1 X1 k1_numbers k5_numbers) \Rightarrow \\ & (\forall X2.(X2 \in k9_xtuple_0 X0) \Rightarrow (((k1_funct_1 X0 X2 = k2_compos_1 \\ & k1_scmfsa_2) \Rightarrow (k1_funct_1 (k1_scmfsa6a X0 X1) X2 = k11_scmfsa_2 \\ & X1)) \wedge ((k1_funct_1 X0 X2 \neq k2_compos_1 k1_scmfsa_2) \Rightarrow (k1_funct_1 \\ & (k1_scmfsa6a X0 X1) X2 = k1_funct_1 X0 X2)))))) \end{aligned} \quad (1)$$

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

$$\begin{aligned} \forall X0.((v1_relat_1 \ X0) \wedge ((v4_relat_1 \ X0 \ k5_numbers) \wedge ((v5_relat_1 \\ X0 \ (u1_compos_1 \ k1_scmfsa_2)) \wedge ((v1_funct_1 \ X0) \wedge (v1_finset_1 \\ X0)))))) \Rightarrow (\forall X1.(X1 \in k9_xtuple_0 \ X0) \Rightarrow (((k1_funct_1 \ X0 \ X1 = \\ k2_compos_1 \ k1_scmfsa_2) \Rightarrow (k1_funct_1 \ (k2_scmfsa6a \ X0) \ X1 = k11_scmfsa_2 \\ (k5_card_1 \ X0))) \wedge ((k1_funct_1 \ X0 \ X1 \neq k2_compos_1 \ k1_scmfsa_2) \Rightarrow \\ (k1_funct_1 \ (k2_scmfsa6a \ X0) \ X1 = k1_funct_1 \ X0 \ X1)))) \end{aligned}$$