

t65_finseq_4 (TMRxnG-
BaLPQhe3FqXSDRGoavzt7Cmc7fxcS)

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Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_card_1 : \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_wellord2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_card_1 : \iota \Rightarrow o$ be given. Let $r1_ordinal1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $v2_funct_1 : \iota \Rightarrow o$ be given. Let $k7_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. (r2_wellord2 X0 X1) \Leftrightarrow (k1_card_1 X0 = k1_card_1 X1) \quad (1)$$

Assume the following.

$$\forall X0. (v1_card_1 X0) \Rightarrow (\forall X1. (v1_card_1 X1) \Rightarrow ((X0 \in X1) \Leftrightarrow (\neg r1_ordinal1 X1 X0))) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow (((r1_tarski X0 (k9_xtuple_0 X1)) \wedge (v2_funct_1 X1)) \Rightarrow (r2_wellord2 X0 (k7_relat_1 X1 X0))) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (r1_tarski X0 X1) \Rightarrow (r1_ordinal1 (k1_card_1 X0) (k1_card_1 X1)) \quad (4)$$

Assume the following.

$$\forall X0. (v1_relat_1 X0) \Rightarrow (k7_relat_1 X0 (k9_xtuple_0 X0) = k10_xtuple_0 X0) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.r1_tarski\ X0\ X0 \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1\ X1)\wedge(v4_relat_1\ X1\ X0))\Rightarrow(k1_relset_1\ X0\ X1 = k9_xtuple_0\ X1) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.v1_relat_1\ (k2_zfmisc_1\ X0\ X1) \quad (8)$$

Assume the following.

$$\forall X0.v1_card_1\ (k1_card_1\ X0) \quad (9)$$

Assume the following.

$$\forall X0.((v1_relat_1\ X0)\wedge(v1_funct_1\ X0))\Rightarrow((v2_funct_1\ X0)\Leftrightarrow(\forall X1.\forall X2.((X1 \in k9_xtuple_0\ X0)\wedge((X2 \in k9_xtuple_0\ X0)\wedge(k1_funct_1\ X0\ X1 = k1_funct_1\ X0\ X2)))\Rightarrow(X1 = X2))) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1)))\Rightarrow(((X1 \neq k1_xboole_0)\Rightarrow((v1_funct_2\ X2\ X0\ X1)\Leftrightarrow(X0 = k1_relset_1\ X0\ X2)))\wedge((X1 = k1_xboole_0)\Rightarrow((v1_funct_2\ X2\ X0\ X1)\Leftrightarrow(X2 = k1_xboole_0)))) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.(v1_relat_1\ X1)\Rightarrow((v5_relat_1\ X1\ X0)\Leftrightarrow(r1_tarski\ (k10_xtuple_0\ X1)\ X0)) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1)))\Rightarrow((v4_relat_1\ X2\ X0)\wedge(v5_relat_1\ X2\ X1)) \quad (13)$$

Assume the following.

$$\forall X0.(v1_relat_1\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1\ X0))\Rightarrow(v1_relat_1\ X1)) \quad (14)$$

Theorem 1

$$\forall X0.\forall X1.\forall X2.((v1_funct_1\ X2)\wedge((v1_funct_2\ X2\ X1\ X0)\wedge(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X1\ X0))))\Rightarrow(\neg(k1_card_1\ X0 \in k1_card_1\ X1)\wedge((X0 \neq k1_xboole_0)\wedge(\forall X3.\forall X4.\neg(X3 \in X1)\wedge((X4 \in X1)\wedge((X3 \neq X4)\wedge(k1_funct_1\ X2\ X3 = k1_funct_1\ X2\ X4))))))$$