

t1_topreal3
(TMYUQHEm6DwzC6KGq8LPVEYfH9RVLdue4kv)

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Let $np_1 : \iota$ be given. Let $k4_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k11_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $np_3 : \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v3_card_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $k2_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k2_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k7_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_enumset1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k5_numbers : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.((v1_relat_1\ X1) \wedge ((\\ v1_funct_1\ X1) \wedge ((v3_card_1\ X1\ X0) \wedge (v1_finseq_1\ X1)))) \Rightarrow (k4_finseq_1 \\ X1 = k2_finseq_1\ X0)) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0.k2_finseq_2\ np_1\ X0 = k9_finseq_1\ X0 \tag{2}$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.(k11_finseq_1\ X0\ X1\ X2 = k7_finseq_1 \\ (k9_finseq_1\ X0)\ (k10_finseq_1\ X1\ X2)) \wedge (k11_finseq_1\ X0\ X1\ X2 = \\ k7_finseq_1\ (k10_finseq_1\ X0\ X1)\ (k9_finseq_1\ X2)) \end{aligned} \tag{3}$$

Assume the following.

$$k2_finseq_1\ np_3 = k1_enumset1\ np_1\ np_2\ np_3 \tag{4}$$

Assume the following.

$$\begin{aligned} ((v2_xxreal_0\ np_3) \wedge (m2_subset_1\ np_3\ k1_numbers\ k5_numbers)) \wedge \\ ((m1_subset_1\ np_3\ k5_numbers) \wedge (m1_subset_1\ np_3\ k1_numbers)) \end{aligned} \tag{5}$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (6)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow (k4_finseq_1 X0 = k9_xtuple_0 X0) \quad (7)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. k10_xtuple_0 (k11_finseq_1 X0 X1 X2) = k1_enumset1 X0 X1 X2 \quad (8)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (v1_relat_1 (k11_finseq_1 X0 X1 X2)) \wedge (v1_funct_1 (k11_finseq_1 X0 X1 X2)) \quad (9)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. v3_card_1 (k11_finseq_1 X0 X1 X2) \text{ np_3} \quad (10)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. v1_finseq_1 (k11_finseq_1 X0 X1 X2) \quad (11)$$

Assume the following.

$$\forall X0. \forall X1. k10_finseq_1 X0 X1 = k7_finseq_1 (k9_finseq_1 X0) (k9_finseq_1 X1) \quad (12)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. \forall X3. (X3 = k1_enumset1 X0 X1 X2) \Leftrightarrow (\forall X4. (X4 \in X3) \Leftrightarrow (\neg (X4 \neq X0) \wedge ((X4 \neq X1) \wedge (X4 \neq X2)))) \quad (13)$$

Assume the following.

$$\forall X0. (m1_subset_1 X0 k4_ordinal1) \Rightarrow (v7_ordinal1 X0) \quad (14)$$

Theorem 1

$$\forall X0. \forall X1. \forall X2. (np_1 \in k4_finseq_1 (k11_finseq_1 X0 X1 X2)) \wedge ((np_2 \in k4_finseq_1 (k11_finseq_1 X0 X1 X2)) \wedge (np_3 \in k4_finseq_1 (k11_finseq_1 X0 X1 X2)))$$