

t103_finseq_2

(TMN7axbrmGbJx3eF7EFknxEo76ZDA2JCp1k)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v3_card_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_3 : \iota$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k11_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $m1_finseq_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k3_finseq_2 : \iota \Rightarrow \iota$ be given. Let $k13_finseq_1 : \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_card_1 : \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. (\neg v1_xboole_0 X0) \Rightarrow & (k4_finseq_2 np_3 X0 = ReplSep3 \\ & (toset (\lambda X1 : \iota. m1_subset_1 X1 X0)) (\lambda X1 : \iota. toset (\lambda X2 : \\ & \iota. m1_subset_1 X2 X0)) (\lambda X1 : \iota. \lambda X2 : \iota. toset (\lambda X3 : \\ & \iota. m1_subset_1 X3 X0)) (\lambda X1 : \iota. \lambda X2 : \iota. \lambda X3 : \iota. \\ & True) (\lambda X1 : \iota. \lambda X2 : \iota. \lambda X3 : \iota. k11_finseq_1 X1 X2 \\ & X3)) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} ((v2_xxreal_0 np_3) \wedge (m2_subset_1 np_3 k1_numbers k5_numbers)) \wedge \\ ((m1_subset_1 np_3 k5_numbers) \wedge (m1_subset_1 np_3 k1_numbers)) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (m1_finseq_2 X1 X0) \Rightarrow (\forall X2. (m2_finseq_2 X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. (m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \quad (5)$$

Assume the following.

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

Assume the following.

$$\forall X0. k3_finseq_2 X0 = k13_finseq_1 X0 \quad (7)$$

Assume the following.

$$\forall X0. ((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow (k3_finseq_1 X0 = k1_card_1 X0) \quad (8)$$

Assume the following.

$$\forall X0. \forall X1. (m2_finseq_1 X1 X0) \Rightarrow ((v1_funct_1 X1) \wedge (v1_finseq_1 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers X0)))) \quad (9)$$

Assume the following.

$$\forall X0. \forall X1. (m1_finseq_1 X1 X0) \Rightarrow ((v1_relat_1 X1) \wedge (v1_funct_1 X1) \wedge (v1_finseq_1 X1)) \quad (10)$$

Assume the following.

$$\forall X0. m1_finseq_2 (k3_finseq_2 X0) X0 \quad (11)$$

Assume the following.

$$\forall X0. \forall X1. (v3_card_1 X1 X0) \Leftrightarrow (k1_card_1 X1 = X0) \quad (12)$$

Assume the following.

$$\forall X0. (v7_ordinal1 X0) \Rightarrow (\forall X1. k4_finseq_2 X0 X1 = ReplSep (toset (\lambda X2 : \iota. m2_finseq_2 X2 X1 (k3_finseq_2 X1))) (\lambda X2 : \iota. k3_finseq_1 X2 = X0) (\lambda X2 : \iota. X2))) \quad (13)$$

Assume the following.

$$\forall X0. \forall X1. (X1 = k13_finseq_1 X0) \Leftrightarrow (\forall X2. (X2 \in X1) \Leftrightarrow (m2_finseq_1 X2 X0)) \quad (14)$$

Assume the following.

$$\forall X0. (m1_subset_1 X0 k4_ordinal1) \Rightarrow (v7_ordinal1 X0) \quad (15)$$

Theorem 1

$$\forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((v3_card_1 X1 np_3) \wedge (m2_finseq_1 X1 X0)) \Rightarrow (\exists X2. (m1_subset_1 X2 X0) \wedge (\exists X3. (m1_subset_1 X3 X0) \wedge (\exists X4. (m1_subset_1 X4 X0) \wedge (X1 = k11_finseq_1 X2 X3 X4))))))$$