

t17_finseq_4 (TMdiVFB- Wnkwu6uxHRxwNSBH2uAosym6wQ2Z)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_finseq_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $np_2 : \iota$ 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 $k4_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k2_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k10_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k1_finseq_1 : \iota \Rightarrow \iota$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_finseq_1 : \iota \Rightarrow \iota$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ 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.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.((v1_relat_1\ X2) \wedge ((v1_funct_1 \\ X2) \wedge (v1_finseq_1\ X2))) \Rightarrow ((X2 = k10_finseq_1\ X0\ X1) \Leftrightarrow ((k3_finseq_1 \\ X2 = np_2) \wedge ((k1_funct_1\ X2\ np_1 = X0) \wedge (k1_funct_1\ X2\ np_2 = X1)))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} ((v2_xxreal_0\ np_2) \wedge (m2_subset_1\ np_2\ k1_numbers\ k5_numbers)) \wedge \\ ((m1_subset_1\ np_2\ k5_numbers) \wedge (m1_subset_1\ np_2\ k1_numbers)) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} ((v2_xxreal_0\ np_1) \wedge (m2_subset_1\ np_1\ k1_numbers\ k5_numbers)) \wedge \\ ((m1_subset_1\ np_1\ k5_numbers) \wedge (m1_subset_1\ np_1\ k1_numbers)) \end{aligned} \tag{4}$$

Assume the following.

$$r1_xxreal_0 \ np_2 \ np_2 \tag{5}$$

Assume the following.

$$r1_xxreal_0 \ np_1 \ np_2 \tag{6}$$

Assume the following.

$$r1_xxreal_0 \ np_1 \ np_1 \tag{7}$$

Assume the following.

$$k5_numbers = k4_ordinal1 \tag{8}$$

Assume the following.

$$\forall X0.((v1_relat_1 \ X0) \wedge ((v1_funct_1 \ X0) \wedge (v1_finseq_1 \ X0))) \Rightarrow (k4_finseq_1 \ X0 = k9_xtuple_0 \ X0) \tag{9}$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((\neg v1_xboole_0 \ X0) \wedge ((m1_subset_1 \ X1 \ X0) \wedge (m1_subset_1 \ X2 \ X0))) \Rightarrow (k2_finseq_4 \ X0 \ X1 \ X2 = k10_finseq_1 \ X1 \ X2) \tag{10}$$

Assume the following.

$$\forall X0. (v7_ordinal1 \ X0) \Rightarrow (k2_finseq_1 \ X0 = k1_finseq_1 \ X0) \tag{11}$$

Assume the following.

$$\forall X0. \forall X1. (v1_relat_1 \ (k10_finseq_1 \ X0 \ X1)) \wedge (v1_funct_1 \ (k10_finseq_1 \ X0 \ X1)) \tag{12}$$

Assume the following.

$$\forall X0. \forall X1. v3_card_1 \ (k10_finseq_1 \ X0 \ X1) \ np_2 \tag{13}$$

Assume the following.

$$\forall X0. \forall X1. v1_finseq_1 \ (k10_finseq_1 \ X0 \ X1) \tag{14}$$

Assume the following.

$$\forall X0. \forall X1. (m2_finseq_1 \ X1 \ X0) \Rightarrow ((v1_funct_1 \ X1) \wedge ((v1_finseq_1 \ X1) \wedge (m1_subset_1 \ X1 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ k5_numbers \ X0)))))) \tag{15}$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((\neg v1_xboole_0 \ X0) \wedge ((m1_subset_1 \ X1 \ X0) \wedge (m1_subset_1 \ X2 \ X0))) \Rightarrow (m2_finseq_1 \ (k2_finseq_4 \ X0 \ X1 \ X2) \ X0) \tag{16}$$

Assume the following.

$$\forall X0.\forall X1.k10_finseq_1 X0 X1 = k7_finseq_1 (k9_finseq_1 X0) (k9_finseq_1 X1) \quad (17)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1)\wedge((v5_relat_1 X1 X0)\wedge(v1_funct_1 X1)))\Rightarrow(\forall X2.(X2 \in k9_xtuple_0 X1)\Rightarrow(k7_partfun1 X0 X1 X2 = k1_funct_1 X1 X2)) \quad (18)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0)\Rightarrow(k1_finseq_1 X0 = ReplSep (toset (\lambda X1 : \iota.m2_subset_1 X1 k1_numbers k5_numbers)) (\lambda X1 : \iota.(r1_xxreal_0 np_1 X1)\wedge(r1_xxreal_0 X1 X0)) (\lambda X1 : \iota.X1)) \quad (19)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1)\Rightarrow(v7_ordinal1 X0) \quad (20)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow((v4_relat_1 X2 X0)\wedge(v5_relat_1 X2 X1)) \quad (21)$$

Theorem 1

$$\forall X0.(\neg v1_xboole_0 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 X0)\Rightarrow(\forall X2.(m1_subset_1 X2 X0)\Rightarrow((k7_partfun1 X0 (k2_finseq_4 X0 X1 X2) np_1 = X1)\wedge(k7_partfun1 X0 (k2_finseq_4 X0 X1 X2) np_2 = X2))))$$