

t23_finseq_6 (TMGm-
SxQqWxWWn4fdo39CRtTWoo4Cb9gPciC)

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Let $k4_finseq_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k4_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k2_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k2_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k9_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ 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 $k10_xtuple_0 : \iota \Rightarrow \iota$ 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. 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.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.\forall X3.((v1_relat_1 X3) \wedge \\ ((v1_funct_1 X3) \wedge (v1_finseq_1 X3))) \Rightarrow ((X3 = k11_finseq_1 X0 X1 \\ X2) \Leftrightarrow ((k3_finseq_1 X3 = np_3) \wedge ((k1_funct_1 X3 np_1 = X0) \wedge ((k1_funct_1 \\ X3 np_2 = X1) \wedge (k1_funct_1 X3 np_3 = X2)))))) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.(k11_finseq_1 X0 X1 X2 = k7_finseq_1 \\ (k9_finseq_1 X0) (k10_finseq_1 X1 X2)) \wedge (k11_finseq_1 X0 X1 X2 = \\ k7_finseq_1 (k10_finseq_1 X0 X1) (k9_finseq_1 X2)) \end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow \\ & (\forall X1.(X1 \in k10_xtuple_0 X0) \Rightarrow (k4_finseq_4 X0 X1 \in k4_finseq_1 \\ & X0)) \end{aligned} \quad (5)$$

Assume the following.

$$k2_finseq_1 np_3 = k1_enumset1 np_1 np_2 np_3 \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow \\ & (\forall X1.(X1 \in k10_xtuple_0 X0) \Rightarrow (k1_funct_1 X0 (k4_finseq_4 \\ & X0 X1) = X1)) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 np_3) \wedge (m2_subset_1 np_3 k1_numbers k5_numbers)) \wedge \\ & ((m1_subset_1 np_3 k5_numbers) \wedge (m1_subset_1 np_3 k1_numbers)) \end{aligned} \quad (8)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. k10_xtuple_0 (k11_finseq_1 \\ & X0 X1 X2) = k1_enumset1 X0 X1 X2 \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (v1_relat_1 (k11_finseq_1 X0 \\ & X1 X2)) \wedge (v1_funct_1 (k11_finseq_1 X0 X1 X2)) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. v3_card_1 (k11_finseq_1 X0 X1 \\ & X2) np_3 \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. v1_finseq_1 (k11_finseq_1 X0 \\ & X1 X2) \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. k10_finseq_1 X0 X1 = k7_finseq_1 (k9_finseq_1 \\ & X0) (k9_finseq_1 X1) \end{aligned} \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(X3 = k1_enumset1 \\ X0 X1 X2) \Leftrightarrow (\forall X4.(X4 \in X3) \Leftrightarrow (\neg(X4 \neq X0) \wedge ((X4 \neq X1) \wedge (X4 \neq X2)))) \quad (15)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1) \Rightarrow (v7_ordinal1 X0) \quad (16)$$

Theorem 1

$$\forall X0.\forall X1.\forall X2.\neg(X0 \neq X1) \wedge ((X2 \neq X1) \wedge (k4_finseq_4 \\ (k11_finseq_1 X0 X2 X1) X1 \neq np_3))$$