

t23_finseq_5

(TML6NZCjqoAnmS9yT4RnFJeE4n3V7LeUtu1)

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Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k17_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k8_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ 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 $k5_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_finseq_1 : \iota \Rightarrow \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_card_1 : \iota \Rightarrow \iota$ be given. Let $k16_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $v1_card_1 : \iota \Rightarrow o$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.\forall X2.(m2_finseq_1 \\ X2\ X1) \Rightarrow (\forall X3.(m2_finseq_1\ X3\ X1) \Rightarrow ((r1_xxreal_0\ X0\ (k3_finseq_1 \\ X2)) \Rightarrow (k17_finseq_1\ X1\ X0\ (k8_finseq_1\ X1\ X2\ X3) = k17_finseq_1\ X1 \\ X0\ X2)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.((v1_relat_1\ X1) \wedge ((\\ v1_funct_1\ X1) \wedge (v1_finseq_1\ X1))) \Rightarrow (\forall X2.((v1_relat_1 \\ X2) \wedge ((v1_funct_1\ X2) \wedge (v1_finseq_1\ X2)))) \Rightarrow (((X1 = k5_relat_1\ X2 \\ (k2_finseq_1\ X0)) \wedge (r1_xxreal_0\ (k3_finseq_1\ X2)\ X0)) \Rightarrow (X2 = X1)))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0\ X0) \wedge (v1_xxreal_0\ X1)) \Rightarrow (\\ r1_xxreal_0\ X0\ X0) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1\ X1\ X0) \Leftrightarrow (m1_finseq_1\ X1\ X0) \tag{4}$$

Assume the following.

$$\forall X0.((v1_relat_1\ X0) \wedge ((v1_funct_1\ X0) \wedge (v1_finseq_1\ X0))) \Rightarrow \\ (k3_finseq_1\ X0 = k1_card_1\ X0) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v7_ordinal1\ X1)\wedge(m1_finseq_1\ X2\ X0))\Rightarrow(k17_finseq_1\ X0\ X1\ X2 = k16_finseq_1\ X1\ X2) \quad (6)$$

Assume the following.

$$\forall X0.(v1_finset_1\ X0)\Rightarrow((v1_finset_1\ (k1_card_1\ X0))\wedge(v1_card_1\ (k1_card_1\ X0))) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1\ X1\ X0)\Rightarrow((v1_relat_1\ X1)\wedge(v1_funct_1\ X1)\wedge(v1_finseq_1\ X1)) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1\ X0)\wedge((v1_relat_1\ X1)\wedge(v1_funct_1\ X1)\wedge(v1_finseq_1\ X1)))\Rightarrow((v1_relat_1\ (k16_finseq_1\ X0\ X1))\wedge((v1_funct_1\ (k16_finseq_1\ X0\ X1))\wedge(v1_finseq_1\ (k16_finseq_1\ X0\ X1)))) \quad (9)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow(\forall X1.((v1_relat_1\ X1)\wedge(v1_funct_1\ X1)\wedge(v1_finseq_1\ X1))\Rightarrow(k16_finseq_1\ X0\ X1 = k5_relat_1\ X1\ (k2_finseq_1\ X0))) \quad (10)$$

Assume the following.

$$\forall X0.((v3_ordinal1\ X0)\wedge(v1_finset_1\ X0))\Rightarrow(v7_ordinal1\ X0) \quad (11)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow(v1_xxreal_0\ X0) \quad (12)$$

Assume the following.

$$\forall X0.((v1_relat_1\ X0)\wedge((v1_funct_1\ X0)\wedge(v1_finseq_1\ X0))\Rightarrow((v1_relat_1\ X0)\wedge((v1_funct_1\ X0)\wedge(v1_finset_1\ X0)))) \quad (13)$$

Assume the following.

$$\forall X0.(v1_card_1\ X0)\Rightarrow(v3_ordinal1\ X0) \quad (14)$$

Theorem 1

$$\forall X0.\forall X1.(m2_finseq_1\ X1\ X0)\Rightarrow(\forall X2.(m2_finseq_1\ X2\ X0)\Rightarrow(k17_finseq_1\ X0\ (k3_finseq_1\ X1)\ (k8_finseq_1\ X0\ X1\ X2) = X1))$$