

t64_finseq_1
(TMJoqjSbrSLenxWzKX7yismmBBnF4Nmzgjg)

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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 $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_1 : \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k16_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k1_card_1 : \iota \Rightarrow \iota$ be given. Let $k2_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_finseq_1 : \iota \Rightarrow \iota$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $v1_card_1 : \iota \Rightarrow o$ 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 $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge ((\\ v1_funct_1 X1) \wedge (v1_finseq_1 X1))) \Rightarrow ((r1_xxreal_0 X0 (k3_finseq_1 \\ X1)) \Rightarrow (k3_finseq_1 (k16_finseq_1 X0 X1) = X0))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow \\ (k4_finseq_1 X0 = k9_xtuple_0 X0) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow \\ (k3_finseq_1 X0 = k1_card_1 X0) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (k2_finseq_1 X0 = k1_finseq_1 X0) \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_finset_1 X0) \Rightarrow ((v1_finset_1 (k1_card_1 X0)) \wedge (\\ v1_card_1 (k1_card_1 X0))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_finseq_1 \\ X0)))\wedge((v1_relat_1 X1)\wedge((v1_funct_1 X1)\wedge(v1_finseq_1 X1))))\Rightarrow \\ ((v1_relat_1 (k7_finseq_1 X0 X1))\wedge((v1_funct_1 (k7_finseq_1 \\ X0 X1))\wedge(v1_finseq_1 (k7_finseq_1 X0 X1)))) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_finseq_1 X0)))\Rightarrow \\ (m2_subset_1 (k3_finseq_1 X0) k1_numbers k5_numbers) \quad (7)$$

Assume the following.

$$\forall X0.v1_card_1 (k1_card_1 X0) \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((v7_ordinal1 X0)\wedge((v1_relat_1 X1)\wedge((\\ v1_funct_1 X1)\wedge(v1_finseq_1 X1))))\Rightarrow((v1_relat_1 (k16_finseq_1 \\ X0 X1))\wedge((v1_funct_1 (k16_finseq_1 X0 X1))\wedge(v1_finseq_1 (k16_finseq_1 \\ X0 X1)))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_finseq_1 X0)))\Rightarrow \\ (\forall X1.((v1_relat_1 X1)\wedge((v1_funct_1 X1)\wedge(v1_finseq_1 \\ X1))))\Rightarrow(\forall X2.((v1_relat_1 X2)\wedge((v1_funct_1 X2)\wedge(v1_finseq_1 \\ X2))))\Rightarrow((X2 = k7_finseq_1 X0 X1)\Leftrightarrow((k4_finseq_1 X2 = k2_finseq_1 \\ (k2_nat_1 (k3_finseq_1 X0) (k3_finseq_1 X1))))\wedge((\forall X3.(\\ v7_ordinal1 X3)\Rightarrow((X3 \in k4_finseq_1 X0)\Rightarrow(k1_funct_1 X2 X3 = k1_funct_1 \\ X0 X3))))\wedge(\forall X3.(v7_ordinal1 X3)\Rightarrow((X3 \in k4_finseq_1 X1)\Rightarrow \\ (k1_funct_1 X2 (k2_nat_1 (k3_finseq_1 X0) X3) = k1_funct_1 X1 X3)))))) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_finseq_1 X0)))\Rightarrow \\ (\forall X1.(m2_subset_1 X1 k1_numbers k5_numbers)\Rightarrow((X1 = k3_finseq_1 \\ X0)\Leftrightarrow(k2_finseq_1 X1 = k9_xtuple_0 X0))) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1 X0)\Rightarrow(k1_finseq_1 X0 = ReplSep (toset (\\ \lambda X1 : \iota.m2_subset_1 X1 k1_numbers k5_numbers)) (\lambda X1 : \iota. \\ (r1_xxreal_0 np_1 X1)\wedge(r1_xxreal_0 X1 X0)) (\lambda X1 : \iota.X1)) \end{aligned} \quad (12)$$

Assume the following.

$$\forall X0.((v3_ordinal1 X0)\wedge(v1_finset_1 X0))\Rightarrow(v7_ordinal1 X0) \quad (13)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow ((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finset_1 X0))) \quad (14)$$

Assume the following.

$$\forall X0.(v1_card_1 X0) \Rightarrow (v3_ordinal1 X0) \quad (15)$$

Theorem 1

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow \\ (\forall X1.((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v1_finseq_1 \\ X1)))) \Rightarrow (\forall X2.(v7_ordinal1 X2) \Rightarrow (((r1_xxreal_0 np_1 X2) \wedge \\ (r1_xxreal_0 X2 (k3_finseq_1 X0))) \Rightarrow (k1_funct_1 (k7_finseq_1 \\ X0 X1) X2 = k1_funct_1 X0 X2)))) \end{aligned}$$