

t61_finseq_4

(TMHhPC9N16vwyFnLBDAZG1td3MEhMhFeaCC)

October 27, 2020

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 $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $v2_funct_1 : \iota \Rightarrow o$ be given. Let $k4_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k2_funct_1 : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k2_finseq_1 : \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow ((k10_xtuple_0 X0 = k4_finseq_1 X0) \Rightarrow (v2_funct_1 X0)) \quad (1)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow ((v2_funct_1 X0) \Rightarrow ((k10_xtuple_0 X0 = k9_xtuple_0 (k2_funct_1 X0)) \wedge (k9_xtuple_0 X0 = k10_xtuple_0 (k2_funct_1 X0)))) \quad (2)$$

Assume the following.

$$\forall X0.(v1_relat_1 X0) \Rightarrow (\forall X1.(v1_relat_1 X1) \Rightarrow ((r1_tarski (k9_xtuple_0 X0) (k10_xtuple_0 X1)) \Rightarrow (k10_xtuple_0 (k3_relat_1 X1 X0) = k10_xtuple_0 X0))) \quad (3)$$

Assume the following.

$$\forall X0.(v1_relat_1 X0) \Rightarrow (\forall X1.(v1_relat_1 X1) \Rightarrow ((r1_tarski (k10_xtuple_0 X0) (k9_xtuple_0 X1)) \Rightarrow (k9_xtuple_0 (k3_relat_1 X0 X1) = k9_xtuple_0 X0))) \quad (4)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow (((v2_funct_1 (k3_relat_1 X1 X0)) \wedge (k10_xtuple_0 X1 = k9_xtuple_0 X0)) \Rightarrow ((v2_funct_1 X1) \wedge (v2_funct_1 X0)))) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.r1_tarSKI X0 X0 \quad (6)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_finseq_1 X0)))\Rightarrow (k4_finseq_1 X0 = k9_xtuple_0 X0) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(((v1_relat_1 X0)\wedge(v1_funct_1 X0))\wedge((v1_relat_1 X1)\wedge(v1_funct_1 X1)))\Rightarrow((v1_relat_1 (k3_relat_1 X0 X1))\wedge(v1_funct_1 (k3_relat_1 X0 X1))) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.v1_relat_1 (k3_relat_1 X0 X1) \quad (9)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_finseq_1 X0)))\Rightarrow (m2_subset_1 (k3_finseq_1 X0) k1_numbers k5_numbers) \quad (10)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge(v1_funct_1 X0))\Rightarrow((v1_relat_1 (k2_funct_1 X0))\wedge(v1_funct_1 (k2_funct_1 X0))) \quad (11)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_finseq_1 X0)))\Rightarrow (\forall X1.(m2_subset_1 X1 k1_numbers k5_numbers)\Rightarrow((X1 = k3_finseq_1 X0)\Leftrightarrow(k2_finseq_1 X1 = k9_xtuple_0 X0))) \quad (12)$$

Assume the following.

$$\forall X0.(v1_relat_1 X0)\Rightarrow((v1_finseq_1 X0)\Leftrightarrow(\exists X1.(v7_ordinal1 X1)\wedge(k9_xtuple_0 X0 = k2_finseq_1 X1))) \quad (13)$$

Theorem 1

$$\forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_finseq_1 X0)))\Rightarrow (\forall X1.((v1_relat_1 X1)\wedge((v1_funct_1 X1)\wedge(v1_finseq_1 X1))))\Rightarrow(((k10_xtuple_0 X0 = k10_xtuple_0 X1)\wedge((k3_finseq_1 X0 = k3_finseq_1 X1)\wedge(v2_funct_1 X1)))\Rightarrow(v2_funct_1 X0))$$