

t139_finseq_3

(TMZz91KzhwAh2e3kmpLzbG13UDczKvk6F9K)

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Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k5_funct_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $np_3 : \iota$ be given. Let $np_1 : \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_funct_5 : \iota \Rightarrow \iota$ be given. Let $k1_binop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k2_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ 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.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((v1_relat_1 X3) \wedge \\ & ((v1_funct_1 X3) \wedge (v1_finseq_1 X3))) \Rightarrow ((X3 = k11_finseq_1 X0 X1 \\ & X2) \Leftrightarrow ((k3_finseq_1 X3 = np_3) \wedge ((k1_funct_1 X3 np_1 = X0) \wedge ((k1_funct_1 \\ & X3 np_2 = X1) \wedge (k1_funct_1 X3 np_3 = X2)))))) \end{aligned} \tag{1}$$

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.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((v1_relat_1 X2) \wedge (v1_funct_1 \\ & X2)) \Rightarrow (\forall X3.((v1_relat_1 X3) \wedge (v1_funct_1 X3)) \Rightarrow (((X0 \in k9_xtuple_0 \\ & X2) \wedge ((X3 = k1_funct_1 X2 X0) \wedge (X1 \in k9_xtuple_0 X3))) \Rightarrow ((k4_tarski \\ & X0 X1 \in k9_xtuple_0 (k2_funct_5 X2)) \wedge ((k1_binop_1 (k2_funct_5 \\ & X2) X0 X1 = k1_funct_1 X3 X1) \wedge (k1_funct_1 X3 X1 \in k10_xtuple_0 (k2_funct_5 \\ & X2)))))) \end{aligned} \tag{3}$$

Assume the following.

$$(k2_finseq_1\ np_1 = k1_tarski\ np_1) \wedge (k2_finseq_1\ np_2 = k2_tarski\ np_1\ np_2) \quad (4)$$

Assume the following.

$$k2_finseq_1\ np_3 = k1_enumset1\ np_1\ np_2\ np_3 \quad (5)$$

Assume the following.

$$((v2_xxreal_0\ np_3) \wedge (m2_subset_1\ np_3\ k1_numbers\ k5_numbers)) \wedge ((m1_subset_1\ np_3\ k5_numbers) \wedge (m1_subset_1\ np_3\ k1_numbers)) \quad (6)$$

Assume the following.

$$((v2_xxreal_0\ np_2) \wedge (m2_subset_1\ np_2\ k1_numbers\ k5_numbers)) \wedge ((m1_subset_1\ np_2\ k5_numbers) \wedge (m1_subset_1\ np_2\ k1_numbers)) \quad (7)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(v1_relat_1\ (k11_finseq_1\ X0\ X1\ X2)) \wedge (v1_funct_1\ (k11_finseq_1\ X0\ X1\ X2)) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.(v1_relat_1\ (k10_finseq_1\ X0\ X1)) \wedge (v1_funct_1\ (k10_finseq_1\ X0\ X1)) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.v1_finseq_1\ (k11_finseq_1\ X0\ X1\ X2) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.v1_finseq_1\ (k10_finseq_1\ X0\ X1) \quad (12)$$

Assume the following.

$$\forall X0.((v1_relat_1\ X0) \wedge (v1_funct_1\ X0)) \Rightarrow (\forall X1.\forall X2.k5_funct_6\ X0\ X1\ X2 = k1_binop_1\ (k2_funct_5\ X0)\ X1\ X2) \quad (13)$$

Assume the following.

$$\forall X0.((v1_relat_1\ X0) \wedge ((v1_funct_1\ X0) \wedge (v1_finseq_1\ X0))) \Rightarrow (\forall X1.(m2_subset_1\ X1\ k1_numbers\ k5_numbers) \Rightarrow ((X1 = k3_finseq_1\ X0) \Leftrightarrow (k2_finseq_1\ X1 = k9_xtuple_0\ X0))) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(X2 = k2_tarSKI X0 X1) \Leftrightarrow (\forall X3. (X3 \in X2) \Leftrightarrow ((X3 = X0) \vee (X3 = X1))) \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(X3 = k1_enumset1 X0 X1 X2) \Leftrightarrow (\forall X4.(X4 \in X3) \Leftrightarrow (\neg(X4 \neq X0) \wedge ((X4 \neq X1) \wedge (X4 \neq X2)))) \quad (16)$$

Theorem 1

$$\begin{aligned} & \forall X0.\forall X1.((v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow (\forall X2. \\ & ((v1_relat_1 X2) \wedge (v1_funct_1 X2)) \Rightarrow (\forall X3.((v1_relat_1 \\ & X3) \wedge (v1_funct_1 X3)) \Rightarrow ((X0 \in k9_xtuple_0 X1) \Rightarrow ((k5_funct_6 (k10_finseq_1 \\ & X2 X1) np_2 X0 = k1_funct_1 X1 X0) \wedge (k5_funct_6 (k11_finseq_1 X2 \\ & X1 X3) np_2 X0 = k1_funct_1 X1 X0)))))) \end{aligned}$$