

t116_glib_001
(TMNcjr1SXtTz2cVwGhovAGsScgopFQyCqS6)

October 27, 2020

Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $v1_glib_000 : \iota \Rightarrow o$ be given. Let $m3_glib_001 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k16_glib_001 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k18_glib_001 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11_glib_001 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $m1_glib_001 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_glib_000 : \iota \Rightarrow \iota$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $v1_abian : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k13_glib_001 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow (\forall X1.((v1_relat_1 \\ X1) \wedge ((v4_relat_1 X1 k5_numbers) \wedge ((v1_funct_1 X1) \wedge ((v1_finset_1 \\ X1) \wedge (v1_glib_000 X1)))))) \Rightarrow (\forall X2.(m3_glib_001 X2 X0) \Rightarrow (\forall X3. \\ (m3_glib_001 X3 X1) \Rightarrow ((X2 = X3) \Rightarrow (k11_glib_001 X0 X2 = k11_glib_001 \\ X1 X3)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. (m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. ((v1_relat_1 X1) \wedge (v5_relat_1 X1 X0)) \Rightarrow (k2_relset_1 X0 X1 = k10_xtuple_0 X1) \tag{3}$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow (\forall X1.(m1_glib_001 \\ X1 X0) \Rightarrow (m2_finseq_1 X1 (k6_glib_000 X0))) \end{aligned} \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0)\Rightarrow((v1_relat_1 X1)\wedge(v1_funct_1 X1)\wedge(v1_finseq_1 X1)) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((v1_relat_1 X0)\wedge((v4_relat_1 X0 k5_numbers)\wedge((v1_funct_1 X0)\wedge((v1_finset_1 X0)\wedge(v1_glib_000 X0))))\wedge(m3_glib_001 X1 X0))\Rightarrow((\neg v1_abian (k18_glib_001 X0 X1 X2))\wedge(m1_subset_1 (k18_glib_001 X0 X1 X2) k5_numbers)) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((v1_relat_1 X0)\wedge((v4_relat_1 X0 k5_numbers)\wedge((v1_funct_1 X0)\wedge((v1_finset_1 X0)\wedge(v1_glib_000 X0))))\wedge(m3_glib_001 X1 X0))\Rightarrow((\neg v1_abian (k16_glib_001 X0 X1 X2))\wedge(m1_subset_1 (k16_glib_001 X0 X1 X2) k5_numbers)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(((v1_relat_1 X0)\wedge((v4_relat_1 X0 k5_numbers)\wedge((v1_funct_1 X0)\wedge((v1_finset_1 X0)\wedge(v1_glib_000 X0))))\wedge(m3_glib_001 X1 X0))\Rightarrow(m1_glib_001 (k11_glib_001 X0 X1) X0) \quad (8)$$

Assume the following.

$$\forall X0.(((v1_relat_1 X0)\wedge((v4_relat_1 X0 k5_numbers)\wedge((v1_funct_1 X0)\wedge((v1_finset_1 X0)\wedge(v1_glib_000 X0))))\Rightarrow(\forall X1.(m3_glib_001 X1 X0)\Rightarrow(\forall X2.\forall X3.((\neg v1_abian X3)\wedge(m1_subset_1 X3 k5_numbers))\Rightarrow(((X2 \in k13_glib_001 X0 X1)\Rightarrow((X3 = k18_glib_001 X0 X1 X2)\Leftrightarrow((r1_xxreal_0 X3 (k3_finseq_1 X1))\wedge((k1_funct_1 X1 X3 = X2)\wedge(\forall X4.((\neg v1_abian X4)\wedge(m1_subset_1 X4 k5_numbers))\Rightarrow(((r1_xxreal_0 X4 (k3_finseq_1 X1))\wedge(k1_funct_1 X1 X4 = X2))\Rightarrow(r1_xxreal_0 X4 X3))))))\wedge((\neg X2 \in k13_glib_001 X0 X1)\Rightarrow((X3 = k18_glib_001 X0 X1 X2)\Leftrightarrow(X3 = k3_finseq_1 X1)))))) \quad (9)$$

Assume the following.

$$\forall X0.(((v1_relat_1 X0)\wedge((v4_relat_1 X0 k5_numbers)\wedge((v1_funct_1 X0)\wedge((v1_finset_1 X0)\wedge(v1_glib_000 X0))))\Rightarrow(\forall X1.(m3_glib_001 X1 X0)\Rightarrow(\forall X2.\forall X3.((\neg v1_abian X3)\wedge(m1_subset_1 X3 k5_numbers))\Rightarrow(((X2 \in k13_glib_001 X0 X1)\Rightarrow((X3 = k16_glib_001 X0 X1 X2)\Leftrightarrow((r1_xxreal_0 X3 (k3_finseq_1 X1))\wedge((k1_funct_1 X1 X3 = X2)\wedge(\forall X4.((v7_ordinal1 X4)\wedge(\neg v1_abian X4))\Rightarrow(((r1_xxreal_0 X4 (k3_finseq_1 X1))\wedge(k1_funct_1 X1 X4 = X2))\Rightarrow(r1_xxreal_0 X3 X4))))))\wedge((\neg X2 \in k13_glib_001 X0 X1)\Rightarrow((X3 = k16_glib_001 X0 X1 X2)\Leftrightarrow(X3 = k3_finseq_1 X1)))))) \quad (10)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow (\forall X1.(m3_glib_001 \\ X1 X0) \Rightarrow (k13_glib_001 X0 X1 = k2_relset_1 (k6_glib_000 X0) (k11_glib_001 \\ X0 X1))) \end{aligned} \quad (11)$$

Assume the following.

$$\forall X0. \forall X1.(m1_finseq_1 X1 X0) \Rightarrow (v5_relat_1 X1 X0) \quad (12)$$

Theorem 1

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow (\forall X1.((v1_relat_1 \\ X1) \wedge ((v4_relat_1 X1 k5_numbers) \wedge ((v1_funct_1 X1) \wedge ((v1_finset_1 \\ X1) \wedge (v1_glib_000 X1)))))) \Rightarrow (\forall X2.(m3_glib_001 X2 X0) \Rightarrow (\forall X3. \\ (m3_glib_001 X3 X1) \Rightarrow (\forall X4.(X2 = X3) \Rightarrow ((k16_glib_001 X0 X2 \\ X4 = k16_glib_001 X1 X3 X4) \wedge (k18_glib_001 X0 X2 X4 = k18_glib_001 \\ X1 X3 X4)))))) \end{aligned}$$