

t33_glib_003
(TMRhef7GxaupN8qi7mcEfNFbJtKkMyy9yu2)

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 $v2_glib_003 : \iota \Rightarrow o$ be given. Let $k7_glib_000 : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_glib_003 : \iota \Rightarrow \iota$ be given. Let $k12_glib_003 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k16_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_glib_003 : \iota$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. X0 \in k9_xtuple_0 (k16_funcop_1 X0 X1) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. k1_funct_1 (k16_funcop_1 X0 X1) X0 = X1 \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. ((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ X0) \wedge ((v1_finset_1 X0) \wedge ((v1_glib_000 X0) \wedge (v2_glib_003 X0)))))) \Rightarrow \\ (\forall X1. \forall X2. (X1 \in k7_glib_000 X0) \Rightarrow (k6_glib_003 (k12_glib_003 \\ X0 X1 X2) = k1_funct_4 (k6_glib_003 X0) (k16_funcop_1 X1 X2))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. ((v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow (\forall X2. \\ ((v1_relat_1 X2) \wedge (v1_funct_1 X2)) \Rightarrow ((X0 \in k9_xtuple_0 X1) \Rightarrow (k1_funct_1 \\ (k1_funct_4 X2 X1) X0 = k1_funct_1 X1 X0))) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. (v1_relat_1 (k16_funcop_1 X0 X1)) \wedge (v1_funct_1 (k16_funcop_1 X0 X1)) \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0. ((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ X0) \wedge ((v1_finset_1 X0) \wedge ((v1_glib_000 X0) \wedge (v2_glib_003 X0)))))) \Rightarrow \\ ((v1_relat_1 (k6_glib_003 X0)) \wedge (v1_funct_1 (k6_glib_003 X0))) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 X0) \wedge ((v1_finset_1 X0) \wedge ((v1_glib_000 X0) \wedge (v2_glib_003 X0)))))) \Rightarrow (k6_glib_003 X0 = k1_funct_1 X0 k3_glib_003) \quad (7)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 X0) \wedge (v1_finset_1 X0)))) \Rightarrow ((v2_glib_003 X0) \Leftrightarrow ((k3_glib_003 \in k1_relset_1 k5_numbers X0) \wedge (\exists X1.((v1_relat_1 X1) \wedge (v1_funct_1 X1)) \wedge ((k1_funct_1 X0 k3_glib_003 = X1) \wedge (r1_tarski (k9_xtuple_0 X1) (k7_glib_000 X0))))) \quad (8)$$

Theorem 1

$$\forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 X0) \wedge ((v1_finset_1 X0) \wedge ((v1_glib_000 X0) \wedge (v2_glib_003 X0)))))) \Rightarrow (\forall X1. \forall X2. (X1 \in k7_glib_000 X0) \Rightarrow (k1_funct_1 (k6_glib_003 (k12_glib_003 X0 X1 X2)) X1 = X2))$$