

t97_glib_001 (TMVxn-
LAn5yVHtVu67NVoBxJFDdRNe2LUJ53)

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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 $k13_glib_001 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_glib_001 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_glib_001 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v1_abian : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $k3_glib_001 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_glib_001 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_glib_001 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k4_finseq_5 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_glib_000 : \iota \Rightarrow \iota$ be given. Let $k7_glib_000 : \iota \Rightarrow \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0. ((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow (\forall X1. (m3_glib_001 \\ X1 X0) \Rightarrow (\forall X2. \forall X3. (r1_glib_001 X0 X2 X3 X1) \Leftrightarrow (r1_glib_001 \\ X0 X3 X2 (k6_glib_001 X0 X1)))) \end{aligned} \quad (1)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. ((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow (\forall X1. (m3_glib_001 \\ X1 X0) \Rightarrow (\forall X2. (X2 \in k13_glib_001 X0 X1) \Leftrightarrow (\exists X3. ((\neg v1_abian \\ X3) \wedge (m1_subset_1 X3 k5_numbers) \wedge ((r1_xxreal_0 X3 (k3_finseq_1 \\ X1)) \wedge (k1_funct_1 X1 X3 = X2)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ & X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow (\forall X1.(m3_glib_001 \\ & X1 X0) \Rightarrow (\forall X2.((\neg v1_abian X2) \wedge (m1_subset_1 X2 k5_numbers)) \Rightarrow \\ & (\forall X3.((\neg v1_abian X3) \wedge (m1_subset_1 X3 k5_numbers)) \Rightarrow ((\\ & (r1_xxreal_0 X2 X3) \wedge (r1_xxreal_0 X3 (k3_finseq_1 X1))) \Rightarrow ((k3_glib_001 \\ & X0 (k8_glib_001 X0 X1 X2 X3) = k1_funct_1 X1 X2) \wedge ((k4_glib_001 X0 \\ & (k8_glib_001 X0 X1 X2 X3) = k1_funct_1 X1 X3) \wedge (r1_glib_001 X0 (k1_funct_1 \\ & X1 X2) (k1_funct_1 X1 X3) (k8_glib_001 X0 X1 X2 X3))))))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. (((v1_relat_1 X0) \wedge \\ & ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 X0) \wedge ((v1_finset_1 \\ & X0) \wedge (v1_glib_000 X0)))))) \wedge ((m3_glib_001 X1 X0) \wedge ((v7_ordinal1 \\ & X2) \wedge (v7_ordinal1 X3))) \Rightarrow (m3_glib_001 (k8_glib_001 X0 X1 X2 X3) \\ & X0) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge \\ & ((v1_funct_1 X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \wedge (m3_glib_001 \\ & X1 X0) \Rightarrow (m3_glib_001 (k6_glib_001 X0 X1) X0) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ & X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow (\forall X1.(m3_glib_001 \\ & X1 X0) \Rightarrow (k6_glib_001 X0 X1 = k4_finseq_5 (k2_xboole_0 (k6_glib_000 \\ & X0) (k7_glib_000 X0)) X1)) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v1_xxreal_0 X0) \wedge (v1_xxreal_0 X1)) \Rightarrow (\\ & (r1_xxreal_0 X0 X1) \vee (r1_xxreal_0 X1 X0)) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0. (m1_subset_1 X0 k4_ordinal1) \Rightarrow (v7_ordinal1 X0) \quad (9)$$

Assume the following.

$$\forall X0. (v7_ordinal1 X0) \Rightarrow (v1_xxreal_0 X0) \quad (10)$$

Theorem 1

$$\begin{aligned} & \forall X0. ((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ & X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow (\forall X1.(m3_glib_001 \\ & X1 X0) \Rightarrow (\forall X2. \forall X3. \neg (X2 \in k13_glib_001 X0 X1) \wedge ((X3 \in \\ & k13_glib_001 X0 X1) \wedge (\forall X4.(m3_glib_001 X4 X0) \Rightarrow (\neg r1_glib_001 \\ & X0 X2 X3 X4)))))) \end{aligned}$$