

l104_glib_001

(TMbC366xpDphcpstM1ax4DCj8xSC1Ng9WjL)

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 $v1_abian : \iota \Rightarrow o$ 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 $k19_glib_001 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v5_glib_001 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ & X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow (\forall X1.(m3_glib_001 \\ & X1 X0) \Rightarrow ((\forall X2.((\neg v1_abian X2) \wedge (m1_subset_1 X2 k5_numbers)) \Rightarrow \\ & (\forall X3.((\neg v1_abian X3) \wedge (m1_subset_1 X3 k5_numbers)) \Rightarrow ((\\ & (r1_xxreal_0 X2 (k3_finseq_1 X1)) \wedge ((r1_xxreal_0 X3 (k3_finseq_1 \\ & X1)) \wedge (k1_funct_1 X1 X2 = k1_funct_1 X1 X3))) \Rightarrow (X2 = X3)))))) \Rightarrow (v5_glib_001 \\ & X1 X0))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ & X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow (\forall X1.(m3_glib_001 \\ & X1 X0) \Rightarrow (\forall X2.(m1_subset_1 X2 k5_numbers) \Rightarrow (\forall X3.(\\ & (\neg v1_abian X3) \wedge (m1_subset_1 X3 k5_numbers) \Rightarrow (((r1_xxreal_0 \\ & X2 (k3_finseq_1 X1)) \Rightarrow ((v1_abian X2) \vee ((X3 = k19_glib_001 X0 X1 X2) \Leftrightarrow \\ & ((r1_xxreal_0 X3 (k3_finseq_1 X1)) \wedge ((k1_funct_1 X1 X3 = k1_funct_1 \\ & X1 X2) \wedge (\forall X4.((\neg v1_abian X4) \wedge (m1_subset_1 X4 k5_numbers)) \Rightarrow \\ & (((r1_xxreal_0 X4 (k3_finseq_1 X1)) \wedge (k1_funct_1 X1 X4 = k1_funct_1 \\ & X1 X2)) \Rightarrow (r1_xxreal_0 X4 X3)))))))))) \wedge ((\neg(\neg v1_abian X2) \wedge (r1_xxreal_0 \\ & X2 (k3_finseq_1 X1))) \Rightarrow ((X3 = k19_glib_001 X0 X1 X2) \Leftrightarrow (X3 = k3_finseq_1 \\ & X1)))))) \end{aligned} \tag{2}$$

Theorem 1

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ & X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow (\forall X1.(m3_glib_001 \\ & X1 X0) \Rightarrow ((\forall X2.(\neg v1_abian X2) \wedge (m1_subset_1 X2 k5_numbers)) \Rightarrow \\ & ((r1_xxreal_0 X2 (k3_finseq_1 X1)) \Rightarrow (k19_glib_001 X0 X1 X2 = X2))) \Rightarrow \\ & (v5_glib_001 X1 X0)) \end{aligned}$$