

170_glib_001

(TMW4smWN43eNSQzUNP2muQeJPnphdDwhfEx)

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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_glib_001 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_glib_001 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_glib_001 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_glib_001 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ & X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow (\forall X1.(m3_glib_001 \\ & X1 X0) \Rightarrow (\forall X2.(m1_subset_1 X2 k5_numbers) \Rightarrow (\forall X3.(\\ & m1_subset_1 X3 k5_numbers) \Rightarrow (\forall X4.\forall X5.(r1_glib_001 \\ & X0 X4 X5 X1) \Rightarrow (r1_glib_001 X0 X4 X5 (k9_glib_001 X0 X1 X2 X3)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.(((v1_relat_1 X0) \wedge \\ & ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 X0) \wedge ((v1_finset_1 \\ & X0) \wedge (v1_glib_000 X0)))))) \wedge ((m3_glib_001 X1 X0) \wedge ((m1_subset_1 \\ & X2 k5_numbers) \wedge (m1_subset_1 X3 k5_numbers)))) \Rightarrow (m3_glib_001 \\ & (k9_glib_001 X0 X1 X2 X3) X0) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ & X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow (\forall X1.\forall X2. \\ & \forall X3.(m3_glib_001 X3 X0) \Rightarrow ((r1_glib_001 X0 X1 X2 X3) \Leftrightarrow ((k3_glib_001 \\ & X0 X3 = X1) \wedge (k4_glib_001 X0 X3 = X2)))) \end{aligned} \quad (3)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ & X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow (\forall X1.(m3_glib_001 \\ & X1 X0) \Rightarrow (\forall X2.(m1_subset_1 X2 k5_numbers) \Rightarrow (\forall X3.(\\ & m1_subset_1 X3 k5_numbers) \Rightarrow ((k3_glib_001 X0 (k9_glib_001 X0 X1 \\ & X2 X3) = k3_glib_001 X0 X1) \wedge (k4_glib_001 X0 (k9_glib_001 X0 X1 X2 \\ & X3) = k4_glib_001 X0 X1)))))) \end{aligned}$$