

# t170\_glib\_001 (TMUfS- NRH5eTEu1bpqLGmEy6QMPEdJTMkVJ4)

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  $m1\_glib\_000 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m3\_glib\_001 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k13\_glib\_001 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k24\_glib\_000 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k14\_glib\_001 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k25\_glib\_000 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_glib\_001 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_glib\_001 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v3\_glib\_001 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k6\_glib\_000 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1\_relat\_1 X0) \wedge ((v4\_relat\_1 X0 k5\_numbers) \wedge ((v1\_funct\_1 \\ & X0) \wedge ((v1\_finset\_1 X0) \wedge (v1\_glib\_000 X0)))))) \Rightarrow (\forall X1.(m3\_glib\_001 \\ & X1 X0) \Rightarrow ((k3\_glib\_001 X0 X1 \in k13\_glib\_001 X0 X1) \wedge (k4\_glib\_001 X0 \\ & X1 \in k13\_glib\_001 X0 X1))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1\_relat\_1 X0) \wedge ((v4\_relat\_1 X0 k5\_numbers) \wedge ((v1\_funct\_1 \\ & X0) \wedge ((v1\_finset\_1 X0) \wedge (v1\_glib\_000 X0)))))) \Rightarrow (\forall X1.(m1\_glib\_000 \\ & X1 X0) \Rightarrow (\forall X2.(m3\_glib\_001 X2 X0) \Rightarrow ((r1\_tarski (k14\_glib\_001 \\ & X0 X2) (k25\_glib\_000 X0 X1)) \Rightarrow ((v3\_glib\_001 X2 X0) \vee (m3\_glib\_001 \\ & X2 X1)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1\_relat\_1 X0) \wedge ((v4\_relat\_1 X0 k5\_numbers) \wedge ((v1\_funct\_1 \\ & X0) \wedge ((v1\_finset\_1 X0) \wedge (v1\_glib\_000 X0)))))) \Rightarrow (\forall X1.(m1\_glib\_000 \\ & X1 X0) \Rightarrow (\forall X2.(m3\_glib\_001 X2 X0) \Rightarrow (((v3\_glib\_001 X2 X0) \wedge \\ & (k3\_glib\_001 X0 X2 \in k24\_glib\_000 X0 X1)) \Rightarrow (m3\_glib\_001 X2 X1)))))) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((v1\_relat\_1 X0) \wedge ((v4\_relat\_1 X0 k5\_numbers) \wedge \\ & ((v1\_funct\_1 X0) \wedge ((v1\_finset\_1 X0) \wedge (v1\_glib\_000 X0)))))) \wedge (m1\_glib\_000 \\ & X1 X0) \Rightarrow (k24\_glib\_000 X0 X1 = k6\_glib\_000 X1) \end{aligned} \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.(r1\_tarski\ X0\ X1)\Leftrightarrow(\forall X2.(X2 \in X0)\Rightarrow (X2 \in X1)) \quad (5)$$

**Theorem 1**

$$\begin{aligned} \forall X0.((v1\_relat\_1\ X0)\wedge((v4\_relat\_1\ X0\ k5\_numbers)\wedge((v1\_funct\_1 \\ X0)\wedge((v1\_finset\_1\ X0)\wedge(v1\_glib\_000\ X0))))\Rightarrow(\forall X1.(m1\_glib\_000 \\ X1\ X0)\Rightarrow(\forall X2.(m3\_glib\_001\ X2\ X0)\Rightarrow(((r1\_tarski\ (k13\_glib\_001 \\ X0\ X2)\ (k24\_glib\_000\ X0\ X1))\wedge(r1\_tarski\ (k14\_glib\_001\ X0\ X2)\ (k25\_glib\_000 \\ X0\ X1)))\Rightarrow(m3\_glib\_001\ X2\ X1)))) \end{aligned}$$