

# t88\_glib\_000 (TMYAgwB- JdC3sxXdTKLazNdZH7ZKwhLucaD2)

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  $r5\_glib\_000 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_glib\_000 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r2\_glib\_000 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r3\_glib\_000 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r4\_glib\_000 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_glib\_000 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} \forall X0.((v1\_relat\_1 X0) \wedge ((v4\_relat\_1 X0 k5\_numbers) \wedge ((v1\_funct\_1 \\ X0) \wedge ((v1\_finset\_1 X0) \wedge (v1\_glib\_000 X0)))))) \Rightarrow (\forall X1.((v1\_relat\_1 \\ X1) \wedge ((v4\_relat\_1 X1 k5\_numbers) \wedge ((v1\_funct\_1 X1) \wedge ((v1\_finset\_1 \\ X1) \wedge (v1\_glib\_000 X1)))))) \Rightarrow ((r5\_glib\_000 X0 X1) \Leftrightarrow ((m1\_glib\_000 \\ X0 X1) \wedge (m1\_glib\_000 X1 X0)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1\_relat\_1 X0) \wedge ((v4\_relat\_1 X0 k5\_numbers) \wedge ((v1\_funct\_1 \\ X0) \wedge ((v1\_finset\_1 X0) \wedge (v1\_glib\_000 X0)))))) \Rightarrow (\forall X1.(m1\_glib\_000 \\ X1 X0) \Rightarrow (\forall X2.\forall X3.\forall X4.((r1\_glib\_000 X1 X2 X3 \\ X4) \Rightarrow (r1\_glib\_000 X0 X2 X3 X4)) \wedge ((r2\_glib\_000 X1 X2 X3 X4) \Rightarrow (r2\_glib\_000 \\ X0 X2 X3 X4)) \wedge ((r3\_glib\_000 X1 X2 X3 X4) \Rightarrow (r3\_glib\_000 X0 X2 X3 X4)) \wedge \\ ((r4\_glib\_000 X1 X2 X3 X4) \Rightarrow (r4\_glib\_000 X0 X2 X3 X4)))))) \end{aligned} \quad (2)$$

**Theorem 1**

$$\begin{aligned} \forall X0.((v1\_relat\_1 X0) \wedge ((v4\_relat\_1 X0 k5\_numbers) \wedge ((v1\_funct\_1 \\ X0) \wedge ((v1\_finset\_1 X0) \wedge (v1\_glib\_000 X0)))))) \Rightarrow (\forall X1.((v1\_relat\_1 \\ X1) \wedge ((v4\_relat\_1 X1 k5\_numbers) \wedge ((v1\_funct\_1 X1) \wedge ((v1\_finset\_1 \\ X1) \wedge (v1\_glib\_000 X1)))))) \Rightarrow (\forall X2.\forall X3.\forall X4. \\ \forall X5.\forall X6.(r5\_glib\_000 X0 X1) \Rightarrow (((r1\_glib\_000 X0 X3 \\ X4 X2) \Rightarrow (r1\_glib\_000 X1 X3 X4 X2)) \wedge ((r2\_glib\_000 X0 X3 X4 X2) \Rightarrow (r2\_glib\_000 \\ X1 X3 X4 X2)) \wedge ((r3\_glib\_000 X0 X5 X6 X2) \Rightarrow (r3\_glib\_000 X1 X5 X6 X2)) \wedge \\ ((r4\_glib\_000 X0 X5 X6 X2) \Rightarrow (r4\_glib\_000 X1 X5 X6 X2)))))) \end{aligned}$$