

t156\_glib\_001  
(TMLJqB5Sbi8igT2fZB4YdC3BTa1VfjKujP3)

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  $v1\_glib\_000 : \iota \Rightarrow o$  be given. Let  $r1\_glib\_000 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v8\_glib\_001 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_glib\_001 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $np\_3 : \iota$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m3\_glib\_001 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v3\_glib\_001 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_glib\_001 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v5\_glib\_001 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} \forall X0.((v1\_relat\_1 X0) \wedge ((v4\_relat\_1 X0 k5\_numbers) \wedge ((v1\_funct\_1 \\ X0) \wedge ((v1\_finset\_1 X0) \wedge (v1\_glib\_000 X0)))))) \Rightarrow (\forall X1. \forall X2. \\ \forall X3.(r1\_glib\_000 X0 X2 X3 X1) \Rightarrow (k3\_finseq\_1 (k2\_glib\_001 \\ X0 X2 X3 X1) = np\_3)) \end{aligned} \quad (1)$$

Assume the following.

$$r1\_xxreal\_0 np\_3 np\_3 \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1\_relat\_1 X0) \wedge ((v4\_relat\_1 X0 k5\_numbers) \wedge ((v1\_funct\_1 \\ X0) \wedge ((v1\_finset\_1 X0) \wedge (v1\_glib\_000 X0)))))) \Rightarrow (\forall X1.(m3\_glib\_001 \\ X1 X0) \Rightarrow ((\neg v3\_glib\_001 X1 X0) \Leftrightarrow (r1\_xxreal\_0 np\_3 (k3\_finseq\_1 \\ X1)))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. ((v1\_relat\_1 X0) \wedge ((v4\_relat\_1 \\ X0 k5\_numbers) \wedge ((v1\_funct\_1 X0) \wedge ((v1\_finset\_1 X0) \wedge (v1\_glib\_000 \\ X0)))))) \Rightarrow (v1\_glib\_001 (k2\_glib\_001 X0 X1 X1 X2) X0) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. \forall X3. ((v1\_relat\_1 X0) \wedge \\ ((v4\_relat\_1 X0 k5\_numbers) \wedge ((v1\_funct\_1 X0) \wedge ((v1\_finset\_1 \\ X0) \wedge (v1\_glib\_000 X0)))))) \Rightarrow (v5\_glib\_001 (k2\_glib\_001 X0 X1 X3 X2) \\ X0) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((v1\_relat\_1 X0) \wedge \\ & ((v4\_relat\_1 X0 k5\_numbers) \wedge ((v1\_funct\_1 X0) \wedge ((v1\_finset\_1 \\ & X0) \wedge (v1\_glib\_000 X0)))))) \Rightarrow (m3\_glib\_001 (k2\_glib\_001 X0 X1 X2 X3) \\ & X0) \end{aligned} \tag{6}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1\_relat\_1 X0) \wedge ((v4\_relat\_1 X0 k5\_numbers) \wedge ((v1\_funct\_1 \\ & X0) \wedge ((v1\_finset\_1 X0) \wedge (v1\_glib\_000 X0)))))) \Rightarrow (\forall X1. (m3\_glib\_001 \\ & X1 X0) \Rightarrow ((v8\_glib\_001 X1 X0) \Leftrightarrow ((v1\_glib\_001 X1 X0) \wedge ((v5\_glib\_001 \\ & X1 X0) \wedge (\neg v3\_glib\_001 X1 X0)))))) \end{aligned} \tag{7}$$

**Theorem 1**

$$\begin{aligned} & \forall X0. ((v1\_relat\_1 X0) \wedge ((v4\_relat\_1 X0 k5\_numbers) \wedge ((v1\_funct\_1 \\ & X0) \wedge ((v1\_finset\_1 X0) \wedge (v1\_glib\_000 X0)))))) \Rightarrow (\forall X1. \forall X2. \\ & (r1\_glib\_000 X0 X2 X2 X1) \Rightarrow (v8\_glib\_001 (k2\_glib\_001 X0 X2 X2 X1) \\ & X0)) \end{aligned}$$