

t55\_glib\_001

(TMTEqi5S5SPyfzDv6d6gPeopfyYYCm1UK2w)

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  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k20\_glib\_001 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k9\_glib\_001 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. (((v1\_relat\_1 X0) \wedge \\ & ((v4\_relat\_1 X0 k5\_numbers) \wedge ((v1\_funct\_1 X0) \wedge ((v1\_finset\_1 \\ & X0) \wedge (v1\_glib\_000 X0)))))) \wedge ((m3\_glib\_001 X1 X0) \wedge ((m1\_subset\_1 \\ & X2 k5\_numbers) \wedge (m1\_subset\_1 X3 k5\_numbers)))) \Rightarrow (k20\_glib\_001 \\ & X0 X1 X2 X3 = k9\_glib\_001 X0 X1 X2 X3) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1\_relat\_1 X0) \wedge ((v4\_relat\_1 X0 k5\_numbers) \wedge ((v1\_funct\_1 \\ & X0) \wedge ((v1\_finset\_1 X0) \wedge (v1\_glib\_000 X0)))))) \Rightarrow (\forall X1. (m3\_glib\_001 \\ & X1 X0) \Rightarrow (\forall X2. ((\neg v1\_abian X2) \wedge (m1\_subset\_1 X2 k5\_numbers)) \Rightarrow \\ & (\forall X3. ((\neg v1\_abian X3) \wedge (m1\_subset\_1 X3 k5\_numbers)) \Rightarrow (( \\ & (r1\_xxreal\_0 X2 X3) \wedge ((r1\_xxreal\_0 X3 (k3\_finseq\_1 X1)) \wedge (k1\_funct\_1 \\ & X1 X2 = k1\_funct\_1 X1 X3)))) \Rightarrow (\forall X4. (m1\_subset\_1 X4 k5\_numbers) \Rightarrow \\ & (((r1\_xxreal\_0 X2 X4) \wedge (r1\_xxreal\_0 X4 (k3\_finseq\_1 (k9\_glib\_001 \\ & X0 X1 X2 X3)))) \Rightarrow ((k1\_funct\_1 (k9\_glib\_001 X0 X1 X2 X3) X4 = k1\_funct\_1 \\ & X1 (k2\_xcmplx\_0 (k6\_xcmplx\_0 X4 X2) X3)) \wedge ((m1\_subset\_1 (k2\_xcmplx\_0 \\ & (k6\_xcmplx\_0 X4 X2) X3) k5\_numbers) \wedge (r1\_xxreal\_0 (k2\_xcmplx\_0 \\ & (k6\_xcmplx\_0 X4 X2) X3) (k3\_finseq\_1 X1)))))))))) \end{aligned} \quad (2)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((v1\_relat\_1 X0) \wedge ((v4\_relat\_1 X0 k5\_numbers) \wedge ((v1\_funct\_1 \\ & X0) \wedge ((v1\_finset\_1 X0) \wedge (v1\_glib\_000 X0)))))) \Rightarrow (\forall X1.(m3\_glib\_001 \\ & X1 X0) \Rightarrow (\forall X2.((\neg v1\_abian X2) \wedge (m1\_subset\_1 X2 k5\_numbers)) \Rightarrow \\ & (\forall X3.((\neg v1\_abian X3) \wedge (m1\_subset\_1 X3 k5\_numbers)) \Rightarrow (( \\ & (r1\_xxreal\_0 X2 X3) \wedge ((r1\_xxreal\_0 X3 (k3\_finseq\_1 X1)) \wedge (k1\_funct\_1 \\ & X1 X2 = k1\_funct\_1 X1 X3))) \Rightarrow (\forall X4.(m1\_subset\_1 X4 k5\_numbers) \Rightarrow \\ & (((r1\_xxreal\_0 X2 X4) \wedge (r1\_xxreal\_0 X4 (k3\_finseq\_1 (k20\_glib\_001 \\ & X0 X1 X2 X3)))) \Rightarrow ((k1\_funct\_1 (k20\_glib\_001 X0 X1 X2 X3) X4 = k1\_funct\_1 \\ & X1 (k2\_xcmplx\_0 (k6\_xcmplx\_0 X4 X2) X3)) \wedge ((m1\_subset\_1 (k2\_xcmplx\_0 \\ & (k6\_xcmplx\_0 X4 X2) X3) k5\_numbers) \wedge (r1\_xxreal\_0 (k2\_xcmplx\_0 \\ & (k6\_xcmplx\_0 X4 X2) X3) (k3\_finseq\_1 X1)))))))))) \end{aligned}$$