t19_glib_003 (TMUqAV5em5Axg9nnFFv8Ne3kJXDAewaHvft)

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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 $v1\_glib\_003 : \iota \Rightarrow o$ be given. Let $m3\_glib\_001 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5\_glib\_003 : \iota \Rightarrow \iota$ be given. Let $k8\_glib\_003 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k12\_glib\_001 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_finseq\_1 : \iota \Rightarrow o$ be given. Let $k3\_finseq\_1 : \iota \Rightarrow \iota$ be given. Let $v7\_ordinal1 : \iota \Rightarrow o$ be given. Let $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np\_\_1 : \iota$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge ((v4\_relat\_1\ X0\ k5\_numbers) \wedge ((v1\_funct\_1\ X0) \wedge ((v1\_finset\_1\ X0) \wedge (v1\_glib\_000\ X0))))) \Rightarrow (\forall X1.((v1\_relat\_1\ X1) \wedge ((v4\_relat\_1\ X1\ k5\_numbers) \wedge ((v1\_funct\_1\ X1) \wedge ((v1\_finset\_1\ X1) \wedge (v1\_glib\_000\ X1))))) \Rightarrow (\forall X2.(m3\_glib\_001\ X2\ X0) \Rightarrow (\forall X3.(m3\_glib\_001\ X3\ X1) \Rightarrow ((X2 = X3) \Rightarrow (k12\_glib\_001\ X0\ X2 = k12\_glib\_001\ X1\ X3))))) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.(((v1\_relat\_1\ X0) \wedge ((v4\_relat\_1\ X0\ k5\_numbers) \wedge ((v1\_funct\_1\ X0) \wedge ((v1\_finset\_1\ X0) \wedge ((v1\_glib\_000\ X0) \wedge (v1\_glib\_003\ X0)))))) \wedge (m3\_glib\_001\ X1\ X0)) \Rightarrow ((v1\_relat\_1\ (k8\_glib\_003\ X0\ X1)) \wedge ((v1\_funct\_1\ (k8\_glib\_003\ X0\ X1)) \wedge (v1\_finseq\_1\ (k8\_glib\_003\ X0\ X1)))) \tag{2}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge ((v4\_relat\_1\ X0\ k5\_numbers) \wedge ((v1\_funct\_1\ X0) \wedge ((v1\_finset\_1\ X0) \wedge ((v1\_glib\_000\ X0) \wedge (v1\_glib\_003\ X0)))))) \Rightarrow (\forall X1.(m3\_glib\_001\ X1\ X0) \Rightarrow (\forall X2.((v1\_relat\_1\ X2) \wedge ((v1\_funct\_1\ X2) \wedge (v1\_finseq\_1\ X2))) \Rightarrow ((X2 = k8\_glib\_003\ X0\ X1) \Leftrightarrow ((k3\_finseq\_1\ X2 = k3\_finseq\_1\ (k12\_glib\_001\ X0\ X1)) \wedge (\forall X3.(v7\_ordinal1\ X3) \Rightarrow (((r1\_xxreal\_0\ np\_\_1\ X3) \wedge (r1\_xxreal\_0\ X3\ (k3\_finseq\_1\ X2))) \Rightarrow (k1\_funct\_1\ X2\ X3 = k1\_funct\_1\ (k5\_glib\_003\ X0)\ (k1\_funct\_1\ (k12\_glib\_001\ X0\ X1)\ X3)))))))) \tag{3}$$

Theorem 1

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v4\_relat\_1\ X0\ k5\_numbers)\wedge((v1\_funct\_1\ X0)\wedge((v1\_finset\_1\ X0)\wedge((v1\_glib\_000\ X0)\wedge(v1\_glib\_003\ X0))))))\Rightarrow(\forall X1.((v1\_relat\_1\ X1)\wedge((v4\_relat\_1\ X1\ k5\_numbers)\wedge((v1\_funct\_1\ X1)\wedge((v1\_finset\_1\ X1)\wedge((v1\_glib\_000\ X1)\wedge(v1\_glib\_003\ X1))))))\Rightarrow(\forall X2.(m3\_glib\_001\ X2\ X0)\Rightarrow(\forall X3.(m3\_glib\_001\ X3\ X1)\Rightarrow(((X2 = X3)\wedge(k5\_glib\_003\ X0 = k5\_glib\_003\ X1))\Rightarrow(k8\_glib\_003\ X0\ X2 = k8\_glib\_003\ X1\ X3)))))$$