t13_glib_001 (TMGQFwWERUGVzBgWRR-JAMB4oD4NRZJHfcpk)

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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 $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6\_glib\_000 : \iota \Rightarrow \iota$ be given. Let $k3\_finseq\_1 : \iota \Rightarrow \iota$ be given. Let $k1\_glib\_001 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np\_\_1 : \iota$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $r1\_glib\_001 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_finseq\_1 : \iota \Rightarrow o$ be given. Let $k9\_finseq\_1 : \iota \Rightarrow \iota$ be given. Let $k5\_finseq\_1 : \iota \Rightarrow \iota$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $k12\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m3\_glib\_001 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1) \wedge ((v1\_funct\_1\ X1) \wedge (v1\_finseq\_1\ X1))) \Rightarrow ((X1 = k9\_finseq\_1\ X0) \Leftrightarrow ((k3\_finseq\_1\ X1 = np\_\_1) \wedge (k1\_funct\_1\ X1\ np\_\_1 = X0))) \tag{1}$$

Assume the following.

$$\forall X0.k9\_finseq\_1\ X0 = k5\_finseq\_1\ X0 \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0) \wedge (m1\_subset\_1\ X1\ X0)) \Rightarrow (k12\_finseq\_1\ X0\ X1 = k5\_finseq\_1\ X1) \tag{3}$$

Assume the following.

$$\forall X0.v1\_finseq\_1\ (k5\_finseq\_1\ X0) \tag{4}$$

Assume the following.

$$\forall X0.(v1\_relat\_1\ (k5\_finseq\_1\ X0)) \wedge (v1\_funct\_1\ (k5\_finseq\_1\ X0)) \tag{5}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge ((v4\_relat\_1\ X0\ k5\_numbers) \wedge ((v1\_funct\_1\ X0) \wedge ((v1\_finset\_1\ X0) \wedge (v1\_glib\_000\ X0))))) \Rightarrow (\neg v1\_xboole\_0\ (k6\_glib\_000\ X0)) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.(((v1\_relat\_1\ X0)\wedge((v4\_relat\_1\ X0\ k5\_numbers)\wedge((v1\_funct\_1\ X0)\wedge((v1\_finset\_1\ X0)\wedge(v1\_glib\_000\ X0)))))\wedge(m1\_subset\_1\ X1\ (k6\_glib\_000\ X0)))\Rightarrow(m3\_glib\_001\ (k1\_glib\_001\ X0\ X1)\ X0) \tag{7}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v4\_relat\_1\ X0\ k5\_numbers)\wedge((v1\_funct\_1\ X0)\wedge((v1\_finset\_1\ X0)\wedge(v1\_glib\_000\ X0)))))\Rightarrow(\forall X1.(m3\_glib\_001\ X1\ X0)\Rightarrow(k4\_glib\_001\ X0\ X1 = k1\_funct\_1\ X1\ (k3\_finseq\_1\ X1))) \tag{8}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v4\_relat\_1\ X0\ k5\_numbers)\wedge((v1\_funct\_1\ X0)\wedge((v1\_finset\_1\ X0)\wedge(v1\_glib\_000\ X0)))))\Rightarrow(\forall X1.(m3\_glib\_001\ X1\ X0)\Rightarrow(k3\_glib\_001\ X0\ X1 = k1\_funct\_1\ X1\ np\_\_1)) \tag{9}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v4\_relat\_1\ X0\ k5\_numbers)\wedge((v1\_funct\_1\ X0)\wedge((v1\_finset\_1\ X0)\wedge(v1\_glib\_000\ X0)))))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k6\_glib\_000\ X0))\Rightarrow(k1\_glib\_001\ X0\ X1 = k12\_finseq\_1\ (k6\_glib\_000\ X0)\ X1)) \tag{10}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v4\_relat\_1\ X0\ k5\_numbers)\wedge((v1\_funct\_1\ X0)\wedge((v1\_finset\_1\ X0)\wedge(v1\_glib\_000\ X0)))))\Rightarrow(\forall X1.\forall X2.\forall X3.(m3\_glib\_001\ X3\ X0)\Rightarrow((r1\_glib\_001\ X0\ X1\ X2\ X3)\Leftrightarrow((k3\_glib\_001\ X0\ X3 = X1)\wedge(k4\_glib\_001\ X0\ X3 = X2)))) \tag{11}$$

Theorem 1

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v4\_relat\_1\ X0\ k5\_numbers)\wedge((v1\_funct\_1\ X0)\wedge((v1\_finset\_1\ X0)\wedge(v1\_glib\_000\ X0)))))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k6\_glib\_000\ X0))\Rightarrow((k3\_finseq\_1\ (k1\_glib\_001\ X0\ X1) = np\_\_1)\wedge((k1\_funct\_1\ (k1\_glib\_001\ X0\ X1)\ np\_\_1 = X1)\wedge((k3\_glib\_001\ X0\ (k1\_glib\_001\ X0\ X1) = X1)\wedge((k4\_glib\_001\ X0\ (k1\_glib\_001\ X0\ X1) = X1)\wedge(r1\_glib\_001\ X0\ X1\ X1\ (k1\_glib\_001\ X0\ X1)))))))$$