t2_glib_002 (TM-RvXGTG8uQyJLAcujdbBsXHmH3PhEP6ahS)

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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 $v4\_glib\_000 : \iota \Rightarrow o$ be given. Let $v1\_glib\_002 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6\_glib\_000 : \iota \Rightarrow \iota$ be given. Let $v10\_glib\_000 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m3\_glib\_001 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3\_glib\_001 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k13\_glib\_001 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_glib\_001 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3\_glib\_001 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1\_glib\_001 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge ((v4\_relat\_1\ X0\ k5\_numbers) \wedge ((v1\_funct\_1\ X0) \wedge ((v1\_finset\_1\ X0) \wedge (v1\_glib\_000\ X0))))) \Rightarrow (\forall X1.(m3\_glib\_001\ X1\ X0) \Rightarrow ((k3\_glib\_001\ X0\ X1 \in k13\_glib\_001\ X0\ X1) \wedge (k4\_glib\_001\ X0\ X1 \in k13\_glib\_001\ X0\ X1))) \tag{1}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge ((v4\_relat\_1\ X0\ k5\_numbers) \wedge ((v1\_funct\_1\ X0) \wedge ((v1\_finset\_1\ X0) \wedge ((v1\_glib\_000\ X0) \wedge (\neg v4\_glib\_000\ X0)))))) \Rightarrow (\neg \forall X1.(m1\_subset\_1\ X1\ (k6\_glib\_000\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (k6\_glib\_000\ X0)) \Rightarrow (X1 = X2))) \tag{2}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge ((v4\_relat\_1\ X0\ k5\_numbers) \wedge ((v1\_funct\_1\ X0) \wedge ((v1\_finset\_1\ X0) \wedge (v1\_glib\_000\ X0))))) \Rightarrow (\forall X1.(m3\_glib\_001\ X1\ X0) \Rightarrow ((\neg v3\_glib\_001\ X1\ X0) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (k6\_glib\_000\ X0)) \Rightarrow (\neg (X2 \in k13\_glib\_001\ X0\ X1) \wedge (v10\_glib\_000\ X2\ X0))))) \tag{3}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge ((v4\_relat\_1\ X0\ k5\_numbers) \wedge ((v1\_funct\_1\ X0) \wedge ((v1\_finset\_1\ X0) \wedge (v1\_glib\_000\ X0))))) \Rightarrow (\forall X1.(m3\_glib\_001\ X1\ X0) \Rightarrow (\neg (k3\_glib\_001\ X0\ X1 \neq k4\_glib\_001\ X0\ X1) \wedge (v3\_glib\_001\ X1\ X0))) \tag{4}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v4\_relat\_1\ X0\ k5\_numbers)\wedge((v1\_funct\_1\ X0)\wedge((v1\_finset\_1\ X0)\wedge(v1\_glib\_000\ X0)))))\Rightarrow(\forall X1.\forall X2.\ \forall X3.(m3\_glib\_001\ X3\ X0)\Rightarrow((r1\_glib\_001\ X0\ X1\ X2\ X3)\Leftrightarrow((k3\_glib\_001\ X0\ X3 = X1)\wedge(k4\_glib\_001\ X0\ X3 = X2)))) \tag{5}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v4\_relat\_1\ X0\ k5\_numbers)\wedge((v1\_funct\_1\ X0)\wedge((v1\_finset\_1\ X0)\wedge(v1\_glib\_000\ X0)))))\Rightarrow((v1\_glib\_002\ X0)\Leftrightarrow(\forall X1.(m1\_subset\_1\ X1\ (k6\_glib\_000\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (k6\_glib\_000\ X0))\Rightarrow(\exists X3.(m3\_glib\_001\ X3\ X0)\wedge(r1\_glib\_001\ X0\ X1\ X2\ X3))))) \tag{6}$$

Theorem 1

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v4\_relat\_1\ X0\ k5\_numbers)\wedge((v1\_funct\_1\ X0)\wedge((v1\_finset\_1\ X0)\wedge((v1\_glib\_000\ X0)\wedge((\neg v4\_glib\_000\ X0)\wedge(v1\_glib\_002\ X0)))))))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k6\_glib\_000\ X0))\Rightarrow(\neg v10\_glib\_000\ X1\ X0))$$