t17_glib_000 (TMdxThE-ABb379QUa1XMFVxQ8qdANx5NGqVA)

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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 $r1\_glib\_000 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r3\_glib\_000 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7\_glib\_000 : \iota \Rightarrow \iota$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10\_glib\_000 : \iota \Rightarrow \iota$ be given. Let $k11\_glib\_000 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge ((v4\_relat\_1\ X0\ k5\_numbers) \wedge ((v1\_funct\_1\ X0) \wedge ((v1\_finset\_1\ X0) \wedge (v1\_glib\_000\ X0))))) \Rightarrow (\forall X1.\forall X2.\ \forall X3.(r3\_glib\_000\ X0\ X1\ X2\ X3) \Leftrightarrow ((X3 \in k7\_glib\_000\ X0) \wedge (((k1\_funct\_1\ (k10\_glib\_000\ X0)\ X3 \in X1) \wedge (k1\_funct\_1\ (k11\_glib\_000\ X0)\ X3 \in X2)) \vee ((k1\_funct\_1\ (k10\_glib\_000\ X0)\ X3 \in X2) \wedge (k1\_funct\_1\ (k11\_glib\_000\ X0)\ X3 \in X1)))))) \tag{1}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge ((v4\_relat\_1\ X0\ k5\_numbers) \wedge ((v1\_funct\_1\ X0) \wedge ((v1\_finset\_1\ X0) \wedge (v1\_glib\_000\ X0))))) \Rightarrow (\forall X1.\forall X2.\ \forall X3.(r1\_glib\_000\ X0\ X1\ X2\ X3) \Leftrightarrow ((X3 \in k7\_glib\_000\ X0) \wedge (((k1\_funct\_1\ (k10\_glib\_000\ X0)\ X3 = X1) \wedge (k1\_funct\_1\ (k11\_glib\_000\ X0)\ X3 = X2)) \vee ((k1\_funct\_1\ (k10\_glib\_000\ X0)\ X3 = X2) \wedge (k1\_funct\_1\ (k11\_glib\_000\ X0)\ X3 = X1)))))) \tag{2}$$

Theorem 1

$$\forall X0.((v1\_relat\_1\ X0) \wedge ((v4\_relat\_1\ X0\ k5\_numbers) \wedge ((v1\_funct\_1\ X0) \wedge ((v1\_finset\_1\ X0) \wedge (v1\_glib\_000\ X0))))) \Rightarrow (\forall X1.\forall X2.\ \forall X3.\forall X4.\forall X5.(r1\_glib\_000\ X0\ X2\ X3\ X1) \Rightarrow (((\neg(X2 \in X4) \wedge (X3 \in X5)) \wedge (\neg(X2 \in X5) \wedge (X3 \in X4))) \vee (r3\_glib\_000\ X0\ X4\ X5\ X1)))$$