l13_glib_000 (TMYQb-SoFHYQm1WYM481zoXF5f3MrRH3u1En)

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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 $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5\_glib\_000 : \iota$ be given. Let $k1\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $k6\_glib\_000 : \iota \Rightarrow \iota$ be given. Let $k8\_glib\_000 : \iota \Rightarrow \iota$ be given. Let $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7\_glib\_000 : \iota \Rightarrow \iota$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9\_glib\_000 : \iota \Rightarrow \iota$ be given. Let $v2\_xxreal\_0 : \iota \Rightarrow o$ be given. Let $np\_\_1 : \iota$ be given. Let $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_numbers : \iota$ be given. Let $k9\_domain\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_enumset1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_ordinal1 : \iota$ be given. Let $v3\_ordinal1 : \iota \Rightarrow o$ be given. Let $k4\_glib\_000 : \iota$ be given. Let $k3\_glib\_000 : \iota$ be given. Let $k2\_glib\_000 : \iota$ be given. Let $k1\_glib\_000 : \iota$ be given. Assume the following.

$$\forall X0.\forall X1.\neg(X0 \in X1) \wedge (v1\_xboole\_0\ X1) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ X1)) \Leftrightarrow (r1\_tarski\ X0\ X1) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (m1\_subset\_1\ X0\ X1) \tag{3}$$

Assume the following.

$$((v2\_xxreal\_0\ np\_\_1) \wedge (m2\_subset\_1\ np\_\_1\ k1\_numbers\ k5\_numbers)) \wedge ((m1\_subset\_1\ np\_\_1\ k5\_numbers) \wedge (m1\_subset\_1\ np\_\_1\ k1\_numbers)) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.((\neg v1\_xboole\_0\ X0) \wedge ((m1\_subset\_1\ X1\ X0) \wedge ((m1\_subset\_1\ X2\ X0) \wedge ((m1\_subset\_1\ X3\ X0) \wedge (m1\_subset\_1\ X4\ X0))))) \Rightarrow (k9\_domain\_1\ X0\ X1\ X2\ X3\ X4 = k2\_enumset1\ X1\ X2\ X3\ X4) \tag{5}$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \tag{6}$$

Assume the following.

$$(\neg v1\_xboole\_0\ k4\_ordinal1) \wedge (v3\_ordinal1\ k4\_ordinal1) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.((\neg v1\_xboole\_0\ X0) \wedge ((m1\_subset\_1\ X1\ X0) \wedge ((m1\_subset\_1\ X2\ X0) \wedge ((m1\_subset\_1\ X3\ X0) \wedge (m1\_subset\_1\ X4\ X0))))) \Rightarrow (m1\_subset\_1\ (k9\_domain\_1\ X0\ X1\ X2\ X3\ X4)\ (k1\_zfmisc\_1\ X0)) \tag{8}$$

Assume the following.

$$m1\_subset\_1\ k4\_glib\_000\ k5\_numbers \tag{9}$$

Assume the following.

$$m1\_subset\_1\ k3\_glib\_000\ k5\_numbers \tag{10}$$

Assume the following.

$$m1\_subset\_1\ k2\_glib\_000\ k5\_numbers \tag{11}$$

Assume the following.

$$k5\_glib\_000 = k9\_domain\_1\ k5\_numbers\ k1\_glib\_000\ k2\_glib\_000\ k3\_glib\_000\ k4\_glib\_000 \tag{12}$$

Assume the following.

$$\forall X0.\forall X1.(r1\_tarski\ X0\ X1) \Leftrightarrow (\forall X2.(X2 \in X0) \Rightarrow (X2 \in X1)) \tag{13}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.(X4 = k2\_enumset1\ X0\ X1\ X2\ X3) \Leftrightarrow (\forall X5.(X5 \in X4) \Leftrightarrow (\neg(X5 \neq X0) \wedge ((X5 \neq X1) \wedge ((X5 \neq X2) \wedge (X5 \neq X3))))) \tag{14}$$

Assume the following.

$$k1\_glib\_000 = np\_\_1 \tag{15}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v4\_relat\_1\ X0\ k5\_numbers)\wedge((v1\_funct\_1\ X0)\wedge(v1\_finset\_1\ X0))))\Rightarrow((v1\_glib\_000\ X0)\Leftrightarrow((k1\_glib\_000\in k1\_relset\_1\ k5\_numbers\ X0)\wedge((k2\_glib\_000\in k1\_relset\_1\ k5\_numbers\ X0)\wedge((k3\_glib\_000\in k1\_relset\_1\ k5\_numbers\ X0)\wedge((k4\_glib\_000\in k1\_relset\_1\ k5\_numbers\ X0)\wedge((\neg v1\_xboole\_0\ (k6\_glib\_000\ X0))\wedge(((v1\_funct\_1\ (k8\_glib\_000\ X0))\wedge((v1\_funct\_2\ (k8\_glib\_000\ X0)\ (k7\_glib\_000\ X0)\ (k6\_glib\_000\ X0))\wedge(m1\_subset\_1\ (k8\_glib\_000\ X0)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k7\_glib\_000\ X0)\ (k6\_glib\_000\ X0))))))\wedge((v1\_funct\_1\ (k9\_glib\_000\ X0))\wedge((v1\_funct\_2\ (k9\_glib\_000\ X0)\ (k7\_glib\_000\ X0)\ (k6\_glib\_000\ X0))\wedge(m1\_subset\_1\ (k9\_glib\_000\ X0)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k7\_glib\_000\ X0)\ (k6\_glib\_000\ X0))))))))))))) \tag{16}$$

Theorem 1

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v4\_relat\_1\ X0\ k5\_numbers)\wedge((v1\_funct\_1\ X0)\wedge(v1\_finset\_1\ X0))))\Rightarrow((v1\_glib\_000\ X0)\Leftrightarrow((r1\_tarski\ k5\_glib\_000\ (k1\_relset\_1\ k5\_numbers\ X0))\wedge((\neg v1\_xboole\_0\ (k6\_glib\_000\ X0))\wedge(((v1\_funct\_1\ (k8\_glib\_000\ X0))\wedge((v1\_funct\_2\ (k8\_glib\_000\ X0)\ (k7\_glib\_000\ X0)\ (k6\_glib\_000\ X0))\wedge(m1\_subset\_1\ (k8\_glib\_000\ X0)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k7\_glib\_000\ X0)\ (k6\_glib\_000\ X0))))))\wedge((v1\_funct\_1\ (k9\_glib\_000\ X0))\wedge((v1\_funct\_2\ (k9\_glib\_000\ X0)\ (k7\_glib\_000\ X0)\ (k6\_glib\_000\ X0))\wedge(m1\_subset\_1\ (k9\_glib\_000\ X0)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k7\_glib\_000\ X0)\ (k6\_glib\_000\ X0))))))))))$$