l16_glib_004 (TM-GRbfT4PFux1bKU4XXeAj9hCLAqMSh6sJG)

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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 $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_glib\_004 : \iota$ be given. Let $k1\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $v2\_xxreal\_0 : \iota \Rightarrow o$ be given. Let $np\_\_5 : \iota$ be given. Let $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_numbers : \iota$ be given. Let $k4\_ordinal1 : \iota$ be given. Let $k10\_domain\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_enumset1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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. Let $k2\_glib\_003 : \iota$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7\_glib\_000 : \iota \Rightarrow \iota$ be given. Let $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np\_\_4 : \iota$ be given. Let $np\_\_3 : \iota$ be given. Let $np\_\_2 : \iota$ be given. Let $np\_\_1 : \iota$ 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 $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9\_glib\_000 : \iota \Rightarrow \iota$ 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.

$$((v2\_xxreal\_0\ np\_\_5) \wedge (m2\_subset\_1\ np\_\_5\ k1\_numbers\ k5\_numbers)) \wedge ((m1\_subset\_1\ np\_\_5\ k5\_numbers) \wedge (m1\_subset\_1\ np\_\_5\ k1\_numbers)) \tag{4}$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5.\\ ((\neg v1\_xboole\_0\ X0)\wedge((m1\_subset\_1\ X1\ X0)\wedge((m1\_subset\_1\ X2\ X0)\wedge\\ ((m1\_subset\_1\ X3\ X0)\wedge((m1\_subset\_1\ X4\ X0)\wedge(m1\_subset\_1\ X5\ X0))))))\Rightarrow\\ (k10\_domain\_1\ X0\ X1\ X2\ X3\ X4\ X5 = k3\_enumset1\ X1\ X2\ X3\ X4\ X5) \tag{6}$$

Assume the following.

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

Assume the following.

$$m1\_subset\_1\ k4\_glib\_000\ k5\_numbers \tag{8}$$

Assume the following.

$$m1\_subset\_1\ k3\_glib\_000\ k5\_numbers \tag{9}$$

Assume the following.

$$m1\_subset\_1\ k2\_glib\_000\ k5\_numbers \tag{10}$$

Assume the following.

$$m1\_subset\_1\ k1\_glib\_000\ k5\_numbers \tag{11}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5.\\ ((\neg v1\_xboole\_0\ X0)\wedge((m1\_subset\_1\ X1\ X0)\wedge((m1\_subset\_1\ X2\ X0)\wedge\\ ((m1\_subset\_1\ X3\ X0)\wedge((m1\_subset\_1\ X4\ X0)\wedge(m1\_subset\_1\ X5\ X0))))))\Rightarrow\\ (m1\_subset\_1\ (k10\_domain\_1\ X0\ X1\ X2\ X3\ X4\ X5)\ (k1\_zfmisc\_1\ X0)) \tag{12}$$

Assume the following.

$$k2\_glib\_004 = k10\_domain\_1\ k5\_numbers\ k1\_glib\_000\ k2\_glib\_000\\ k3\_glib\_000\ k4\_glib\_000\ k2\_glib\_003 \tag{13}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v4\_relat\_1\ X0\ k5\_numbers)\wedge((v1\_funct\_1\\ X0)\wedge(v1\_finset\_1\ X0))))\Rightarrow((v1\_glib\_003\ X0)\Leftrightarrow((k2\_glib\_003\in k1\_relset\_1\\ k5\_numbers\ X0)\wedge((v1\_relat\_1\ (k1\_funct\_1\ X0\ k2\_glib\_003))\wedge(\\ v4\_relat\_1\ (k1\_funct\_1\ X0\ k2\_glib\_003)\ (k7\_glib\_000\ X0))\wedge((v1\_funct\_1\\ (k1\_funct\_1\ X0\ k2\_glib\_003))\wedge(v1\_partfun1\ (k1\_funct\_1\ X0\ k2\_glib\_003)\\ (k7\_glib\_000\ X0))))))) \tag{14}$$

Assume the following.

$$k4\_glib\_000 = np\_\_4 \tag{15}$$

Assume the following.

$$k3\_glib\_000 = np\_\_3 \tag{16}$$

Assume the following.

$$k2\_glib\_000 = np\_\_2 \tag{17}$$

Assume the following.

$$k2\_glib\_003 = np\_\_5 \tag{18}$$

Assume the following.

$$k1\_glib\_000 = np\_\_1 \tag{19}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v4\_relat\_1\ X0\ k5\_numbers)\wedge((v1\_funct\_1\ X0)\wedge(v1\_finset\_1\ X0))))\Rightarrow((v1\_glib\_000\ X0)\Leftrightarrow((k1\_glib\_000 \in k1\_relset\_1\ k5\_numbers\ X0)\wedge((k2\_glib\_000 \in k1\_relset\_1\ k5\_numbers\ X0)\wedge((k3\_glib\_000 \in k1\_relset\_1\ k5\_numbers\ X0)\wedge((k4\_glib\_000 \in k1\_relset\_1\ k5\_numbers\ X0)\wedge((\neg v1\_xboole\_0\ (k6\_glib\_000\ X0))\wedge(((v1\_funct\_1\ (k8\_glib\_000\ X0))\wedge((v1\_funct\_2\ (k8\_glib\_000\ X0)\ (k7\_glib\_000\ X0)\ (k6\_glib\_000\ X0))\wedge(m1\_subset\_1\ (k8\_glib\_000\ X0)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k7\_glib\_000\ X0)\ (k6\_glib\_000\ X0))))))\wedge((v1\_funct\_1\ (k9\_glib\_000\ X0))\wedge((v1\_funct\_2\ (k9\_glib\_000\ X0)\ (k7\_glib\_000\ X0)\ (k6\_glib\_000\ X0))\wedge(m1\_subset\_1\ (k9\_glib\_000\ X0)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k7\_glib\_000\ X0)\ (k6\_glib\_000\ X0))))))))))))) \tag{20}$$

Theorem 1

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v4\_relat\_1\ X0\ k5\_numbers)\wedge((v1\_funct\_1\ X0)\wedge((v1\_finset\_1\ X0)\wedge((v1\_glib\_000\ X0)\wedge(v1\_glib\_003\ X0))))))\Rightarrow(r1\_tarski\ k2\_glib\_004\ (k1\_relset\_1\ k5\_numbers\ X0))$$