l30_glib_002 (TMJUyv5egG2L2zDJXxemV7rfYqJ8Rrjg44m)

October 27, 2020

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 $v1\_glib\_002 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6\_glib\_000 : \iota \Rightarrow \iota$ be given. Let $v5\_glib\_002 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2\_glib\_000 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_tarski : \iota \Rightarrow \iota$ be given. Let $k21\_glib\_000 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1\_ordinal1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4\_glib\_002 : \iota \Rightarrow \iota$ be given. Let $r5\_glib\_000 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_card\_1 : \iota \Rightarrow o$ be given. Let $k3\_glib\_002 : \iota \Rightarrow \iota$ be given. Let $m1\_glib\_000 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_card\_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge ((v4\_relat\_1\ X0\ k5\_numbers) \wedge ((v1\_funct\_1\ X0) \wedge ((v1\_finset\_1\ X0) \wedge (v1\_glib\_000\ X0))))) \Rightarrow (\forall X1.\forall X2.\ \forall X3.(m2\_glib\_000\ X3\ X0\ X1\ X2) \Rightarrow (\forall X4.(m2\_glib\_000\ X4\ X0\ X1\ X2) \Rightarrow (r5\_glib\_000\ X3\ X4))) \tag{1}$$

Assume the following.

$$\forall X0.(v1\_card\_1\ X0) \Rightarrow (\forall X1.(v1\_card\_1\ X1) \Rightarrow ((X0 \in X1) \Leftrightarrow (\neg r1\_ordinal1\ X1\ X0))) \tag{2}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge ((v4\_relat\_1\ X0\ k5\_numbers) \wedge ((v1\_funct\_1\ X0) \wedge ((v1\_finset\_1\ X0) \wedge (v1\_glib\_000\ X0))))) \Rightarrow (\forall X1.((v1\_relat\_1\ X1) \wedge ((v4\_relat\_1\ X1\ k5\_numbers) \wedge ((v1\_funct\_1\ X1) \wedge ((v1\_finset\_1\ X1) \wedge (v1\_glib\_000\ X1))))) \Rightarrow ((r5\_glib\_000\ X0\ X1) \Rightarrow (k3\_glib\_002\ X0 = k3\_glib\_002\ X1))) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1\_relat\_1\ X0) \wedge ((v4\_relat\_1\ X0\ k5\_numbers) \wedge ((v1\_funct\_1\ X0) \wedge ((v1\_finset\_1\ X0) \wedge (v1\_glib\_000\ X0))))) \Rightarrow (\exists X3.m2\_glib\_000\ X3\ X0\ X1\ X2) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1\_relat\_1\ X0)\wedge((v4\_relat\_1\ X0\ k5\_numbers)\wedge((v1\_funct\_1\ X0)\wedge((v1\_finset\_1\ X0)\wedge(v1\_glib\_000\ X0)))))\Rightarrow(\forall X3.(m2\_glib\_000\ X3\ X0\ X1\ X2)\Rightarrow(m1\_glib\_000\ X3\ X0)) \tag{5}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v4\_relat\_1\ X0\ k5\_numbers)\wedge((v1\_funct\_1\ X0)\wedge((v1\_finset\_1\ X0)\wedge(v1\_glib\_000\ X0)))))\Rightarrow(\forall X1.(m1\_glib\_000\ X1\ X0)\Rightarrow((v1\_relat\_1\ X1)\wedge((v4\_relat\_1\ X1\ k5\_numbers)\wedge((v1\_funct\_1\ X1)\wedge((v1\_finset\_1\ X1)\wedge(v1\_glib\_000\ X1))))))) \tag{6}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v4\_relat\_1\ X0\ k5\_numbers)\wedge((v1\_funct\_1\ X0)\wedge((v1\_finset\_1\ X0)\wedge(v1\_glib\_000\ X0)))))\Rightarrow(v1\_card\_1\ (k4\_glib\_002\ X0)) \tag{7}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v4\_relat\_1\ X0\ k5\_numbers)\wedge((v1\_funct\_1\ X0)\wedge((v1\_finset\_1\ X0)\wedge(v1\_glib\_000\ X0)))))\Rightarrow(k4\_glib\_002\ X0 = k1\_card\_1\ (k3\_glib\_002\ X0)) \tag{8}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v4\_relat\_1\ X0\ k5\_numbers)\wedge((v1\_funct\_1\ X0)\wedge((v1\_finset\_1\ X0)\wedge(v1\_glib\_000\ X0)))))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k6\_glib\_000\ X0))\Rightarrow((v5\_glib\_002\ X1\ X0)\Leftrightarrow(\forall X2.(m2\_glib\_000\ X2\ X0\ (k6\_subset\_1\ (k6\_glib\_000\ X0)\ (k1\_tarski\ X1))\ (k21\_glib\_000\ X0\ (k6\_subset\_1\ (k6\_glib\_000\ X0)\ (k1\_tarski\ X1))))\Rightarrow(k4\_glib\_002\ X0 \in k4\_glib\_002\ X2)))) \tag{9}$$

Theorem 1

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v4\_relat\_1\ X0\ k5\_numbers)\wedge((v1\_funct\_1\ X0)\wedge((v1\_finset\_1\ X0)\wedge((v1\_glib\_000\ X0)\wedge(v1\_glib\_002\ X0))))))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k6\_glib\_000\ X0))\Rightarrow((\neg v5\_glib\_002\ X1\ X0)\Leftrightarrow(\forall X2.(m2\_glib\_000\ X2\ X0\ (k6\_subset\_1\ (k6\_glib\_000\ X0)\ (k1\_tarski\ X1))\ (k21\_glib\_000\ X0\ (k6\_subset\_1\ (k6\_glib\_000\ X0)\ (k1\_tarski\ X1))))\Rightarrow(r1\_ordinal1\ (k4\_glib\_002\ X2)\ (k4\_glib\_002\ X0)))))$$