t71_card_3 (TMTLztb3RmkwGan16UvRjSMxucpiEqxtpHL)

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Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $k9\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_funct\_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8\_card\_3 : \iota \Rightarrow \iota$ be given. Let $k1\_funct\_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k16\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k3\_tarski : \iota \Rightarrow \iota$ be given. Let $k10\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge (v1\_funct\_1\ X0)) \Rightarrow (\forall X1.((v1\_relat\_1\ X1) \wedge (v1\_funct\_1\ X1)) \Rightarrow (\forall X2.((v1\_relat\_1\ X2) \wedge (v1\_funct\_1\ X2)) \Rightarrow (((X0 \in k8\_card\_3\ X1) \wedge (X2 \in k8\_card\_3\ X1)) \Rightarrow (k1\_funct\_4\ X0\ X2 \in k8\_card\_3\ X1)))) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1\_relat\_1\ X2) \wedge (v1\_funct\_1\ X2)) \Rightarrow (((X0 \in k9\_xtuple\_0\ X2) \wedge (X1 \in k1\_funct\_1\ X2\ X0)) \Rightarrow (k16\_funcop\_1\ X0\ X1 \in k8\_card\_3\ X2)) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1) \wedge (v1\_funct\_1\ X1)) \Rightarrow ((X0 \in k8\_card\_3\ X1) \Rightarrow ((v1\_funct\_1\ X0) \wedge (m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k9\_xtuple\_0\ X1)\ (k3\_tarski\ (k10\_xtuple\_0\ X1))))))) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.(v1\_relat\_1\ (k16\_funcop\_1\ X0\ X1)) \wedge (v1\_funct\_1\ (k16\_funcop\_1\ X0\ X1)) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.k4\_funct\_4\ X0\ X1\ X2\ X3 = k1\_funct\_4\ (k16\_funcop\_1\ X0\ X2)\ (k16\_funcop\_1\ X1\ X3) \tag{5}$$

Theorem 1

$$\forall X0.((v1\_relat\_1\ X0)\wedge(v1\_funct\_1\ X0))\Rightarrow(\forall X1.\forall X2.\ \forall X3.\forall X4.((X1 \in k9\_xtuple\_0\ X0)\wedge((X3 \in k1\_funct\_1\ X0\ X1)\wedge((X2 \in k9\_xtuple\_0\ X0)\wedge(X4 \in k1\_funct\_1\ X0\ X2))))\Rightarrow(k4\_funct\_4\ X1\ X2\ X3\ X4 \in k8\_card\_3\ X0))$$