l71_finseq_2 (TMYSU39zZikiFkeZUhcVHgagTPS8jjpa6EA)

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Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $v1\_finseq\_1 : \iota \Rightarrow o$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_tarski : \iota \Rightarrow \iota$ be given. Let $k10\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k9\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k5\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_finseq\_1 : \iota \Rightarrow \iota$ be given. Let $k13\_funct\_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.(r1\_tarski\ X0\ X1) \Rightarrow ((r1\_tarski\ (k2\_zfmisc\_1\ X0\ X2)\ (k2\_zfmisc\_1\ X1\ X2)) \wedge (r1\_tarski\ (k2\_zfmisc\_1\ X2\ X0)\ (k2\_zfmisc\_1\ X2\ X1))) \tag{1}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge (v1\_funct\_1\ X0)) \Rightarrow (\forall X1.((v1\_relat\_1\ X1) \wedge (v1\_funct\_1\ X1)) \Rightarrow (r1\_tarski\ (k10\_xtuple\_0\ (k13\_funct\_3\ X0\ X1))\ (k2\_zfmisc\_1\ (k10\_xtuple\_0\ X0)\ (k10\_xtuple\_0\ X1)))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1) \wedge (v1\_funct\_1\ X1)) \Rightarrow (\forall X2.((v1\_relat\_1\ X2) \wedge (v1\_funct\_1\ X2)) \Rightarrow (((k9\_xtuple\_0\ X1 = X0) \wedge (k9\_xtuple\_0\ X2 = X0)) \Rightarrow (k9\_xtuple\_0\ (k13\_funct\_3\ X1\ X2) = X0))) \tag{3}$$

Assume the following.

$$\forall X0.(v1\_relat\_1\ X0) \Rightarrow (\forall X1.(v1\_relat\_1\ X1) \Rightarrow ((r1\_tarski\ (k10\_xtuple\_0\ X0)\ (k9\_xtuple\_0\ X1)) \Rightarrow (k9\_xtuple\_0\ (k3\_relat\_1\ X0\ X1) = k9\_xtuple\_0\ X0))) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((r1\_tarski\ X0\ X1) \wedge (r1\_tarski\ X1\ X2)) \Rightarrow (r1\_tarski\ X0\ X2) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.(k9\_xtuple\_0\ (k2\_funcop\_1\ X0\ X1) = X0)\wedge(r1\_tarski\ (k10\_xtuple\_0\ (k2\_funcop\_1\ X0\ X1))\ (k1\_tarski\ X1)) \tag{6}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v1\_finseq\_1\ X0)))\Rightarrow (k4\_finseq\_1\ X0 = k9\_xtuple\_0\ X0) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.v1\_relat\_1\ (k2\_zfmisc\_1\ X0\ X1) \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.(v1\_relat\_1\ (k2\_funcop\_1\ X0\ X1))\wedge(v1\_funct\_1\ (k2\_funcop\_1\ X0\ X1)) \tag{9}$$

Assume the following.

$$\forall X0.\forall X1.(((v1\_relat\_1\ X0)\wedge(v1\_funct\_1\ X0))\wedge((v1\_relat\_1\ X1)\wedge(v1\_funct\_1\ X1)))\Rightarrow((v1\_relat\_1\ (k13\_funct\_3\ X0\ X1))\wedge(v1\_funct\_1\ (k13\_funct\_3\ X0\ X1))) \tag{10}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge(v1\_funct\_1\ X0))\Rightarrow(\forall X1.\forall X2. ((v1\_relat\_1\ X2)\wedge(v1\_funct\_1\ X2))\Rightarrow(k5\_funcop\_1\ X0\ X1\ X2 = k3\_relat\_1\ (k13\_funct\_3\ (k2\_funcop\_1\ (k9\_xtuple\_0\ X2)\ X1)\ X2)\ X0)) \tag{11}$$

Assume the following.

$$\forall X0.\forall X1.k2\_funcop\_1\ X0\ X1 = k2\_zfmisc\_1\ X0\ (k1\_tarski\ X1) \tag{12}$$

Theorem 1

$$\forall X0.\forall X1.((v1\_relat\_1\ X1)\wedge((v1\_funct\_1\ X1)\wedge(v1\_finseq\_1\ X1)))\Rightarrow(\forall X2.((v1\_relat\_1\ X2)\wedge(v1\_funct\_1\ X2))\Rightarrow((r1\_tarski\ (k2\_zfmisc\_1\ (k1\_tarski\ X0)\ (k10\_xtuple\_0\ X1))\ (k9\_xtuple\_0\ X2))\Rightarrow (k9\_xtuple\_0\ (k5\_funcop\_1\ X2\ X0\ X1) = k4\_finseq\_1\ X1)))$$