t24_memstr_0 (TMYb1NR4qFCLVnYSJ5cDab1UxMR3Xyriyrk)

October 27, 2020

Let $v1\_setfam\_1 : \iota \Rightarrow o$ be given. Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $v2\_memstr\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3\_memstr\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1\_memstr\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $v5\_funct\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_memstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k9\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k2\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6\_domain\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6\_memstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_funct\_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7\_memstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5\_memstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k1\_tarski : \iota \Rightarrow \iota$ 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 $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5\_numbers : \iota$ be given. Let $k4\_ordinal1 : \iota$ be given. Let $v3\_ordinal1 : \iota \Rightarrow o$ be given. Let $l1\_struct\_0 : \iota \Rightarrow o$ be given. Let $l2\_struct\_0 : \iota \Rightarrow o$ be given. Let $v7\_ordinal1 : \iota \Rightarrow o$ be given. Let $k1\_numbers : \iota$ be given. Let $k16\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(\neg v1\_setfam\_1\ X0) \Rightarrow (\forall X1.((\neg v2\_struct\_0\ X1) \wedge ((v2\_memstr\_0\ X1\ X0) \wedge ((v3\_memstr\_0\ X1\ X0) \wedge (l1\_memstr\_0\ X1\ X0)))) \Rightarrow (\forall X2.((v1\_relat\_1\ X2) \wedge ((v4\_relat\_1\ X2\ (u1\_struct\_0\ X1)) \wedge ((v1\_funct\_1\ X2) \wedge (v5\_funct\_1\ X2\ (k2\_memstr\_0\ X0\ X1))))) \Rightarrow ((k4\_struct\_0\ X1 \in k9\_xtuple\_0\ X2) \Rightarrow (X2 = k1\_funct\_4\ (k7\_memstr\_0\ X0\ X1\ (k5\_memstr\_0\ X0\ X1\ X2))\ (k6\_memstr\_0\ X0\ X1\ X2)))))) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.(k9\_xtuple\_0\ (k2\_funcop\_1\ X0\ X1) = X0) \wedge (r1\_tarski\ (k10\_xtuple\_0\ (k2\_funcop\_1\ X0\ X1))\ (k1\_tarski\ X1)) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0)\wedge((\neg v1\_xboole\_0\ X1)\wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0))))\Rightarrow(\forall X2.(m2\_subset\_1\ X2\ X0\ X1)\Leftrightarrow(m1\_subset\_1\ X2\ X1)) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.k7\_funcop\_1\ X0\ X1 = k2\_funcop\_1\ X0\ X1 \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0)\wedge(m1\_subset\_1\ X1\ X0))\Rightarrow (k6\_domain\_1\ X0\ X1 = k1\_tarski\ X1) \tag{5}$$

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.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l1\_struct\_0\ X0))\Rightarrow(\neg v1\_xboole\_0\ (u1\_struct\_0\ X0)) \tag{8}$$

Assume the following.

$$\forall X0.(l2\_struct\_0\ X0)\Rightarrow(l1\_struct\_0\ X0) \tag{9}$$

Assume the following.

$$\forall X0.\forall X1.(l1\_memstr\_0\ X1\ X0)\Rightarrow(l2\_struct\_0\ X1) \tag{10}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1\_setfam\_1\ X0)\wedge(((\neg v2\_struct\_0\ X1)\wedge((v2\_memstr\_0\ X1\ X0)\wedge((v3\_memstr\_0\ X1\ X0)\wedge(l1\_memstr\_0\ X1\ X0))))\wedge(v7\_ordinal1\ X2)))\Rightarrow((v1\_relat\_1\ (k7\_memstr\_0\ X0\ X1\ X2))\wedge((v4\_relat\_1\ (k7\_memstr\_0\ X0\ X1\ X2)\ (u1\_struct\_0\ X1))\wedge((v1\_funct\_1\ (k7\_memstr\_0\ X0\ X1\ X2))\wedge(v5\_funct\_1\ (k7\_memstr\_0\ X0\ X1\ X2)\ (k2\_memstr\_0\ X0\ X1))))) \tag{11}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1\_setfam\_1\ X0)\wedge((l1\_memstr\_0\ X1\ X0)\wedge((v1\_relat\_1\ X2)\wedge((v4\_relat\_1\ X2\ (u1\_struct\_0\ X1))\wedge((v1\_funct\_1\ X2)\wedge(v5\_funct\_1\ X2\ (k2\_memstr\_0\ X0\ X1))))))))\Rightarrow((v1\_relat\_1\ (k6\_memstr\_0\ X0\ X1\ X2))\wedge((v4\_relat\_1\ (k6\_memstr\_0\ X0\ X1\ X2)\ (u1\_struct\_0\ X1))\wedge((v1\_funct\_1\ (k6\_memstr\_0\ X0\ X1\ X2))\wedge(v5\_funct\_1\ (k6\_memstr\_0\ X0\ X1\ X2)\ (k2\_memstr\_0\ X0\ X1))))) \tag{12}$$

Assume the following.

$$m1\_subset\_1\ k5\_numbers\ (k1\_zfmisc\_1\ k1\_numbers) \tag{13}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1\_setfam\_1\ X0)\wedge(((\neg v2\_struct\_0\ X1)\wedge((v2\_memstr\_0\ X1\ X0)\wedge((v3\_memstr\_0\ X1\ X0)\wedge(l1\_memstr\_0\ X1\ X0))))\wedge((v1\_relat\_1\ X2)\wedge((v4\_relat\_1\ X2\ (u1\_struct\_0\ X1))\wedge((v1\_funct\_1\ X2)\wedge(v5\_funct\_1\ X2\ (k2\_memstr\_0\ X0\ X1)))))))\Rightarrow(m2\_subset\_1\ (k5\_memstr\_0\ X0\ X1\ X2)\ k1\_numbers\ k5\_numbers) \tag{14}$$

Assume the following.

$$\forall X0.(l2\_struct\_0\ X0)\Rightarrow(m1\_subset\_1\ (k4\_struct\_0\ X0)\ (u1\_struct\_0\ X0)) \tag{15}$$

Assume the following.

$$\forall X0.\forall X1.k16\_funcop\_1\ X0\ X1 = k7\_funcop\_1\ (k1\_tarski\ X0)\ X1 \tag{16}$$

Assume the following.

$$\forall X0.(\neg v1\_setfam\_1\ X0)\Rightarrow(\forall X1.((\neg v2\_struct\_0\ X1)\wedge((v2\_memstr\_0\ X1\ X0)\wedge((v3\_memstr\_0\ X1\ X0)\wedge(l1\_memstr\_0\ X1\ X0))))\Rightarrow(\forall X2.((v1\_relat\_1\ X2)\wedge((v4\_relat\_1\ X2\ (u1\_struct\_0\ X1))\wedge((v1\_funct\_1\ X2)\wedge(v5\_funct\_1\ X2\ (k2\_memstr\_0\ X0\ X1)))))\Rightarrow(k5\_memstr\_0\ X0\ X1\ X2 = k1\_funct\_1\ X2\ (k4\_struct\_0\ X1)))) \tag{17}$$

Assume the following.

$$\forall X0.\forall X1.k2\_funcop\_1\ X0\ X1 = k2\_zfmisc\_1\ X0\ (k1\_tarski\ X1) \tag{18}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge(v1\_funct\_1\ X0))\Rightarrow(\forall X1.((v1\_relat\_1\ X1)\wedge(v1\_funct\_1\ X1))\Rightarrow(\forall X2.((v1\_relat\_1\ X2)\wedge(v1\_funct\_1\ X2))\Rightarrow((X2 = k1\_funct\_4\ X0\ X1)\Leftrightarrow((k9\_xtuple\_0\ X2 = k2\_xboole\_0\ (k9\_xtuple\_0\ X0)\ (k9\_xtuple\_0\ X1))\wedge(\forall X3.(X3 \in k2\_xboole\_0\ (k9\_xtuple\_0\ X0)\ (k9\_xtuple\_0\ X1))\Rightarrow(((X3 \in k9\_xtuple\_0\ X1)\Rightarrow(k1\_funct\_1\ X2\ X3 = k1\_funct\_1\ X1\ X3))\wedge((\neg X3 \in k9\_xtuple\_0\ X1)\Rightarrow(k1\_funct\_1\ X2\ X3 = k1\_funct\_1\ X0\ X3)))))))) \tag{19}$$

Assume the following.

$$\forall X0.(\neg v1\_setfam\_1\ X0)\Rightarrow(\forall X1.((\neg v2\_struct\_0\ X1)\wedge((v2\_memstr\_0\ X1\ X0)\wedge((v3\_memstr\_0\ X1\ X0)\wedge(l1\_memstr\_0\ X1\ X0))))\Rightarrow(\forall X2.(v7\_ordinal1\ X2)\Rightarrow(k7\_memstr\_0\ X0\ X1\ X2 = k16\_funcop\_1\ (k4\_struct\_0\ X1)\ X2))) \tag{20}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k4\_ordinal1)\Rightarrow(v7\_ordinal1\ X0) \tag{21}$$

Assume the following.

$$\forall X0.(v1\_xboole\_0\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0))\Rightarrow(v1\_xboole\_0\ X1)) \tag{22}$$

Theorem 1

$$\forall X0.(\neg v1\_setfam\_1\ X0)\Rightarrow(\forall X1.((\neg v2\_struct\_0\ X1)\wedge((v2\_memstr\_0\ X1\ X0)\wedge((v3\_memstr\_0\ X1\ X0)\wedge(l1\_memstr\_0\ X1\ X0))))\Rightarrow(\forall X2.((v1\_relat\_1\ X2)\wedge((v4\_relat\_1\ X2\ (u1\_struct\_0\ X1))\wedge((v1\_funct\_1\ X2)\wedge(v5\_funct\_1\ X2\ (k2\_memstr\_0\ X0\ X1)))))\Rightarrow((k4\_struct\_0\ X1\in k9\_xtuple\_0\ X2)\Rightarrow(k9\_xtuple\_0\ X2 = k2\_xboole\_0\ (k6\_domain\_1\ (u1\_struct\_0\ X1)\ (k4\_struct\_0\ X1))\ (k9\_xtuple\_0\ (k6\_memstr\_0\ X0\ X1\ X2))))))$$