t17_scmfsa_2 (TMFcLFb7CvkUGmaZCrf7i3KY4bbqxskzHNz)

October 27, 2020

Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_compos\_1 : \iota \Rightarrow \iota$ be given. Let $k1\_ami\_3 : \iota$ be given. Let $k1\_scmfsa\_2 : \iota$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $v1\_compos\_0 : \iota \Rightarrow o$ be given. Let $v2\_compos\_0 : \iota \Rightarrow o$ be given. Let $v3\_compos\_0 : \iota \Rightarrow o$ be given. Let $v5\_compos\_0 : \iota \Rightarrow o$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_card\_3 : \iota \Rightarrow \iota$ be given. Let $k3\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $g1\_extpro\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_scm\_inst : \iota$ be given. Let $k2\_scmfsa\_i : \iota$ be given. Let $k9\_ami\_2 : \iota$ be given. Let $k3\_ami\_2 : \iota$ be given. Let $k4\_ami\_2 : \iota$ be given. Let $k5\_scmfsa\_1 : \iota$ be given. Let $np\_\_3 : \iota$ be given. Let $k4\_scmfsa\_1 : \iota$ be given. Let $k1\_scmfsa\_1 : \iota$ be given. Let $np\_\_2 : \iota$ be given. Let $k1\_ami\_2 : \iota$ be given. Let $v1\_extpro\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1\_extpro\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_funct\_7 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k12\_scmfsa\_1 : \iota$ be given. Let $k2\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4\_ordinal1 : \iota$ be given. Let $k7\_card\_1 : \iota \Rightarrow \iota$ be given. Let $np\_\_13 : \iota$ be given. Let $k2\_scm\_inst : \iota$ be given. Let $k1\_scmfsa\_i : \iota$ be given. Let $k3\_xtuple\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_xboole\_0 : \iota$ be given. Let $k11\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np\_\_9 : \iota$ be given. Let $np\_\_10 : \iota$ be given. Let $k10\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np\_\_11 : \iota$ be given. Let $np\_\_12 : \iota$ be given. Let $k5\_numbers : \iota$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $u2\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $u1\_memstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u2\_memstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1\_extpro\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X0\ X1) \Rightarrow ((v1\_xboole\_0\ X1) \vee (X0 \in X1)) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (m1\_subset\_1\ X0\ X1) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5.\forall X6.((m1\_subset\_1\ X2\ X1)\wedge(((v1\_compos\_0\ X3)\wedge((v2\_compos\_0\ X3)\wedge((v3\_compos\_0\ X3)\wedge(v5\_compos\_0\ X3))))\wedge(((v1\_funct\_1\ X4)\wedge((v1\_funct\_2\ X4\ X1\ X0)\wedge(m1\_subset\_1\ X4\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X1\ X0)))))\wedge(((v1\_relat\_1\ X5)\wedge((v4\_relat\_1\ X5\ X0)\wedge((v1\_funct\_1\ X5)\wedge(v1\_partfun1\ X5\ X0))))\wedge((v1\_funct\_1\ X6)\wedge((v1\_funct\_2\ X6\ X3\ (k1\_funct\_2\ (k4\_card\_3\ (k3\_relat\_1\ X4\ X5))\ (k4\_card\_3\ (k3\_relat\_1\ X4\ X5))))\wedge(m1\_subset\_1\ X6\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X3\ (k1\_funct\_2\ (k4\_card\_3\ (k3\_relat\_1\ X4\ X5))\ (k4\_card\_3\ (k3\_relat\_1\ X4\ X5))))))))))\Rightarrow(\forall X7.\forall X8.\forall X9.\forall X10.\forall X11.\forall X12.\forall X13.(g1\_extpro\_1\ X0\ X1\ X2\ X3\ X4\ X5\ X6 = g1\_extpro\_1\ X7\ X8\ X9\ X10\ X11\ X12\ X13)\Rightarrow((X0 = X7)\wedge((X1 = X8)\wedge((X2 = X9)\wedge((X3 = X10)\wedge((X4 = X11)\wedge((X5 = X12)\wedge(X6 = X13))))))) \tag{3}$$

Assume the following.

$$(\neg v1\_xboole\_0\ k3\_scm\_inst)\wedge(v5\_compos\_0\ k3\_scm\_inst) \tag{4}$$

Assume the following.

$$(\neg v1\_xboole\_0\ k2\_scmfsa\_i)\wedge(v5\_compos\_0\ k2\_scmfsa\_i) \tag{5}$$

Assume the following.

$$(\neg v1\_xboole\_0\ k3\_scm\_inst)\wedge(v3\_compos\_0\ k3\_scm\_inst) \tag{6}$$

Assume the following.

$$(\neg v1\_xboole\_0\ k2\_scmfsa\_i)\wedge(v3\_compos\_0\ k2\_scmfsa\_i) \tag{7}$$

Assume the following.

$$(\neg v1\_xboole\_0\ k3\_scm\_inst)\wedge(v2\_compos\_0\ k3\_scm\_inst) \tag{8}$$

Assume the following.

$$(\neg v1\_xboole\_0\ k2\_scmfsa\_i)\wedge(v2\_compos\_0\ k2\_scmfsa\_i) \tag{9}$$

Assume the following.

$$(\neg v1\_xboole\_0\ k3\_scm\_inst)\wedge(v1\_compos\_0\ k3\_scm\_inst) \tag{10}$$

Assume the following.

$$(\neg v1\_xboole\_0\ k2\_scmfsa\_i)\wedge(v1\_compos\_0\ k2\_scmfsa\_i) \tag{11}$$

Assume the following.

$$(v1\_funct\_1\ k9\_ami\_2)\wedge((v1\_funct\_2\ k9\_ami\_2\ k3\_scm\_inst\ (k1\_funct\_2\ (k4\_card\_3\ (k3\_relat\_1\ k3\_ami\_2\ k4\_ami\_2))\ (k4\_card\_3\ (k3\_relat\_1\ k3\_ami\_2\ k4\_ami\_2))))\wedge(m1\_subset\_1\ k9\_ami\_2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k3\_scm\_inst\ (k1\_funct\_2\ (k4\_card\_3\ (k3\_relat\_1\ k3\_ami\_2\ k4\_ami\_2))\ (k4\_card\_3\ (k3\_relat\_1\ k3\_ami\_2\ k4\_ami\_2)))))))) \tag{12}$$

Assume the following.

$$(v1\_relat\_1\ k5\_scmfsa\_1)\wedge((v4\_relat\_1\ k5\_scmfsa\_1\ np\_\_3)\wedge((v1\_funct\_1\ k5\_scmfsa\_1)\wedge(v1\_partfun1\ k5\_scmfsa\_1\ np\_\_3))) \tag{13}$$

Assume the following.

$$(v1\_funct\_1\ k4\_scmfsa\_1)\wedge((v1\_funct\_2\ k4\_scmfsa\_1\ k1\_scmfsa\_1\ np\_\_3)\wedge(m1\_subset\_1\ k4\_scmfsa\_1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k1\_scmfsa\_1\ np\_\_3)))) \tag{14}$$

Assume the following.

$$(v1\_relat\_1\ k4\_ami\_2)\wedge((v4\_relat\_1\ k4\_ami\_2\ np\_\_2)\wedge((v1\_funct\_1\ k4\_ami\_2)\wedge(v1\_partfun1\ k4\_ami\_2\ np\_\_2))) \tag{15}$$

Assume the following.

$$(v1\_funct\_1\ k3\_ami\_2)\wedge((v1\_funct\_2\ k3\_ami\_2\ k1\_ami\_2\ np\_\_2)\wedge(m1\_subset\_1\ k3\_ami\_2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k1\_ami\_2\ np\_\_2)))) \tag{16}$$

Assume the following.

$$(v1\_extpro\_1\ k1\_scmfsa\_2\ np\_\_3)\wedge(l1\_extpro\_1\ k1\_scmfsa\_2\ np\_\_3) \tag{17}$$

Assume the following.

$$\forall X0.\forall X1.m1\_subset\_1\ (k1\_funct\_7\ X0\ X1)\ X1 \tag{18}$$

Assume the following.

$$(v1\_extpro\_1\ k1\_ami\_3\ np\_\_2)\wedge(l1\_extpro\_1\ k1\_ami\_3\ np\_\_2) \tag{19}$$

Assume the following.

$$(v1\_funct\_1\ k12\_scmfsa\_1)\wedge((v1\_funct\_2\ k12\_scmfsa\_1\ k2\_scmfsa\_i\ (k1\_funct\_2\ (k4\_card\_3\ (k3\_relat\_1\ k4\_scmfsa\_1\ k5\_scmfsa\_1))\ (k4\_card\_3\ (k3\_relat\_1\ k4\_scmfsa\_1\ k5\_scmfsa\_1))))\wedge(m1\_subset\_1\ k12\_scmfsa\_1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k2\_scmfsa\_i\ (k1\_funct\_2\ (k4\_card\_3\ (k3\_relat\_1\ k4\_scmfsa\_1\ k5\_scmfsa\_1))\ (k4\_card\_3\ (k3\_relat\_1\ k4\_scmfsa\_1\ k5\_scmfsa\_1))))))) \tag{20}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(X2 = k2\_xboole\_0\ X0\ X1)\Leftrightarrow(\forall X3.\ (X3 \in X2)\Leftrightarrow((X3 \in X0)\vee(X3 \in X1))) \tag{21}$$

Assume the following.

$$k2\_scmfsa\_i = k2\_xboole\_0\ (k2\_xboole\_0\ k3\_scm\_inst\ (ReplSep4\ (toset\ (\lambda X0 : \iota.m2\_subset\_1\ X0\ k4\_ordinal1\ (k7\_card\_1\ np\_\_13)))\ (\lambda X0 : \iota.toset\ (\lambda X1 : \iota.m1\_subset\_1\ X1\ k2\_scm\_inst))\ (\lambda X0 : \iota.\lambda X1 : \iota.toset\ (\lambda X2 : \iota.m1\_subset\_1\ X2\ k2\_scm\_inst))\ (\lambda X0 : \iota.\lambda X1 : \iota.\lambda X2 : \iota.toset\ (\lambda X3 : \iota.m1\_subset\_1\ X3\ k1\_scmfsa\_i))\ (\lambda X0 : \iota.\lambda X1 : \iota.\lambda X2 : \iota.\lambda X3 : \iota.X0 \in k2\_tarski\ np\_\_9\ np\_\_10)\ (\lambda X0 : \iota.\lambda X1 : \iota.\lambda X2 : \iota.\lambda X3 : \iota.k3\_xtuple\_0\ X0\ k1\_xboole\_0\ (k11\_finseq\_1\ X1\ X3\ X2))))\ (ReplSep3\ (toset\ (\lambda X0 : \iota.m2\_subset\_1\ X0\ k4\_ordinal1\ (k7\_card\_1\ np\_\_13)))\ (\lambda X0 : \iota.toset\ (\lambda X1 : \iota.m1\_subset\_1\ X1\ k2\_scm\_inst))\ (\lambda X0 : \iota.\lambda X1 : \iota.toset\ (\lambda X2 : \iota.m1\_subset\_1\ X2\ k1\_scmfsa\_i))\ (\lambda X0 : \iota.\lambda X1 : \iota.\lambda X2 : \iota.X0 \in k2\_tarski\ np\_\_11\ np\_\_12)\ (\lambda X0 : \iota.\lambda X1 : \iota.\lambda X2 : \iota.k3\_xtuple\_0\ X0\ k1\_xboole\_0\ (k10\_finseq\_1\ X1\ X2))) \tag{22}$$

Assume the following.

$$k1\_scmfsa\_2 = g1\_extpro\_1\ np\_\_3\ k1\_scmfsa\_1\ (k1\_funct\_7\ k5\_numbers\ k1\_scmfsa\_1)\ k2\_scmfsa\_i\ k4\_scmfsa\_1\ k5\_scmfsa\_1\ k12\_scmfsa\_1 \tag{23}$$

Assume the following.

$$k1\_ami\_3 = g1\_extpro\_1\ np\_\_2\ k1\_ami\_2\ (k1\_funct\_7\ k5\_numbers\ k1\_ami\_2)\ k3\_scm\_inst\ k3\_ami\_2\ k4\_ami\_2\ k9\_ami\_2 \tag{24}$$

Assume the following.

$$\forall X0.\forall X1.k2\_xboole\_0\ X0\ X1 = k2\_xboole\_0\ X1\ X0 \tag{25}$$

Assume the following.

$$\forall X0.\forall X1.(l1\_extpro\_1\ X1\ X0)\Rightarrow((v1\_extpro\_1\ X1\ X0)\Rightarrow(X1 = g1\_extpro\_1\ X0\ (u1\_struct\_0\ X1)\ (u2\_struct\_0\ X1)\ (u1\_compos\_1\ X1)\ (u1\_memstr\_0\ X0\ X1)\ (u2\_memstr\_0\ X0\ X1)\ (u1\_extpro\_1\ X0\ X1))) \tag{26}$$

Theorem 1

$$\forall X0.(m1\_subset\_1\ X0\ (u1\_compos\_1\ k1\_ami\_3))\Rightarrow(m1\_subset\_1\ X0\ (u1\_compos\_1\ k1\_scmfsa\_2))$$