t14_sf_mastr (TMPJbB8LFGQ4MzarsCNLesR949Va53ofgLs)

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Let $v1\_ami\_2 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k1\_scmfsa\_2 : \iota$ be given. Let $u1\_compos\_1 : \iota \Rightarrow \iota$ be given. Let $k6\_scmfsa\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7\_scmfsa\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8\_scmfsa\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9\_scmfsa\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10\_scmfsa\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_sf\_mastr : \iota \Rightarrow \iota$ be given. Let $k5\_scmfsa\_m : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_compos\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np\_\_5 : \iota$ be given. Let $np\_\_4 : \iota$ be given. Let $np\_\_3 : \iota$ be given. Let $np\_\_2 : \iota$ be given. Let $np\_\_1 : \iota$ be given. Let $k2\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_finset\_1 : \iota \Rightarrow o$ be given. Let $k2\_scmfsa\_2 : \iota$ be given. Let $v4\_finsub\_1 : \iota \Rightarrow o$ be given. Let $k5\_finsub\_1 : \iota \Rightarrow \iota$ be given. Let $k3\_enumset1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np\_\_7 : \iota$ be given. Let $np\_\_8 : \iota$ be given. Let $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_numbers : \iota$ be given. Let $k5\_numbers : \iota$ be given. Let $k12\_scmfsa\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k13\_scmfsa\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_scmfsa\_m : \iota \Rightarrow \iota$ be given. Let $np\_\_9 : \iota$ be given. Let $np\_\_10 : \iota$ be given. Let $m1\_scmfsa\_2 : \iota \Rightarrow o$ be given. Let $k14\_scmfsa\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k15\_scmfsa\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np\_\_11 : \iota$ be given. Let $np\_\_12 : \iota$ be given. Let $k16\_scmfsa\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k17\_scmfsa\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_xboole\_0 : \iota$ be given. Assume the following.

$$\forall X0. \forall X1. (m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ X1)) \Leftrightarrow (r1\_tarski\ X0\ X1) \tag{1}$$

Assume the following.

$$\forall X0. ((v1\_ami\_2\ X0) \wedge (m1\_subset\_1\ X0\ (u1\_struct\_0\ k1\_scmfsa\_2))) \Rightarrow (\forall X1. ((v1\_ami\_2\ X1) \wedge (m1\_subset\_1\ X1\ (u1\_struct\_0\ k1\_scmfsa\_2))) \Rightarrow (k2\_compos\_0\ (u1\_compos\_1\ k1\_scmfsa\_2)\ (k10\_scmfsa\_2\ X0\ X1) = np\_\_5)) \tag{2}$$

Assume the following.

$$\forall X0.((v1\_ami\_2\ X0)\wedge(m1\_subset\_1\ X0\ (u1\_struct\_0\ k1\_scmfsa\_2)))\Rightarrow (\forall X1.((v1\_ami\_2\ X1)\wedge(m1\_subset\_1\ X1\ (u1\_struct\_0\ k1\_scmfsa\_2)))\Rightarrow (k2\_compos\_0\ (u1\_compos\_1\ k1\_scmfsa\_2)\ (k9\_scmfsa\_2\ X0\ X1) = np\_\_4)) \quad (3)$$

Assume the following.

$$\forall X0.((v1\_ami\_2\ X0)\wedge(m1\_subset\_1\ X0\ (u1\_struct\_0\ k1\_scmfsa\_2)))\Rightarrow (\forall X1.((v1\_ami\_2\ X1)\wedge(m1\_subset\_1\ X1\ (u1\_struct\_0\ k1\_scmfsa\_2)))\Rightarrow (k2\_compos\_0\ (u1\_compos\_1\ k1\_scmfsa\_2)\ (k8\_scmfsa\_2\ X0\ X1) = np\_\_3)) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1)\Rightarrow(m1\_subset\_1\ X0\ X1) \quad (5)$$

Assume the following.

$$\forall X0.((v1\_ami\_2\ X0)\wedge(m1\_subset\_1\ X0\ (u1\_struct\_0\ k1\_scmfsa\_2)))\Rightarrow (\forall X1.((v1\_ami\_2\ X1)\wedge(m1\_subset\_1\ X1\ (u1\_struct\_0\ k1\_scmfsa\_2)))\Rightarrow (k2\_compos\_0\ (u1\_compos\_1\ k1\_scmfsa\_2)\ (k7\_scmfsa\_2\ X0\ X1) = np\_\_2)) \quad (6)$$

Assume the following.

$$\forall X0.((v1\_ami\_2\ X0)\wedge(m1\_subset\_1\ X0\ (u1\_struct\_0\ k1\_scmfsa\_2)))\Rightarrow (\forall X1.((v1\_ami\_2\ X1)\wedge(m1\_subset\_1\ X1\ (u1\_struct\_0\ k1\_scmfsa\_2)))\Rightarrow (k2\_compos\_0\ (u1\_compos\_1\ k1\_scmfsa\_2)\ (k6\_scmfsa\_2\ X0\ X1) = np\_\_1)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(((v1\_ami\_2\ X0)\wedge(m1\_subset\_1\ X0\ (u1\_struct\_0\ k1\_scmfsa\_2)))\wedge((v1\_ami\_2\ X1)\wedge(m1\_subset\_1\ X1\ (u1\_struct\_0\ k1\_scmfsa\_2))))\Rightarrow(k5\_scmfsa\_m\ X0\ X1 = k2\_tarski\ X0\ X1) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.v1\_finset\_1\ (k2\_tarski\ X0\ X1) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.(((v1\_ami\_2\ X0)\wedge(m1\_subset\_1\ X0\ (u1\_struct\_0\ k1\_scmfsa\_2)))\wedge((v1\_ami\_2\ X1)\wedge(m1\_subset\_1\ X1\ (u1\_struct\_0\ k1\_scmfsa\_2))))\Rightarrow(m1\_subset\_1\ (k5\_scmfsa\_m\ X0\ X1)\ (k1\_zfmisc\_1\ k2\_scmfsa\_2)) \quad (10)$$

Assume the following.

$$\forall X0.v4\_finsub\_1\ (k5\_finsub\_1\ X0) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.(v4\_finsub\_1\ X1) \Rightarrow ((X1 = k5\_finsub\_1\ X0) \Leftrightarrow (\forall X2.(X2 \in X1) \Leftrightarrow ((r1\_tarski\ X2\ X0) \wedge (v1\_finset\_1\ X2)))) \tag{12}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5. (X5 = k3\_enumset1\ X0\ X1\ X2\ X3\ X4) \Leftrightarrow (\forall X6.(X6 \in X5) \Leftrightarrow (\neg(X6 \neq X0) \wedge ((X6 \neq X1) \wedge ((X6 \neq X2) \wedge ((X6 \neq X3) \wedge (X6 \neq X4)))))) \tag{13}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ (u1\_compos\_1\ k1\_scmfsa\_2)) \Rightarrow (\forall X1. (m1\_subset\_1\ X1\ (k5\_finsub\_1\ k2\_scmfsa\_2)) \Rightarrow (((k2\_compos\_0\ (u1\_compos\_1\ k1\_scmfsa\_2)\ X0 \in k3\_enumset1\ np\_\_1\ np\_\_2\ np\_\_3\ np\_\_4\ np\_\_5) \Rightarrow ((X1 = k1\_sf\_mastr\ X0) \Leftrightarrow (\exists X2.((v1\_ami\_2\ X2) \wedge (m1\_subset\_1\ X2\ (u1\_struct\_0\ k1\_scmfsa\_2))) \wedge (\exists X3.((v1\_ami\_2\ X3) \wedge (m1\_subset\_1\ X3\ (u1\_struct\_0\ k1\_scmfsa\_2))) \wedge ((\neg(X0 \neq k6\_scmfsa\_2\ X2\ X3) \wedge ((X0 \neq k7\_scmfsa\_2\ X2\ X3) \wedge ((X0 \neq k8\_scmfsa\_2\ X2\ X3) \wedge ((X0 \neq k9\_scmfsa\_2\ X2\ X3) \wedge (X0 \neq k10\_scmfsa\_2\ X2\ X3))))) \wedge (X1 = k5\_scmfsa\_m\ X2\ X3)))))) \wedge ((((k2\_compos\_0\ (u1\_compos\_1\ k1\_scmfsa\_2)\ X0 = np\_\_7) \vee (k2\_compos\_0\ (u1\_compos\_1\ k1\_scmfsa\_2)\ X0 = np\_\_8)) \Rightarrow ((X1 = k1\_sf\_mastr\ X0) \Leftrightarrow (\exists X2.((v1\_ami\_2\ X2) \wedge (m1\_subset\_1\ X2\ (u1\_struct\_0\ k1\_scmfsa\_2))) \wedge (\exists X3.(m2\_subset\_1\ X3\ k1\_numbers\ k5\_numbers) \wedge (((X0 = k12\_scmfsa\_2\ X3\ X2) \vee (X0 = k13\_scmfsa\_2\ X3\ X2)) \wedge (X1 = k4\_scmfsa\_m\ X2)))))) \wedge ((((k2\_compos\_0\ (u1\_compos\_1\ k1\_scmfsa\_2)\ X0 = np\_\_9) \vee (k2\_compos\_0\ (u1\_compos\_1\ k1\_scmfsa\_2)\ X0 = np\_\_10)) \Rightarrow ((X1 = k1\_sf\_mastr\ X0) \Leftrightarrow (\exists X2.((v1\_ami\_2\ X2) \wedge (m1\_subset\_1\ X2\ (u1\_struct\_0\ k1\_scmfsa\_2))) \wedge (\exists X3.((v1\_ami\_2\ X3) \wedge (m1\_subset\_1\ X3\ (u1\_struct\_0\ k1\_scmfsa\_2))) \wedge (\exists X4.(m1\_scmfsa\_2\ X4) \wedge (((X0 = k14\_scmfsa\_2\ X3\ X2\ X4) \vee (X0 = k15\_scmfsa\_2\ X3\ X2\ X4)) \wedge (X1 = k5\_scmfsa\_m\ X2\ X3))))))) \wedge ((((k2\_compos\_0\ (u1\_compos\_1\ k1\_scmfsa\_2)\ X0 = np\_\_11) \vee (k2\_compos\_0\ (u1\_compos\_1\ k1\_scmfsa\_2)\ X0 = np\_\_12)) \Rightarrow ((X1 = k1\_sf\_mastr\ X0) \Leftrightarrow (\exists X2.((v1\_ami\_2\ X2) \wedge (m1\_subset\_1\ X2\ (u1\_struct\_0\ k1\_scmfsa\_2))) \wedge (\exists X3.(m1\_scmfsa\_2\ X3) \wedge (((X0 = k16\_scmfsa\_2\ X2\ X3) \vee (X0 = k17\_scmfsa\_2\ X2\ X3)) \wedge (X1 = k4\_scmfsa\_m\ X2)))))) \wedge (\neg (\neg k2\_compos\_0\ (u1\_compos\_1\ k1\_scmfsa\_2)\ X0 \in k3\_enumset1\ np\_\_1\ np\_\_2\ np\_\_3\ np\_\_4\ np\_\_5) \wedge ((k2\_compos\_0\ (u1\_compos\_1\ k1\_scmfsa\_2)\ X0 \neq np\_\_7) \wedge ((k2\_compos\_0\ (u1\_compos\_1\ k1\_scmfsa\_2)\ X0 \neq np\_\_8) \wedge ((k2\_compos\_0\ (u1\_compos\_1\ k1\_scmfsa\_2)\ X0 \neq np\_\_9) \wedge ((k2\_compos\_0\ (u1\_compos\_1\ k1\_scmfsa\_2)\ X0 \neq np\_\_10) \wedge ((k2\_compos\_0\ (u1\_compos\_1\ k1\_scmfsa\_2)\ X0 \neq np\_\_11) \wedge ((k2\_compos\_0\ (u1\_compos\_1\ k1\_scmfsa\_2)\ X0 \neq np\_\_12) \wedge (\neg(X1 = k1\_sf\_mastr\ X0) \Leftrightarrow (X1 = k1\_xboole\_0))))))))))))) \tag{14}$$

Theorem 1

$$\forall X0.((v1\_ami\_2\ X0)\wedge(m1\_subset\_1\ X0\ (u1\_struct\_0\ k1\_scmfsa\_2)))\Rightarrow (\forall X1.((v1\_ami\_2\ X1)\wedge(m1\_subset\_1\ X1\ (u1\_struct\_0\ k1\_scmfsa\_2)))\Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u1\_compos\_1\ k1\_scmfsa\_2))\Rightarrow((\neg(X2\neq k6\_scmfsa\_2\ X0\ X1)\wedge((X2\neq k7\_scmfsa\_2\ X0\ X1)\wedge((X2\neq k8\_scmfsa\_2\ X0\ X1)\wedge((X2\neq k9\_scmfsa\_2\ X0\ X1)\wedge(X2\neq k10\_scmfsa\_2\ X0\ X1)))))\Rightarrow(k1\_sf\_mastr\ X2 = k5\_scmfsa\_m\ X0\ X1))))$$