t10_scmfsa7b (TMRm1JGMp8MSgmxUm1CtgSyZqfqjCdprRZ9)

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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 $r3\_scmfsa7b : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10\_scmfsa\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1\_scmfsa\_2 : \iota \Rightarrow o$ be given. Let $k2\_compos\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1\_compos\_1 : \iota \Rightarrow \iota$ be given. Let $k16\_scmfsa\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np\_\_11 : \iota$ be given. Let $k14\_scmfsa\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np\_\_9 : \iota$ be given. Let $np\_\_5 : \iota$ be given. Let $k9\_scmfsa\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np\_\_4 : \iota$ be given. Let $k8\_scmfsa\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np\_\_3 : \iota$ be given. Let $k7\_scmfsa\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np\_\_2 : \iota$ be given. Let $k6\_scmfsa\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np\_\_1 : \iota$ be given. Assume the following.

$$\forall X0.((v1\_ami\_2\ X0) \wedge (m1\_subset\_1\ X0\ (u1\_struct\_0\ k1\_scmfsa\_2))) \Rightarrow (\forall X1.((v1\_ami\_2\ X1) \wedge (m1\_subset\_1\ X1\ (u1\_struct\_0\ k1\_scmfsa\_2))) \Rightarrow (\forall X2.((v1\_ami\_2\ X2) \wedge (m1\_subset\_1\ X2\ (u1\_struct\_0\ k1\_scmfsa\_2))) \Rightarrow (\forall X3.((v1\_ami\_2\ X3) \wedge (m1\_subset\_1\ X3\ (u1\_struct\_0\ k1\_scmfsa\_2))) \Rightarrow ((k10\_scmfsa\_2\ X0\ X1 = k10\_scmfsa\_2\ X2\ X3) \Rightarrow ((X0 = X2) \wedge (X1 = X3))))))) \tag{1}$$

Assume the following.

$$\forall X0.(m1\_scmfsa\_2\ X0) \Rightarrow (\forall X1.((v1\_ami\_2\ X1) \wedge (m1\_subset\_1\ X1\ (u1\_struct\_0\ k1\_scmfsa\_2))) \Rightarrow (k2\_compos\_0\ (u1\_compos\_1\ k1\_scmfsa\_2)\ (k16\_scmfsa\_2\ X1\ X0) = np\_\_11)) \tag{2}$$

Assume the following.

$$\forall X0.(m1\_scmfsa\_2\ X0) \Rightarrow (\forall X1.((v1\_ami\_2\ X1) \wedge (m1\_subset\_1\ X1\ (u1\_struct\_0\ k1\_scmfsa\_2))) \Rightarrow (\forall X2.((v1\_ami\_2\ X2) \wedge (m1\_subset\_1\ X2\ (u1\_struct\_0\ k1\_scmfsa\_2))) \Rightarrow (k2\_compos\_0\ (u1\_compos\_1\ k1\_scmfsa\_2)\ (k14\_scmfsa\_2\ X1\ X2\ X0) = np\_\_9))) \tag{3}$$

Assume the following.

$$\forall X0.((v1\_ami\_2\ X0)\wedge(m1\_subset\_1\ X0\ (u1\_struct\_0\ k1\_scmfsa\_2)))\Rightarrow (\forall X1.((v1\_ami\_2\ X1)\wedge(m1\_subset\_1\ X1\ (u1\_struct\_0\ k1\_scmfsa\_2)))\Rightarrow (k2\_compos\_0\ (u1\_compos\_1\ k1\_scmfsa\_2)\ (k10\_scmfsa\_2\ X0\ X1) = np\_\_5)) \tag{4}$$

Assume the following.

$$\forall X0.((v1\_ami\_2\ X0)\wedge(m1\_subset\_1\ X0\ (u1\_struct\_0\ k1\_scmfsa\_2)))\Rightarrow (\forall X1.((v1\_ami\_2\ X1)\wedge(m1\_subset\_1\ X1\ (u1\_struct\_0\ k1\_scmfsa\_2)))\Rightarrow (k2\_compos\_0\ (u1\_compos\_1\ k1\_scmfsa\_2)\ (k9\_scmfsa\_2\ X0\ X1) = np\_\_4)) \tag{5}$$

Assume the following.

$$\forall X0.((v1\_ami\_2\ X0)\wedge(m1\_subset\_1\ X0\ (u1\_struct\_0\ k1\_scmfsa\_2)))\Rightarrow (\forall X1.((v1\_ami\_2\ X1)\wedge(m1\_subset\_1\ X1\ (u1\_struct\_0\ k1\_scmfsa\_2)))\Rightarrow (k2\_compos\_0\ (u1\_compos\_1\ k1\_scmfsa\_2)\ (k8\_scmfsa\_2\ X0\ X1) = np\_\_3)) \tag{6}$$

Assume the following.

$$\forall X0.((v1\_ami\_2\ X0)\wedge(m1\_subset\_1\ X0\ (u1\_struct\_0\ k1\_scmfsa\_2)))\Rightarrow (\forall X1.((v1\_ami\_2\ X1)\wedge(m1\_subset\_1\ X1\ (u1\_struct\_0\ k1\_scmfsa\_2)))\Rightarrow (k2\_compos\_0\ (u1\_compos\_1\ k1\_scmfsa\_2)\ (k7\_scmfsa\_2\ X0\ X1) = np\_\_2)) \tag{7}$$

Assume the following.

$$\forall X0.((v1\_ami\_2\ X0)\wedge(m1\_subset\_1\ X0\ (u1\_struct\_0\ k1\_scmfsa\_2)))\Rightarrow (\forall X1.((v1\_ami\_2\ X1)\wedge(m1\_subset\_1\ X1\ (u1\_struct\_0\ k1\_scmfsa\_2)))\Rightarrow (k2\_compos\_0\ (u1\_compos\_1\ k1\_scmfsa\_2)\ (k6\_scmfsa\_2\ X0\ X1) = np\_\_1)) \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.(((v1\_ami\_2\ X0)\wedge(m1\_subset\_1\ X0\ (u1\_struct\_0\ k1\_scmfsa\_2)))\wedge((v1\_ami\_2\ X1)\wedge(m1\_subset\_1\ X1\ (u1\_struct\_0\ k1\_scmfsa\_2))))\Rightarrow(m1\_subset\_1\ (k10\_scmfsa\_2\ X0\ X1)\ (u1\_compos\_1\ k1\_scmfsa\_2)) \tag{9}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ (u1\_compos\_1\ k1\_scmfsa\_2))\Rightarrow(\forall X1.((v1\_ami\_2\ X1)\wedge(m1\_subset\_1\ X1\ (u1\_struct\_0\ k1\_scmfsa\_2)))\Rightarrow((r3\_scmfsa7b\ X0\ X1)\Leftrightarrow(\neg\forall X2.((v1\_ami\_2\ X2)\wedge(m1\_subset\_1\ X2\ (u1\_struct\_0\ k1\_scmfsa\_2)))\Rightarrow(\forall X3.(m1\_scmfsa\_2\ X3)\Rightarrow((k6\_scmfsa\_2\ X1\ X2\neq X0)\wedge((k7\_scmfsa\_2\ X1\ X2\neq X0)\wedge((k8\_scmfsa\_2\ X1\ X2\neq X0)\wedge((k9\_scmfsa\_2\ X1\ X2\neq X0)\wedge((k10\_scmfsa\_2\ X1\ X2\neq X0)\wedge((k10\_scmfsa\_2\ X2\ X1\neq X0)\wedge((k14\_scmfsa\_2\ X1\ X2\ X3\neq X0)\wedge(k16\_scmfsa\_2\ X1\ X3\neq X0)))))))))))) \tag{10}$$

Theorem 1

$$\forall X0.((v1\_ami\_2\ X0)\wedge(m1\_subset\_1\ X0\ (u1\_struct\_0\ k1\_scmfsa\_2)))\Rightarrow$$
$$(\forall X1.((v1\_ami\_2\ X1)\wedge(m1\_subset\_1\ X1\ (u1\_struct\_0\ k1\_scmfsa\_2)))\Rightarrow$$
$$(\forall X2.((v1\_ami\_2\ X2)\wedge(m1\_subset\_1\ X2\ (u1\_struct\_0\ k1\_scmfsa\_2)))\Rightarrow$$
$$(\neg(X0\neq X1)\wedge((X0\neq X2)\wedge(r3\_scmfsa7b\ (k10\_scmfsa\_2\ X1\ X2)\ X0)))))$$