t24_mssublat (TMZggV1sYyd5c7EPGyXTYqK8K3B8KTqkNKy)

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Let $v11\_struct\_0 : \iota \Rightarrow o$ be given. Let $v13\_struct\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np\_\_1 : \iota$ be given. Let $v5\_msualg\_1 : \iota \Rightarrow o$ be given. Let $l1\_msualg\_1 : \iota \Rightarrow o$ be given. Let $v4\_msualg\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l3\_msualg\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k12\_msualg\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $g3\_msualg\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u3\_msualg\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u4\_msualg\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_finseq\_2 : \iota \Rightarrow \iota$ be given. Let $g1\_unialg\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1\_struct\_0 : \iota \Rightarrow o$ be given. Let $l2\_msualg\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $l5\_struct\_0 : \iota \Rightarrow o$ be given. Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $k11\_msualg\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10\_msualg\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7\_struct\_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1)\wedge((v4\_relat\_1\ X1\ X0)\wedge((v1\_funct\_1\ X1)\wedge(v1\_partfun1\ X1\ X0))))\Rightarrow(\forall X2.((v1\_relat\_1\ X2)\wedge((v4\_relat\_1\ X2\ X0)\wedge((v1\_funct\_1\ X2)\wedge(v1\_partfun1\ X2\ X0))))\Rightarrow((\forall X3.(X3 \in X0)\Rightarrow(k1\_funct\_1\ X1\ X3 = k1\_funct\_1\ X2\ X3))\Rightarrow(X1 = X2))) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1)\wedge((v4\_relat\_1\ X1\ X0)\wedge((v1\_funct\_1\ X1)\wedge(v1\_partfun1\ X1\ X0))))\Rightarrow(\forall X2.(X2 \in X0)\Rightarrow(m1\_subset\_1\ (k1\_funct\_1\ X1\ X2)\ (k10\_xtuple\_0\ X1))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1\ X1\ X0)\Leftrightarrow(m1\_finseq\_1\ X1\ X0) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_1\ X1\ (k4\_partfun1\ (k3\_finseq\_2\ X0)\ X0))\Rightarrow(\forall X2.\forall X3.(g1\_unialg\_1\ X0\ X1 = g1\_unialg\_1\ X2\ X3)\Rightarrow((X0 = X2)\wedge(X1 = X3))) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.((l1\_struct\_0\ X0)\wedge(l2\_msualg\_1\ X1\ X0))\Rightarrow((v1\_relat\_1\ (u3\_msualg\_1\ X0\ X1))\wedge((v4\_relat\_1\ (u3\_msualg\_1\ X0\ X1)\ (u1\_struct\_0\ X0))\wedge((v1\_funct\_1\ (u3\_msualg\_1\ X0\ X1))\wedge(v1\_partfun1\ (u3\_msualg\_1\ X0\ X1)\ (u1\_struct\_0\ X0))))) \tag{5}$$

Assume the following.

$$\forall X0.(l5\_struct\_0\ X0)\Rightarrow(l1\_struct\_0\ X0) \tag{6}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l1\_msualg\_1\ X0))\Rightarrow(\forall X1.(l3\_msualg\_1\ X1\ X0)\Rightarrow(l2\_msualg\_1\ X1\ X0)) \tag{7}$$

Assume the following.

$$\forall X0.(l1\_msualg\_1\ X0)\Rightarrow(l5\_struct\_0\ X0) \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v11\_struct\_0\ X0)\wedge((v13\_struct\_0\ X0\ np\_\_1)\wedge((v5\_msualg\_1\ X0)\wedge(l1\_msualg\_1\ X0))))\wedge((v4\_msualg\_1\ X1\ X0)\wedge(l3\_msualg\_1\ X1\ X0)))\Rightarrow(m2\_finseq\_1\ (k11\_msualg\_1\ X0\ X1)\ (k4\_partfun1\ (k3\_finseq\_2\ (k10\_msualg\_1\ X0\ X1))\ (k10\_msualg\_1\ X0\ X1))) \tag{9}$$

Assume the following.

$$\forall X0.((\neg v11\_struct\_0\ X0)\wedge((v13\_struct\_0\ X0\ np\_\_1)\wedge((v5\_msualg\_1\ X0)\wedge(l1\_msualg\_1\ X0))))\Rightarrow(\forall X1.((v4\_msualg\_1\ X1\ X0)\wedge(l3\_msualg\_1\ X1\ X0))\Rightarrow(k12\_msualg\_1\ X0\ X1 = g1\_unialg\_1\ (k10\_msualg\_1\ X0\ X1)\ (k11\_msualg\_1\ X0\ X1))) \tag{10}$$

Assume the following.

$$\forall X0.((\neg v11\_struct\_0\ X0)\wedge((v13\_struct\_0\ X0\ np\_\_1)\wedge((v5\_msualg\_1\ X0)\wedge(l1\_msualg\_1\ X0))))\Rightarrow(\forall X1.((v4\_msualg\_1\ X1\ X0)\wedge(l3\_msualg\_1\ X1\ X0))\Rightarrow(k11\_msualg\_1\ X0\ X1 = u4\_msualg\_1\ X0\ X1)) \tag{11}$$

Assume the following.

$$\forall X0.((v13\_struct\_0\ X0\ np\_\_1)\wedge(l1\_msualg\_1\ X0))\Rightarrow(\forall X1.\ (l3\_msualg\_1\ X1\ X0)\Rightarrow(\forall X2.(X2 = k10\_msualg\_1\ X0\ X1)\Leftrightarrow(m1\_subset\_1\ X2\ (k10\_xtuple\_0\ (u3\_msualg\_1\ X0\ X1)))))) \tag{12}$$

Assume the following.

$$\forall X0.(l1\_struct\_0\ X0)\Rightarrow((v13\_struct\_0\ X0\ np\_\_1)\Rightarrow((\neg v2\_struct\_0\ X0)\wedge(v7\_struct\_0\ X0))) \tag{13}$$

Theorem 1

$$\forall X0.((\neg v11\_struct\_0\ X0)\wedge((v13\_struct\_0\ X0\ np\_\_1)\wedge((v5\_msualg\_1\ X0)\wedge(l1\_msualg\_1\ X0))))\Rightarrow(\forall X1.((v4\_msualg\_1\ X1\ X0)\wedge(l3\_msualg\_1\ X1\ X0))\Rightarrow(\forall X2.((v4\_msualg\_1\ X2\ X0)\wedge(l3\_msualg\_1\ X2\ X0))\Rightarrow((k12\_msualg\_1\ X0\ X1 = k12\_msualg\_1\ X0\ X2)\Rightarrow(g3\_msualg\_1\ X0\ (u3\_msualg\_1\ X0\ X1)\ (u4\_msualg\_1\ X0\ X1) = g3\_msualg\_1\ X0\ (u3\_msualg\_1\ X0\ X2)\ (u4\_msualg\_1\ X0\ X2)))))$$