t39_msualg_2 (TM-Rcz6JmAWxnWGiS6KcYAgAgPbo3FizwMte)

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Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $v11\_struct\_0 : \iota \Rightarrow o$ be given. Let $l1\_msualg\_1 : \iota \Rightarrow o$ be given. Let $l3\_msualg\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m3\_pboole : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $u3\_msualg\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5\_msualg\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6\_msualg\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9\_setfam\_1 : \iota \Rightarrow \iota$ be given. Let $k3\_card\_3 : \iota \Rightarrow \iota$ be given. Let $v3\_msualg\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2\_pboole : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_msualg\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.(r1\_tarski\ X0\ X1) \Leftrightarrow (\forall X2.(X2 \in X0) \Rightarrow (X2 \in X1)) \tag{1}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((\neg v11\_struct\_0\ X0) \wedge (l1\_msualg\_1\ X0))) \Rightarrow (\forall X1.(l3\_msualg\_1\ X1\ X0) \Rightarrow (\forall X2.(X2 = k6\_msualg\_2\ X0\ X1) \Leftrightarrow (\forall X3.(X3 \in X2) \Leftrightarrow ((X3 \in k9\_funct\_2\ (u1\_struct\_0\ X0)\ (k9\_setfam\_1\ (k3\_card\_3\ (u3\_msualg\_1\ X0\ X1)))) \wedge ((m3\_pboole\ X3\ (u1\_struct\_0\ X0)\ (u3\_msualg\_1\ X0\ X1)) \wedge (\forall X4.(m3\_pboole\ X4\ (u1\_struct\_0\ X0)\ (u3\_msualg\_1\ X0\ X1)) \Rightarrow ((X4 = X3) \Rightarrow (v3\_msualg\_2\ X4\ X0\ X1)))))))) \tag{2}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((\neg v11\_struct\_0\ X0) \wedge (l1\_msualg\_1\ X0))) \Rightarrow (\forall X1.(l3\_msualg\_1\ X1\ X0) \Rightarrow (\forall X2.(m3\_pboole\ X2\ (u1\_struct\_0\ X0)\ (u3\_msualg\_1\ X0\ X1)) \Rightarrow (\forall X3.(X3 = k5\_msualg\_2\ X0\ X1\ X2) \Leftrightarrow (\forall X4.(X4 \in X3) \Leftrightarrow ((X4 \in k9\_funct\_2\ (u1\_struct\_0\ X0)\ (k9\_setfam\_1\ (k3\_card\_3\ (u3\_msualg\_1\ X0\ X1)))) \wedge ((m3\_pboole\ X4\ (u1\_struct\_0\ X0)\ (u3\_msualg\_1\ X0\ X1)) \wedge (\forall X5.(m3\_pboole\ X5\ (u1\_struct\_0\ X0)\ (u3\_msualg\_1\ X0\ X1)) \Rightarrow ((X5 = X4) \Rightarrow ((v3\_msualg\_2\ X5\ X0\ X1) \wedge ((r2\_pboole\ (u1\_struct\_0\ X0)\ (k2\_msualg\_2\ X0\ X1)\ X5) \wedge (r2\_pboole\ (u1\_struct\_0\ X0)\ X2\ X5)))))))))) \tag{3}$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((\neg v11\_struct\_0\ X0)\wedge(l1\_msualg\_1\ X0)))\Rightarrow(\forall X1.(l3\_msualg\_1\ X1\ X0)\Rightarrow(\forall X2.(m3\_pboole\ X2\ (u1\_struct\_0\ X0)\ (u3\_msualg\_1\ X0\ X1))\Rightarrow(r1\_tarski\ (k5\_msualg\_2\ X0\ X1\ X2)\ (k6\_msualg\_2\ X0\ X1))))$$