t9_instalg1 (TM-RnvE1XWwxWBYvLRF1Wcy3nWV4vDmEAcNc)

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Let $l1\_msualg\_1 : \iota \Rightarrow o$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $r3\_pua2mss1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u4\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k9\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k3\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u2\_msualg\_1 : \iota \Rightarrow \iota$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1\_msualg\_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1) \wedge (v1\_funct\_1\ X1)) \Rightarrow ((r1\_tarski\ (k10\_xtuple\_0\ X1)\ X0) \Rightarrow ((v1\_funct\_1\ X1) \wedge ((v1\_funct\_2\ X1\ (k9\_xtuple\_0\ X1)\ X0) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k9\_xtuple\_0\ X1)\ X0))))))) \tag{1}$$

Assume the following.

$$\forall X0.(l1\_msualg\_1\ X0) \Rightarrow (\forall X1.(l1\_msualg\_1\ X1) \Rightarrow (\forall X2.((v1\_relat\_1\ X2) \wedge (v1\_funct\_1\ X2)) \Rightarrow (\forall X3.((v1\_relat\_1\ X3) \wedge (v1\_funct\_1\ X3)) \Rightarrow ((r3\_pua2mss1\ X0\ X1\ X2\ X3) \Leftrightarrow ((k9\_xtuple\_0\ X2 = u1\_struct\_0\ X0) \wedge ((k9\_xtuple\_0\ X3 = u4\_struct\_0\ X0) \wedge ((r1\_tarski\ (k10\_xtuple\_0\ X2)\ (u1\_struct\_0\ X1)) \wedge ((r1\_tarski\ (k10\_xtuple\_0\ X3)\ (u4\_struct\_0\ X1)) \wedge ((k3\_relat\_1\ (u2\_msualg\_1\ X0)\ X2 = k3\_relat\_1\ X3\ (u2\_msualg\_1\ X1)) \wedge (\forall X4.\forall X5.((v1\_relat\_1\ X5) \wedge (v1\_funct\_1\ X5)) \Rightarrow (((X4 \in u4\_struct\_0\ X0) \wedge (X5 = k1\_funct\_1\ (u1\_msualg\_1\ X0)\ X4)) \Rightarrow (k3\_relat\_1\ X5\ X2 = k1\_funct\_1\ (u1\_msualg\_1\ X1)\ (k1\_funct\_1\ X3\ X4)))))))))))) \tag{2}$$

Theorem 1

$$\forall X0.(l1\_msualg\_1\ X0)\Rightarrow(\forall X1.(l1\_msualg\_1\ X1)\Rightarrow(\forall X2.((v1\_relat\_1\ X2)\wedge(v1\_funct\_1\ X2))\Rightarrow(\forall X3.((v1\_relat\_1\ X3)\wedge(v1\_funct\_1\ X3))\Rightarrow((r3\_pua2mss1\ X0\ X1\ X2\ X3)\Rightarrow(((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1))))))\wedge((v1\_funct\_1\ X3)\wedge((v1\_funct\_2\ X3\ (u4\_struct\_0\ X0)\ (u4\_struct\_0\ X1))\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u4\_struct\_0\ X0)\ (u4\_struct\_0\ X1))))))))))$$