t75_memstr_0 (TM-NGR4wUMsCUe6mdAuhHtZyXhoarQniVbof)

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Let $v1\_setfam\_1 : \iota \Rightarrow o$ be given. Let $v2\_memstr\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1\_memstr\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $v5\_funct\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_memstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_finset\_1 : \iota \Rightarrow o$ be given. Let $k11\_memstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2\_relat\_1 : \iota \Rightarrow o$ be given. Let $k8\_card\_3 : \iota \Rightarrow \iota$ be given. Let $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (m1\_subset\_1\ X0\ X1) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1) \wedge ((v2\_relat\_1\ X1) \wedge ((v4\_relat\_1\ X1\ X0) \wedge (v1\_funct\_1\ X1)))) \Rightarrow (\forall X2.((v1\_relat\_1\ X2) \wedge ((v4\_relat\_1\ X2\ X0) \wedge ((v1\_funct\_1\ X2) \wedge (v5\_funct\_1\ X2\ X1)))) \Rightarrow (X2 \in k8\_card\_3\ X1)) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_setfam\_1\ X0) \wedge ((v2\_memstr\_0\ X1\ X0) \wedge (l1\_memstr\_0\ X1\ X0))) \Rightarrow ((v1\_relat\_1\ (k2\_memstr\_0\ X0\ X1)) \wedge ((v2\_relat\_1\ (k2\_memstr\_0\ X0\ X1)) \wedge ((v4\_relat\_1\ (k2\_memstr\_0\ X0\ X1)\ (u1\_struct\_0\ X1)) \wedge ((v1\_funct\_1\ (k2\_memstr\_0\ X0\ X1)) \wedge (v1\_partfun1\ (k2\_memstr\_0\ X0\ X1)\ (u1\_struct\_0\ X1))))) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_setfam\_1\ X0) \wedge (l1\_memstr\_0\ X1\ X0)) \Rightarrow ((v1\_relat\_1\ (k2\_memstr\_0\ X0\ X1)) \wedge ((v4\_relat\_1\ (k2\_memstr\_0\ X0\ X1)\ (u1\_struct\_0\ X1)) \wedge ((v1\_funct\_1\ (k2\_memstr\_0\ X0\ X1)) \wedge (v1\_partfun1\ (k2\_memstr\_0\ X0\ X1)\ (u1\_struct\_0\ X1))))) \tag{4}$$

Assume the following.

$$\forall X0.(\neg v1\_setfam\_1\ X0)\Rightarrow(\forall X1.((v2\_memstr\_0\ X1\ X0)\wedge (l1\_memstr\_0\ X1\ X0))\Rightarrow(k11\_memstr\_0\ X0\ X1 = ReplSep\ (toset\ (\lambda X2 : \iota.m1\_subset\_1\ X2\ (k8\_card\_3\ (k2\_memstr\_0\ X0\ X1))))\ (\lambda X2 : \iota.v1\_finset\_1\ X2)\ (\lambda X2 : \iota.X2))) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1)\wedge((v4\_relat\_1\ X1\ X0)\wedge(v1\_funct\_1\ X1)))\Rightarrow(\forall X2.((v1\_relat\_1\ X2)\wedge((v1\_funct\_1\ X2)\wedge(v5\_funct\_1\ X2\ X1)))\Rightarrow((v1\_relat\_1\ X2)\wedge((v4\_relat\_1\ X2\ X0)\wedge(v1\_funct\_1\ X2)))) \tag{6}$$

Theorem 1

$$\forall X0.(\neg v1\_setfam\_1\ X0)\Rightarrow(\forall X1.((v2\_memstr\_0\ X1\ X0)\wedge (l1\_memstr\_0\ X1\ X0))\Rightarrow(\forall X2.((v1\_relat\_1\ X2)\wedge((v4\_relat\_1\ X2\ (u1\_struct\_0\ X1))\wedge((v1\_funct\_1\ X2)\wedge((v5\_funct\_1\ X2\ (k2\_memstr\_0\ X0\ X1))\wedge(v1\_finset\_1\ X2)))))\Rightarrow(X2 \in k11\_memstr\_0\ X0\ X1)))$$