t6_amistd_5 (TMMJkhwWp-PRSc3XDvy9Ru1apMcodjJuWpgx)

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Let $v1\_setfam\_1 : \iota \Rightarrow o$ be given. Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $v2\_memstr\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3\_memstr\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3\_extpro\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3\_amistd\_5 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1\_extpro\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5\_numbers : \iota$ be given. Let $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_compos\_1 : \iota \Rightarrow \iota$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $v1\_finset\_1 : \iota \Rightarrow o$ be given. Let $v2\_compos\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ 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 $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $v4\_extpro\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k9\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(\neg v1\_setfam\_1\ X0) \Rightarrow (\forall X1.((\neg v2\_struct\_0\ X1) \wedge ((v2\_memstr\_0\ X1\ X0) \wedge ((v3\_memstr\_0\ X1\ X0) \wedge ((v3\_extpro\_1\ X1\ X0) \wedge (l1\_extpro\_1\ X1\ X0))))) \Rightarrow ((v3\_amistd\_5\ X1\ X0) \Leftrightarrow (\forall X2.((v1\_relat\_1\ X2) \wedge ((v4\_relat\_1\ X2\ k5\_numbers) \wedge ((v5\_relat\_1\ X2\ (u1\_compos\_1\ X1)) \wedge ((v1\_funct\_1\ X2) \wedge ((v1\_finset\_1\ X2) \wedge (\neg v2\_compos\_1\ X2\ X1)))))) \Rightarrow (\forall X3.((v1\_relat\_1\ X3) \wedge ((v4\_relat\_1\ X3\ (u1\_struct\_0\ X1)) \wedge ((v1\_funct\_1\ X3) \wedge ((v5\_funct\_1\ X3\ (k2\_memstr\_0\ X0\ X1)) \wedge ((v1\_finset\_1\ X3) \wedge (v4\_extpro\_1\ X3\ X0\ X1\ X2)))))) \Rightarrow ((\neg v1\_xboole\_0\ X3) \Rightarrow (k4\_struct\_0\ X1 \in k9\_xtuple\_0\ X3)))))) \tag{1}$$

Theorem 1

$$\forall X0.(\neg v1\_setfam\_1\ X0) \Rightarrow (\forall X1.((\neg v2\_struct\_0\ X1) \wedge ((v2\_memstr\_0\ X1\ X0) \wedge ((v3\_memstr\_0\ X1\ X0) \wedge ((v3\_extpro\_1\ X1\ X0) \wedge ((v3\_amistd\_5\ X1\ X0) \wedge (l1\_extpro\_1\ X1\ X0)))))) \Rightarrow (\forall X2.((v1\_relat\_1\ X2) \wedge ((v4\_relat\_1\ X2\ k5\_numbers) \wedge ((v5\_relat\_1\ X2\ (u1\_compos\_1\ X1)) \wedge ((v1\_funct\_1\ X2) \wedge ((v1\_finset\_1\ X2) \wedge (\neg v2\_compos\_1\ X2\ X1)))))) \Rightarrow (\forall X3.((v1\_relat\_1\ X3) \wedge ((v4\_relat\_1\ X3\ (u1\_struct\_0\ X1)) \wedge ((v1\_funct\_1\ X3) \wedge ((v5\_funct\_1\ X3\ (k2\_memstr\_0\ X0\ X1)) \wedge ((\neg v1\_xboole\_0\ X3) \wedge ((v1\_finset\_1\ X3) \wedge (v4\_extpro\_1\ X3\ X0\ X1\ X2))))))) \Rightarrow (k4\_struct\_0\ X1 \in k9\_xtuple\_0\ X3))))$$