

t42_algspec1 (TM-
Nmp9xLS9m4H8caEexAZdC8ZD3WDdLaABk)

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Let $v11_struct_0 : \iota \Rightarrow o$ be given. Let $v1_instalg1 : \iota \Rightarrow o$ be given. 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 $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $u4_struct_0 : \iota \Rightarrow \iota$ be given. Let $r1_algspec1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r3_pua2mss1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_algspec1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_algspec1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v11_struct_0 X0) \wedge ((v1_instalg1 X0) \wedge (l1_msualg_1 \\ & \quad X0))) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow (\forall X2. \\ & ((v1_relat_1 X2) \wedge (v1_funct_1 X2)) \Rightarrow ((r1_algspec1 X0 X1 X2) \Leftrightarrow (r3_pua2mss1 \\ & \quad X0 (k2_algspec1 X0 X1 X2) (k1_algspec1 (u1_struct_0 X0) X1) (k1_algspec1 \\ & \quad (u4_struct_0 X0) X2)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. ((v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow ((k9_xtuple_0 X1 = X0) \Rightarrow (k1_algspec1 X0 X1 = X1)) \tag{2}$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v11_struct_0 X0) \wedge ((v1_instalg1 X0) \wedge (l1_msualg_1 \\ & \quad X0))) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow (\forall X2. \\ & ((v1_relat_1 X2) \wedge (v1_funct_1 X2)) \Rightarrow (((k9_xtuple_0 X1 = u1_struct_0 \\ & \quad X0) \wedge ((k9_xtuple_0 X2 = u4_struct_0 X0) \wedge (r1_algspec1 X0 X1 X2))) \Rightarrow \\ & \quad (r3_pua2mss1 X0 (k2_algspec1 X0 X1 X2) X1 X2)))))) \end{aligned}$$