

t1_scmpds_3

(TMKZxfGuYz2JJHwoMVWZ7zT2Yi9m6HCm8jC)

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Let $v1_int_1 : \iota \Rightarrow o$ 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 $k1_scmpds_2 : \iota$ 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 $np_2 : \iota$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_memstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k17_scmpds_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $k1_int_2 : \iota \Rightarrow \iota$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((v1_relat_1 X0) \wedge ((v4_relat_1 X0 (u1_struct_0 \\ & k1_scmpds_2)) \wedge ((v1_funct_1 X0) \wedge ((v5_funct_1 X0 (k2_memstr_0 \\ & np_2 k1_scmpds_2)) \wedge (v1_partfun1 X0 (u1_struct_0 k1_scmpds_2)))))) \wedge \\ & (v1_int_1 X1)) \Rightarrow (m1_subset_1 (k17_scmpds_2 X0 X1) k5_numbers) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1_relat_1 X0) \wedge ((v4_relat_1 X0 (u1_struct_0 k1_scmpds_2)) \wedge \\ & ((v1_funct_1 X0) \wedge ((v5_funct_1 X0 (k2_memstr_0 np_2 k1_scmpds_2)) \wedge \\ & (v1_partfun1 X0 (u1_struct_0 k1_scmpds_2)))))) \Rightarrow (\forall X1. \\ & (v1_int_1 X1) \Rightarrow (\forall X2. (m1_subset_1 X2 k5_numbers) \Rightarrow ((X2 = \\ & k17_scmpds_2 X0 X1) \Leftrightarrow (\exists X3. (m1_subset_1 X3 k5_numbers) \wedge \\ & ((X3 = k5_memstr_0 np_2 k1_scmpds_2 X0) \wedge (X2 = k1_int_2 (k2_xcmplx_0 \\ & X3 X1)))))) \end{aligned} \quad (2)$$

Theorem 1

$$\begin{aligned} & \forall X0. (v1_int_1 X0) \Rightarrow (\forall X1. ((v1_relat_1 X1) \wedge ((v4_relat_1 \\ & X1 (u1_struct_0 k1_scmpds_2)) \wedge ((v1_funct_1 X1) \wedge ((v5_funct_1 \\ & X1 (k2_memstr_0 np_2 k1_scmpds_2)) \wedge (v1_partfun1 X1 (u1_struct_0 \\ & k1_scmpds_2)))))) \Rightarrow (\forall X2. ((v1_relat_1 X2) \wedge ((v4_relat_1 \\ & X2 (u1_struct_0 k1_scmpds_2)) \wedge ((v1_funct_1 X2) \wedge ((v5_funct_1 \\ & X2 (k2_memstr_0 np_2 k1_scmpds_2)) \wedge (v1_partfun1 X2 (u1_struct_0 \\ & k1_scmpds_2)))))) \Rightarrow ((k5_memstr_0 np_2 k1_scmpds_2 X1 = k5_memstr_0 \\ & np_2 k1_scmpds_2 X2) \Rightarrow (k17_scmpds_2 X1 X0 = k17_scmpds_2 X2 X0))) \end{aligned}$$