

t10_scmpds_9

(TMJvkkXZav9o28h3yZUcGywiEF8GZR8Rac5)

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Let $v1_ami_2 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_scmpds_2 : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $v1_int_1 : \iota \Rightarrow o$ be given. Let $k1_amistd_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $k12_scmpds_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k1_ordinal1 : \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_extpro_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $k4_card_1 : \iota \Rightarrow \iota$ be given. Let $k5_memstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_scmpds_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_compos_1 : \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 (u1_struct_0 k1_scmpds_2)) \wedge \\
 & ((v1_funct_1 X0) \wedge ((v5_funct_1 X0 (k2_memstr_0 np_2 k1_scmpds_2)) \wedge \\
 & (v1_partfun1 X0 (u1_struct_0 k1_scmpds_2)))))) \Rightarrow (\forall X1. \\
 & (v1_int_1 X1) \Rightarrow (\forall X2.(v1_int_1 X2) \Rightarrow (\forall X3.((v1_ami_2 \\
 & X3) \wedge (m1_subset_1 X3 (u1_struct_0 k1_scmpds_2))) \Rightarrow (\forall X4. \\
 & ((v1_ami_2 X4) \wedge (m1_subset_1 X4 (u1_struct_0 k1_scmpds_2))) \Rightarrow \\
 & ((k1_funct_1 (k2_extpro_1 np_2 k1_scmpds_2 (k12_scmpds_2 X3 \\
 & X4 X1 X2) X0) (k4_struct_0 k1_scmpds_2) = k4_card_1 (k5_memstr_0 \\
 & np_2 k1_scmpds_2 X0)) \wedge ((k1_funct_1 (k2_extpro_1 np_2 k1_scmpds_2 \\
 & (k12_scmpds_2 X3 X4 X1 X2) X0) (k2_scmpds_2 (k1_funct_1 X0 X3) X1) = \\
 & k2_xcmplx_0 (k1_funct_1 X0 (k2_scmpds_2 (k1_funct_1 X0 X3) X1)) \\
 & (k1_funct_1 X0 (k2_scmpds_2 (k1_funct_1 X0 X4) X2)))) \wedge (\forall X5. \\
 & ((v1_ami_2 X5) \wedge (m1_subset_1 X5 (u1_struct_0 k1_scmpds_2))) \Rightarrow \\
 & ((X5 \neq k2_scmpds_2 (k1_funct_1 X0 X3) X1) \Rightarrow (k1_funct_1 (k2_extpro_1 \\
 & np_2 k1_scmpds_2 (k12_scmpds_2 X3 X4 X1 X2) X0) X5 = k1_funct_1 X0 \\
 & X5)))))))))
 \end{aligned}$$

(1)

Assume the following.

$$\begin{aligned} \forall X0.(m1_subset_1 X0 (u1_compos_1 k1_scmpds_2)) \Rightarrow (\forall X1. \\ (m1_subset_1 X1 k5_numbers) \Rightarrow ((\forall X2.((v1_relat_1 X2) \wedge \\ (v4_relat_1 X2 (u1_struct_0 k1_scmpds_2)) \wedge ((v1_funct_1 X2) \wedge \\ ((v5_funct_1 X2 (k2_memstr_0 np_2 k1_scmpds_2)) \wedge (v1_partfun1 \\ X2 (u1_struct_0 k1_scmpds_2)))))) \Rightarrow ((k5_memstr_0 np_2 k1_scmpds_2 \\ X2 = X1) \Rightarrow (k1_funct_1 (k2_extpro_1 np_2 k1_scmpds_2 X0 X2) (k4_struct_0 \\ k1_scmpds_2) = k1_ordinal1 (k5_memstr_0 np_2 k1_scmpds_2 X2)))) \Rightarrow \\ (k1_amistd_1 np_2 k1_scmpds_2 X1 X0 = k1_tarski (k1_ordinal1 X1)))) \end{aligned} \quad (2)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (3)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (k4_card_1 X0 = k1_ordinal1 X0) \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.\forall X3.(((v1_ami_2 X0) \wedge \\ (m1_subset_1 X0 (u1_struct_0 k1_scmpds_2))) \wedge (((v1_ami_2 X1) \wedge \\ (m1_subset_1 X1 (u1_struct_0 k1_scmpds_2))) \wedge ((v1_int_1 X2) \wedge \\ (v1_int_1 X3)))) \Rightarrow (m1_subset_1 (k12_scmpds_2 X0 X1 X2 X3) (u1_compos_1 \\ k1_scmpds_2)) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1) \Rightarrow (v7_ordinal1 X0) \quad (6)$$

Theorem 1

$$\begin{aligned} \forall X0.(((v1_ami_2 X0) \wedge (m1_subset_1 X0 (u1_struct_0 k1_scmpds_2))) \Rightarrow \\ (\forall X1.(((v1_ami_2 X1) \wedge (m1_subset_1 X1 (u1_struct_0 k1_scmpds_2))) \Rightarrow \\ (\forall X2.(m1_subset_1 X2 k5_numbers) \Rightarrow (\forall X3.(v1_int_1 \\ X3) \Rightarrow (\forall X4.(v1_int_1 X4) \Rightarrow (k1_amistd_1 np_2 k1_scmpds_2 \\ X2 (k12_scmpds_2 X0 X1 X3 X4) = k1_tarski (k1_ordinal1 X2))))))) \end{aligned}$$