

t2_scmpds_3 (TM- SWmVvwME7j5Vuh3hUfoVCsmuWQZtYZhS9)

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Let $v1_int_1 : \iota \Rightarrow o$ be given. 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 $v1_relat_1 : \iota \Rightarrow o$ 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 $np_2 : \iota$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_memstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_scmpds_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_struct_0 : \iota \Rightarrow \iota$ be given. Let $k2_ami_2 : \iota$ be given. Let $k5_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $l1_extpro_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_memstr_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_compos_1 : \iota \Rightarrow o$ be given. Let $v1_extpro_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_setfam_1 : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$k8_struct_0 \ k1_scmpds_2 = k2_ami_2 \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((v1_relat_1 \ X2) \wedge (v1_funct_1 \ X2)) \Rightarrow ((X0 \in X1) \Rightarrow (k1_funct_1 \ (k5_relat_1 \ X2 \ X1) \ X0 = k1_funct_1 \ X2 \ X0)) \tag{2}$$

Assume the following.

$$((v2_xxreal_0 \ np_2) \wedge (m2_subset_1 \ np_2 \ k1_numbers \ k5_numbers)) \wedge ((m1_subset_1 \ np_2 \ k5_numbers) \wedge (m1_subset_1 \ np_2 \ k1_numbers)) \tag{3}$$

Assume the following.

$$\neg v1_xboole_0 \ np_2 \tag{4}$$

Assume the following.

$$k5_numbers = k4_ordinal1 \tag{5}$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (&((v1_relat_1 X0) \wedge ((v4_relat_1 X0 (u1_struct_0 \\ &k1_scmpds_2)) \wedge ((v1_funct_1 X0) \wedge ((v5_funct_1 X0 (k2_memstr_0 \\ &np_2 k1_scmpds_2)) \wedge (v1_partfun1 X0 (u1_struct_0 k1_scmpds_2)))))) \wedge \\ &((v1_ami_2 X1) \wedge (m1_subset_1 X1 (u1_struct_0 k1_scmpds_2)))) \Rightarrow \\ &(v1_int_1 (k1_funct_1 X0 X1)) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0. \forall X1. (l1_extpro_1 X1 X0) \Rightarrow ((l1_memstr_0 X1 X0) \wedge (l1_compos_1 X1)) \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (&(v1_int_1 X0) \wedge (v1_int_1 X1)) \Rightarrow ((v1_ami_2 \\ &(k2_scmpds_2 X0 X1)) \wedge (m1_subset_1 (k2_scmpds_2 X0 X1) (u1_struct_0 \\ &k1_scmpds_2))) \end{aligned} \quad (8)$$

Assume the following.

$$(v1_extpro_1 k1_scmpds_2 np_2) \wedge (l1_extpro_1 k1_scmpds_2 np_2) \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0. (\neg v1_setfam_1 X0) \Rightarrow (&\forall X1. (l1_memstr_0 X1 X0) \Rightarrow \\ &(\forall X2. ((v1_relat_1 X2) \wedge ((v4_relat_1 X2 (u1_struct_0 X1)) \wedge \\ &((v1_funct_1 X2) \wedge (v5_funct_1 X2 (k2_memstr_0 X0 X1)))))) \Rightarrow (k6_memstr_0 \\ &X0 X1 X2 = k5_relat_1 X2 (k8_struct_0 X1))) \end{aligned} \quad (10)$$

Assume the following.

$$\forall X0. (v1_ami_2 X0) \Leftrightarrow (X0 \in k2_ami_2) \quad (11)$$

Assume the following.

$$\forall X0. (m1_subset_1 X0 k4_ordinal1) \Rightarrow (v7_ordinal1 X0) \quad (12)$$

Assume the following.

$$\begin{aligned} \forall X0. (&(\neg v1_xboole_0 X0) \wedge (v7_ordinal1 X0)) \Rightarrow ((\neg v1_xboole_0 \\ &X0) \wedge ((v7_ordinal1 X0) \wedge (\neg v1_setfam_1 X0))) \end{aligned} \quad (13)$$

Theorem 1

$$\begin{aligned} & \forall X0.(v1_int_1 X0) \Rightarrow (\forall X1.((v1_ami_2 X1) \wedge (m1_subset_1 \\ & X1 (u1_struct_0 k1_scmpds_2))) \Rightarrow (\forall X2.((v1_relat_1 X2) \wedge \\ & ((v4_relat_1 X2 (u1_struct_0 k1_scmpds_2)) \wedge ((v1_funct_1 X2) \wedge \\ & (v5_funct_1 X2 (k2_memstr_0 np_2 k1_scmpds_2)) \wedge (v1_partfun1 \\ & X2 (u1_struct_0 k1_scmpds_2)))))) \Rightarrow (\forall X3.((v1_relat_1 \\ & X3) \wedge ((v4_relat_1 X3 (u1_struct_0 k1_scmpds_2)) \wedge ((v1_funct_1 \\ & X3) \wedge ((v5_funct_1 X3 (k2_memstr_0 np_2 k1_scmpds_2)) \wedge (v1_partfun1 \\ & X3 (u1_struct_0 k1_scmpds_2)))))) \Rightarrow ((k6_memstr_0 np_2 k1_scmpds_2 \\ & X2 = k6_memstr_0 np_2 k1_scmpds_2 X3) \Rightarrow (k1_funct_1 X2 (k2_scmpds_2 \\ & (k1_funct_1 X2 X1) X0) = k1_funct_1 X3 (k2_scmpds_2 (k1_funct_1 \\ & X3 X1) X0)))))) \end{aligned}$$