

t21_scmpds_2

(TMTAmEWsZq23ktbzaop537gv86JJ42QTNLR)

October 27, 2020

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 $k2_compos_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_compos_1 : \iota \Rightarrow \iota$ be given. Let $k12_scmpds_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_9 : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_compos_0 : \iota \Rightarrow o$ be given. Let $k4_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k3_xtuple_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1_compos_1 : \iota \Rightarrow o$ be given. Let $v2_compos_0 : \iota \Rightarrow o$ be given. Let $v3_compos_0 : \iota \Rightarrow o$ be given. Let $v5_compos_0 : \iota \Rightarrow o$ 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 $v1_extpro_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_2 : \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k7_finseq_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v1_xboole_0 X0) \wedge (v1_compos_0 X0)) \wedge \\ & (m1_subset_1 X1 X0)) \Rightarrow (k2_compos_0 X0 X1 = k4_xtuple_0 X1) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. k4_xtuple_0 (k3_xtuple_0 X0 \\ & X1 X2) = X0 \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. (l1_compos_1 X0) \Rightarrow ((v1_compos_0 (u1_compos_1 X0)) \wedge \\ & ((v2_compos_0 (u1_compos_1 X0)) \wedge ((v3_compos_0 (u1_compos_1 \\ & X0)) \wedge (v5_compos_0 (u1_compos_1 X0)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (l1_extpro_1 X1 X0) \Rightarrow ((l1_memstr_0 X1 X0) \wedge \\ & (l1_compos_1 X1)) \end{aligned} \quad (4)$$

Assume the following.

$$(v1_extpro_1 k1_scmpds_2 np_2) \wedge (l1_extpro_1 k1_scmpds_2 np_2) \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.(((v1_ami_2 X0)\wedge \\ & (m1_subset_1 X0 (u1_struct_0 k1_scmpds_2)))\wedge(((v1_ami_2 X1)\wedge \\ & (m1_subset_1 X1 (u1_struct_0 k1_scmpds_2)))\wedge((v1_int_1 X2)\wedge \\ & (v1_int_1 X3))))\Rightarrow(m1_subset_1 (k12_scmpds_2 X0 X1 X2 X3) (u1_compos_1 \\ & k1_scmpds_2)) \end{aligned} \tag{6}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_ami_2 X0)\wedge(m1_subset_1 X0 (u1_struct_0 k1_scmpds_2)))\Rightarrow \\ & (\forall X1.((v1_ami_2 X1)\wedge(m1_subset_1 X1 (u1_struct_0 k1_scmpds_2)))\Rightarrow \\ & (\forall X2.(v1_int_1 X2)\Rightarrow(\forall X3.(v1_int_1 X3)\Rightarrow(k12_scmpds_2 \\ & X0 X1 X2 X3 = k3_xtuple_0 np_9 k1_xboole_0 (k7_finseq_4 X0 X1 X2 X3)))))) \end{aligned} \tag{7}$$

Assume the following.

$$\forall X0.(v5_compos_0 X0)\Rightarrow(\neg v1_xboole_0 X0) \tag{8}$$

Theorem 1

$$\begin{aligned} & \forall X0.(v1_int_1 X0)\Rightarrow(\forall X1.(v1_int_1 X1)\Rightarrow(\forall X2. \\ & ((v1_ami_2 X2)\wedge(m1_subset_1 X2 (u1_struct_0 k1_scmpds_2)))\Rightarrow \\ & (\forall X3.((v1_ami_2 X3)\wedge(m1_subset_1 X3 (u1_struct_0 k1_scmpds_2)))\Rightarrow \\ & (k2_compos_0 (u1_compos_1 k1_scmpds_2) (k12_scmpds_2 X2 X3 X0 \\ & X1) = np_9)))))) \end{aligned}$$