

t27_twoscomp
(TMJn2TReeNJSXCkFdss7m24PhsyA5Z2Knoa)

October 27, 2020

Let $v1_xtuple_0 : \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k34_twoscomp : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k15_twoscomp : \iota$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $v11_struct_0 : \iota \Rightarrow o$ be given. Let $k5_circcomb : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_msualg_1 : \iota \Rightarrow o$ be given. Let $l1_msualg_1 : \iota \Rightarrow o$ be given. Let $u4_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_msualg_1 : \iota \Rightarrow \iota$ be given. Let $u2_msualg_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. k10_xtuple_0 (k10_finseq_1 X0 X1) = k2_tarski X0 X1 \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (v1_relat_1 (k10_finseq_1 X0 X1)) \wedge (v1_funct_1 (k10_finseq_1 X0 X1)) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. v1_finseq_1 (k10_finseq_1 X0 X1) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v1_finseq_1 X1))) \Rightarrow ((\neg v11_struct_0 (k5_circcomb X0 X1)) \wedge ((v1_msualg_1 (k5_circcomb X0 X1)) \wedge (l1_msualg_1 (k5_circcomb X0 X1)))) \quad (4)$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.((v1_relat_1 X1)\wedge((v1_funct_1 X1)\wedge(v1_finseq_1 \\
& X1)))\Rightarrow(\forall X2.((\neg v11_struct_0 X2)\wedge((v1_msualg_1 X2)\wedge(l1_msualg_1 \\
& X2)))\Rightarrow((X2 = k5_circcomb X0 X1)\Leftrightarrow((u1_struct_0 X2 = k2_xboole_0 \\
& (k10_xtuple_0 X1) (k1_tarski (k4_tarski X1 X0)))\wedge((u4_struct_0 \\
& X2 = k1_tarski (k4_tarski X1 X0))\wedge((k1_funct_1 (u1_msualg_1 X2) \\
& (k4_tarski X1 X0) = X1)\wedge(k1_funct_1 (u2_msualg_1 X2) (k4_tarski \\
& X1 X0) = k4_tarski X1 X0))))))
\end{aligned} \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.k34_twoscomp X0 X1 = k5_circcomb k15_twoscomp (k10_finseq_1 X0 X1) \tag{6}$$

Theorem 1

$$\begin{aligned}
& \forall X0.(\neg v1_xtuple_0 X0)\Rightarrow(\forall X1.(\neg v1_xtuple_0 X1)\Rightarrow \\
& (u1_struct_0 (k34_twoscomp X0 X1) = k2_xboole_0 (k2_tarski X0 X1) \\
& (k1_tarski (k4_tarski (k10_finseq_1 X0 X1) k15_twoscomp))))
\end{aligned}$$