

t43_twoscomp (TMMETpPAXcQDoZZa- Xjte7E71e8kWU9TET7K)

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Let $v1_xtuple_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_card_3 : \iota \Rightarrow \iota$ be given. Let $u3_msualg_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k34_twoscomp : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k35_twoscomp : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_circuit2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k36_twoscomp : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k15_twoscomp : \iota$ be given. Let $k10_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $k6_margrel1 : \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_circcomb : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_facirc_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. ((v1_funct_1 X2) \wedge ((v1_funct_2 \\
& X2 (k4_finseq_2 np_2 k6_margrel1) k6_margrel1) \wedge (m1_subset_1 \\
& X2 (k1_zfmisc_1 (k2_zfmisc_1 (k4_finseq_2 np_2 k6_margrel1) \\
& k6_margrel1)))) \Rightarrow (\forall X3. (m1_subset_1 X3 (k4_card_3 (u3_msualg_1 \\
& (k5_circcomb X2 (k10_finseq_1 X0 X1)) (k6_facirc_1 X0 X1 X2)))) \Rightarrow \\
& ((k1_funct_1 (k6_circuit2 (k5_circcomb X2 (k10_finseq_1 X0 X1)) \\
& (k6_facirc_1 X0 X1 X2) X3) (k4_tarski (k10_finseq_1 X0 X1) X2) = k1_funct_1 \\
& X2 (k10_finseq_1 (k1_funct_1 X3 X0) (k1_funct_1 X3 X1))) \wedge ((k1_funct_1 \\
& (k6_circuit2 (k5_circcomb X2 (k10_finseq_1 X0 X1)) (k6_facirc_1 \\
& X0 X1 X2) X3) X0 = k1_funct_1 X3 X0) \wedge (k1_funct_1 (k6_circuit2 (k5_circcomb \\
& X2 (k10_finseq_1 X0 X1)) (k6_facirc_1 X0 X1 X2) X3) X1 = k1_funct_1 \\
& X3 X1))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& (v1_funct_1 k15_twoscomp) \wedge ((v1_funct_2 k15_twoscomp (k4_finseq_2 \\
& np_2 k6_margrel1) k6_margrel1) \wedge (m1_subset_1 k15_twoscomp (\\
& k1_zfmisc_1 (k2_zfmisc_1 (k4_finseq_2 np_2 k6_margrel1) k6_margrel1))))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. k36_twoscomp X0 X1 = k4_tarski (k10_finseq_1 \\
& X0 X1) k15_twoscomp
\end{aligned} \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.k35_twoscomp\ X0\ X1 = k6_facirc.1\ X0\ X1\ k15_twoscomp \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.k34_twoscomp\ X0\ X1 = k5_circcomb\ k15_twoscomp\ (k10_finseq.1\ X0\ X1) \quad (5)$$

Theorem 1

$$\begin{aligned} & \forall X0.(\neg v1_xtuple.0\ X0) \Rightarrow (\forall X1.(\neg v1_xtuple.0\ X1) \Rightarrow \\ & (\forall X2.(m1_subset.1\ X2\ (k4_card.3\ (u3_msualg.1\ (k34_twoscomp \\ & X0\ X1)\ (k35_twoscomp\ X0\ X1)))) \Rightarrow ((k1_funct.1\ (k6_circuit2\ (k34_twoscomp \\ & X0\ X1)\ (k35_twoscomp\ X0\ X1)\ X2)\ (k36_twoscomp\ X0\ X1) = k1_funct.1 \\ & k15_twoscomp\ (k10_finseq.1\ (k1_funct.1\ X2\ X0)\ (k1_funct.1\ X2\ X1))) \wedge \\ & ((k1_funct.1\ (k6_circuit2\ (k34_twoscomp\ X0\ X1)\ (k35_twoscomp \\ & X0\ X1)\ X2)\ X0 = k1_funct.1\ X2\ X0) \wedge (k1_funct.1\ (k6_circuit2\ (k34_twoscomp \\ & X0\ X1)\ (k35_twoscomp\ X0\ X1)\ X2)\ X1 = k1_funct.1\ X2\ X1)))) \end{aligned}$$