

t125_gfacirc1
(TML9GY1WfX7cs8fC37Dx6v3x1cJB1ba8ViQ)

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Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k14_twoscomp : \iota$ 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 $k46_gfacirc1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k47_gfacirc1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_margrel1 : \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_twoscomp : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_facirc_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $k48_gfacirc1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_binarith : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_gfacirc1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11_gfacirc1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k12_gfacirc1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k9_facirc_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_facirc_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_facirc_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. (X2 \neq k4_tarski (k10_finseq_1 \\
& X0 X1) k14_twoscomp) \Rightarrow (\forall X3. (m1_subset_1 X3 (k4_card_3 (\\
& u3_msualg_1 (k10_gfacirc1 X0 X1 X2) (k11_gfacirc1 X0 X1 X2)))) \Rightarrow \\
& (\forall X4. (m1_subset_1 X4 k6_margrel1) \Rightarrow (\forall X5. (m1_subset_1 \\
& X5 k6_margrel1) \Rightarrow (\forall X6. (m1_subset_1 X6 k6_margrel1) \Rightarrow ((\\
& (X4 = k1_funct_1 X3 X0) \wedge ((X5 = k1_funct_1 X3 X1) \wedge (X6 = k1_funct_1 \\
& X3 X2))) \Rightarrow ((k1_twoscomp (k10_gfacirc1 X0 X1 X2) (k11_gfacirc1 X0 \\
& X1 X2) (k5_facirc_1 (k10_gfacirc1 X0 X1 X2) (k11_gfacirc1 X0 X1 X2) \\
& X3 np_2) (k12_gfacirc1 X0 X1 X2) = k2_binarith (k2_binarith X4 X5) \\
& X6) \wedge ((k1_funct_1 (k5_facirc_1 (k10_gfacirc1 X0 X1 X2) (k11_gfacirc1 \\
& X0 X1 X2) X3 np_2) (k4_tarski (k10_finseq_1 X0 X1) k14_twoscomp) = \\
& k2_binarith X4 X5) \wedge ((k1_funct_1 (k5_facirc_1 (k10_gfacirc1 X0 \\
& X1 X2) (k11_gfacirc1 X0 X1 X2) X3 np_2) X0 = X4) \wedge ((k1_funct_1 (k5_facirc_1 \\
& (k10_gfacirc1 X0 X1 X2) (k11_gfacirc1 X0 X1 X2) X3 np_2) X1 = X5) \wedge \\
& (k1_funct_1 (k5_facirc_1 (k10_gfacirc1 X0 X1 X2) (k11_gfacirc1 \\
& X0 X1 X2) X3 np_2) X2 = X6))))))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. k4_tarski X0 X1 = k2_tarski (k2_tarski X0 X1) (k1_tarski X0) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.k48_gfacirc1\ X0\ X1\ X2 = k9_facirc.1\ X0\ X1\ X2\ k14_twoscomp \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.k47_gfacirc1\ X0\ X1\ X2 = k10_facirc.1\ X0\ X1\ X2\ k14_twoscomp \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.k46_gfacirc1\ X0\ X1\ X2 = k8_facirc.1\ X0\ X1\ X2\ k14_twoscomp \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.k12_gfacirc1\ X0\ X1\ X2 = k9_facirc.1\ X0\ X1\ X2\ k14_twoscomp \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.k11_gfacirc1\ X0\ X1\ X2 = k10_facirc.1\ X0\ X1\ X2\ k14_twoscomp \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.k10_gfacirc1\ X0\ X1\ X2 = k8_facirc.1\ X0\ X1\ X2\ k14_twoscomp \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.k2_tarski\ X0\ X1 = k2_tarski\ X1\ X0 \quad (9)$$

Theorem 1

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(X2 \neq k4_tarski\ (k10_finseq.1\ X0\ X1)\ k14_twoscomp) \Rightarrow (\forall X3.(m1_subset.1\ X3\ (k4_card.3\ (\\ & u3_msualg.1\ (k46_gfacirc1\ X0\ X1\ X2)\ (k47_gfacirc1\ X0\ X1\ X2)))) \Rightarrow \\ & (\forall X4.(m1_subset.1\ X4\ k6_margrel1) \Rightarrow (\forall X5.(m1_subset.1\ X5\ k6_margrel1) \Rightarrow (\forall X6.(m1_subset.1\ X6\ k6_margrel1) \Rightarrow ((\\ & (X4 = k1_funct.1\ X3\ X0) \wedge ((X5 = k1_funct.1\ X3\ X1) \wedge (X6 = k1_funct.1\ X3\ X2))) \Rightarrow ((k1_twoscomp\ (k46_gfacirc1\ X0\ X1\ X2)\ (k47_gfacirc1\ X0 \\ & X1\ X2)\ (k5_facirc.1\ (k46_gfacirc1\ X0\ X1\ X2)\ (k47_gfacirc1\ X0\ X1\ X2)\ X3\ np_2)\ (k48_gfacirc1\ X0\ X1\ X2) = k2_binarith\ (k2_binarith\ X4\ X5) \\ & X6) \wedge ((k1_funct.1\ (k5_facirc.1\ (k46_gfacirc1\ X0\ X1\ X2)\ (k47_gfacirc1\ X0\ X1\ X2)\ X3\ np_2)\ (k4_tarski\ (k10_finseq.1\ X0\ X1)\ k14_twoscomp) = \\ & k2_binarith\ X4\ X5) \wedge ((k1_funct.1\ (k5_facirc.1\ (k46_gfacirc1\ X0 \\ & X1\ X2)\ (k47_gfacirc1\ X0\ X1\ X2)\ X3\ np_2)\ X0 = X4) \wedge ((k1_funct.1\ (k5_facirc.1 \\ & (k46_gfacirc1\ X0\ X1\ X2)\ (k47_gfacirc1\ X0\ X1\ X2)\ X3\ np_2)\ X1 = X5) \wedge \\ & (k1_funct.1\ (k5_facirc.1\ (k46_gfacirc1\ X0\ X1\ X2)\ (k47_gfacirc1\ X0\ X1\ X2)\ X3\ np_2)\ X2 = X6))))))))) \end{aligned}$$