

t87_facirc_1

(TMWM3WXd67wbQ22tXx4VSnCjCUEvL6TMXUL)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_msualg_1 : \iota \Rightarrow o$ be given. Let $k19_facirc_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ 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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_facirc_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_circcomb : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v11_struct_0 : \iota \Rightarrow o$ be given. Let $v1_msualg_1 : \iota \Rightarrow o$ be given. Let $v1_circcomb : \iota \Rightarrow o$ be given. Let $v2_circcomb : \iota \Rightarrow o$ be given. Let $v3_circcomb : \iota \Rightarrow o$ be given. Let $k1_facirc_1 : \iota$ be given. Let $k15_facirc_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((v1_funct_1 X3) \wedge \\ & ((v1_funct_2 X3 (k4_finseq_2 np_2 k6_margrel1) k6_margrel1) \wedge \\ & (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 (k4_finseq_2 np_2 \\ & k6_margrel1) k6_margrel1)))))) \Rightarrow ((X0 \in u1_struct_0 (k8_facirc_1 \\ & X0 X1 X2 X3)) \wedge ((X1 \in u1_struct_0 (k8_facirc_1 X0 X1 X2 X3)) \wedge (X2 \in u1_struct_0 \\ & (k8_facirc_1 X0 X1 X2 X3)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge (l1_msualg_1 X0)) \Rightarrow (\forall X1. \\ & ((\neg v2_struct_0 X1) \wedge (l1_msualg_1 X1)) \Rightarrow (\forall X2. (m1_subset_1 \\ & X2 (u1_struct_0 X0)) \Rightarrow ((X2 \in u1_struct_0 (k2_circcomb X0 X1)) \wedge (\\ & X2 \in u1_struct_0 (k2_circcomb X1 X0)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.\forall X3.((v1_funct_1 X3)\wedge \\
& ((v1_funct_2 X3 (k4_finseq_2 np_2 k6_margrel1) k6_margrel1)\wedge \\
& (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 (k4_finseq_2 np_2 \\
& k6_margrel1) k6_margrel1))))))\Rightarrow((\neg v2_struct_0 (k8_facirc_1 \\
& X0 X1 X2 X3))\wedge((\neg v11_struct_0 (k8_facirc_1 X0 X1 X2 X3))\wedge((v1_msualg_1 \\
& (k8_facirc_1 X0 X1 X2 X3))\wedge((v1_circcomb (k8_facirc_1 X0 X1 X2 X3))\wedge \\
& ((v2_circcomb (k8_facirc_1 X0 X1 X2 X3))\wedge((v3_circcomb (k8_facirc_1 \\
& X0 X1 X2 X3))\wedge(l1_msualg_1 (k8_facirc_1 X0 X1 X2 X3)))))))))
\end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned}
& (v1_funct_1 k1_facirc_1)\wedge((v1_funct_2 k1_facirc_1 (k4_finseq_2 \\
& np_2 k6_margrel1) k6_margrel1)\wedge(m1_subset_1 k1_facirc_1 (k1_zfmisc_1 \\
& (k2_zfmisc_1 (k4_finseq_2 np_2 k6_margrel1) k6_margrel1))))
\end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.(\neg v2_struct_0 (k15_facirc_1 \\
& X0 X1 X2))\wedge((\neg v11_struct_0 (k15_facirc_1 X0 X1 X2))\wedge((v1_msualg_1 \\
& (k15_facirc_1 X0 X1 X2))\wedge((v1_circcomb (k15_facirc_1 X0 X1 X2))\wedge \\
& ((v2_circcomb (k15_facirc_1 X0 X1 X2))\wedge((v3_circcomb (k15_facirc_1 \\
& X0 X1 X2))\wedge(l1_msualg_1 (k15_facirc_1 X0 X1 X2)))))))))
\end{aligned} \tag{6}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.k19_facirc_1 X0 X1 X2 = k2_circcomb \\
& (k8_facirc_1 X0 X1 X2 k1_facirc_1) (k15_facirc_1 X0 X1 X2)
\end{aligned} \tag{7}$$

Theorem 1

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.\forall X3.((\neg v2_struct_0 X3)\wedge \\
& (l1_msualg_1 X3))\Rightarrow((X3 = k19_facirc_1 X0 X1 X2)\Rightarrow((X0 \in u1_struct_0 \\
& X3)\wedge((X1 \in u1_struct_0 X3)\wedge(X2 \in u1_struct_0 X3))))
\end{aligned}$$