

t83_facirc_1

(TMS2EzV84b7p3E5vJNt3HWtSTL9CHjnJmPf)

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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 $k15_facirc_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k18_facirc_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_margrel1 : \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11_facirc_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_facirc_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $k17_facirc_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_binarith : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_margrel1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_facirc_1 : \iota$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0. (\neg v1_xtuple_0 X0) \Rightarrow (\forall X1. (\neg v1_xtuple_0 X1) \Rightarrow \\
 & (\forall X2. (\neg v1_xtuple_0 X2) \Rightarrow (\forall X3. (m1_subset_1 X3 (k4_card_3 \\
 & (u3_msualg_1 (k15_facirc_1 X0 X1 X2) (k18_facirc_1 X0 X1 X2)))) \Rightarrow \\
 & (\forall X4. (m1_subset_1 X4 k6_margrel1) \Rightarrow (\forall X5. (m1_subset_1 \\
 & X5 k6_margrel1) \Rightarrow (\forall X6. (m1_subset_1 X6 k6_margrel1) \Rightarrow ((\\
 & (X4 = k1_funct_1 X3 X0) \wedge ((X5 = k1_funct_1 X3 X1) \wedge (X6 = k1_funct_1 \\
 & X3 X2))) \Rightarrow ((k11_facirc_1 (k15_facirc_1 X0 X1 X2) (k18_facirc_1 \\
 & X0 X1 X2) (k5_facirc_1 (k15_facirc_1 X0 X1 X2) (k18_facirc_1 X0 X1 \\
 & X2) X3 np_2) (k17_facirc_1 X0 X1 X2) = k1_binarith (k1_binarith \\
 & (k10_margrel1 X4 X5) (k10_margrel1 X5 X6)) (k10_margrel1 X6 X4) \wedge \\
 & ((k1_funct_1 (k5_facirc_1 (k15_facirc_1 X0 X1 X2) (k18_facirc_1 \\
 & X0 X1 X2) X3 np_2) (k4_tarski (k10_finseq_1 X0 X1) k3_facirc_1) = \\
 & k10_margrel1 X4 X5) \wedge ((k1_funct_1 (k5_facirc_1 (k15_facirc_1 \\
 & X0 X1 X2) (k18_facirc_1 X0 X1 X2) X3 np_2) (k4_tarski (k10_finseq_1 \\
 & X1 X2) k3_facirc_1) = k10_margrel1 X5 X6) \wedge (k1_funct_1 (k5_facirc_1 \\
 & (k15_facirc_1 X0 X1 X2) (k18_facirc_1 X0 X1 X2) X3 np_2) (k4_tarski \\
 & (k10_finseq_1 X2 X0) k3_facirc_1) = k10_margrel1 X6 X4))))))))))
 \end{aligned} \tag{1}$$

Theorem 1

$$\begin{aligned} & \forall X0.(\neg v1_xtuple_0 X0) \Rightarrow (\forall X1.(\neg v1_xtuple_0 X1) \Rightarrow \\ & (\forall X2.(\neg v1_xtuple_0 X2) \Rightarrow (\forall X3.(m1_subset_1 X3 (k4_card_3 \\ & (u3_msualg_1 (k15_facirc_1 X0 X1 X2) (k18_facirc_1 X0 X1 X2)))) \Rightarrow \\ & (\forall X4.(m1_subset_1 X4 k6_margrel1) \Rightarrow (\forall X5.(m1_subset_1 \\ & X5 k6_margrel1) \Rightarrow (\forall X6.(m1_subset_1 X6 k6_margrel1) \Rightarrow ((\\ & (X4 = k1_funct_1 X3 X0) \wedge ((X5 = k1_funct_1 X3 X1) \wedge (X6 = k1_funct_1 \\ & X3 X2))) \Rightarrow (k11_facirc_1 (k15_facirc_1 X0 X1 X2) (k18_facirc_1 X0 \\ & X1 X2) (k5_facirc_1 (k15_facirc_1 X0 X1 X2) (k18_facirc_1 X0 X1 X2) \\ & X3 np_2) (k17_facirc_1 X0 X1 X2) = k1_binarith (k1_binarith (k10_margrel1 \\ & X4 X5) (k10_margrel1 X5 X6)) (k10_margrel1 X6 X4)))))))))) \end{aligned}$$