

t9_gfacirc1

(TMVd3JYFDmRS43Gybm7Q2K5qN7W8i4psRLx)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_margrel1 : \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_gfacirc1 : \iota$ be given. Let $k9_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k4_gfacirc1 : \iota$ be given. Let $k10_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k16_twoscomp : \iota$ be given. Let $k14_twoscomp : \iota$ be given. Let $k2_binarith : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k15_twoscomp : \iota$ be given. Let $k9_margrel1 : \iota \Rightarrow \iota$ be given. Let $k10_binarith : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k6_margrel1) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 k6_margrel1) \Rightarrow (k1_funct_1 k16_twoscomp (k10_finseq_1 X0 X1) = \\ & k1_funct_1 k14_twoscomp (k10_finseq_1 X0 X1))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k6_margrel1) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 k6_margrel1) \Rightarrow ((k1_funct_1 k14_twoscomp (k10_finseq_1 X0 X1) = \\ & k2_binarith X0 X1) \wedge ((k1_funct_1 k15_twoscomp (k10_finseq_1 X0 \\ & X1) = k2_binarith (k9_margrel1 X0) X1) \wedge (k1_funct_1 k16_twoscomp \\ & (k10_finseq_1 X0 X1) = k2_binarith (k9_margrel1 X0) (k9_margrel1 \\ & X1)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k6_margrel1) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 k6_margrel1) \Rightarrow ((k1_funct_1 k1_gfacirc1 (k9_finseq_1 (k1_funct_1 \\ & k14_twoscomp (k10_finseq_1 X0 X1))) = k1_funct_1 k15_twoscomp \\ & (k10_finseq_1 X0 X1)) \wedge ((k1_funct_1 k1_gfacirc1 (k9_finseq_1 \\ & (k1_funct_1 k14_twoscomp (k10_finseq_1 X0 X1))) = k1_funct_1 k4_gfacirc1 \\ & (k10_finseq_1 X0 X1)) \wedge (k1_funct_1 k14_twoscomp (k10_finseq_1 \\ & (k1_funct_1 k1_gfacirc1 (k10_binarith k6_margrel1 X0)) (k1_funct_1 \\ & k1_gfacirc1 (k10_binarith k6_margrel1 X1))) = k1_funct_1 k14_twoscomp \\ & (k10_finseq_1 X0 X1)))))) \end{aligned} \tag{3}$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k6_margrel1) \Rightarrow (k9_margrel1 (k9_margrel1 X0) = X0) \quad (4)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k6_margrel1) \Rightarrow (m1_subset_1 (k9_margrel1 X0) k6_margrel1) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k6_margrel1) \wedge (m1_subset_1 X1 k6_margrel1)) \Rightarrow (m1_subset_1 (k2_binarith X0 X1) k6_margrel1) \quad (6)$$

Theorem 1

$$\begin{aligned} \forall X0.(m1_subset_1 X0 k6_margrel1) \Rightarrow & (\forall X1.(m1_subset_1 \\ X1 k6_margrel1) \Rightarrow & (\forall X2.(m1_subset_1 X2 k6_margrel1) \Rightarrow (k1_funct_1 \\ & k1_gfacirc1 (k9_finseq_1 (k1_funct_1 k4_gfacirc1 (k10_finseq_1 \\ & (k1_funct_1 k16_twoscomp (k10_finseq_1 X0 X1)) X2))) = k1_funct_1 \\ & k14_twoscomp (k10_finseq_1 (k1_funct_1 k14_twoscomp (k10_finseq_1 \\ & X0 X1)) X2)))) \end{aligned}$$