

t3_circcmb3

(TMY2znb6nxrvqmTtFKXRLkTeqXGtZmG6jT8)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v11_struct_0 : \iota \Rightarrow o$ be given. Let $v2_msafree2 : \iota \Rightarrow o$ be given. Let $l1_msualg_1 : \iota \Rightarrow o$ be given. Let $v4_msualg_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_msafree2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l3_msualg_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $k5_numbers : \iota$ be given. Let $v1_circuit2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_facirc_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_circcmb3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_circcmb3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge (\neg v11_struct_0 \\ & X0) \wedge ((v2_msafree2 X0) \wedge (l1_msualg_1 X0)))) \wedge (((v4_msualg_1 X1 \\ & X0) \wedge ((v4_msafree2 X1 X0) \wedge (l3_msualg_1 X1 X0))) \wedge (m1_subset_1 \\ & X2 (k4_card_3 (u3_msualg_1 X0 X1)))) \Rightarrow (m1_subset_1 (k2_circcmb3 \\ & X0 X1 X2) k5_numbers) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge (\neg v11_struct_0 X0) \wedge ((v2_msafree2 \\ & X0) \wedge (l1_msualg_1 X0))) \Rightarrow (\forall X1. ((v4_msualg_1 X1 X0) \wedge ((\\ & v4_msafree2 X1 X0) \wedge (l3_msualg_1 X1 X0))) \Rightarrow (\forall X2. (m1_subset_1 \\ & X2 (k4_card_3 (u3_msualg_1 X0 X1))) \Rightarrow ((v1_circcmb3 X2 X0 X1) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 k5_numbers) \Rightarrow ((X3 = k2_circcmb3 X0 X1 X2) \Leftrightarrow ((v1_circuit2 \\ & (k5_facirc_1 X0 X1 X2 X3) X0 X1) \wedge (\forall X4. (m1_subset_1 X4 k5_numbers) \Rightarrow \\ & (\neg(\neg r1_xxreal_0 X3 X4) \wedge (v1_circuit2 (k5_facirc_1 X0 X1 X2 X4) X0 \\ & X1)))))))))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge (\neg v11_struct_0 X0) \wedge ((v2_msafree2 \\ & X0) \wedge (l1_msualg_1 X0))) \Rightarrow (\forall X1. ((v4_msualg_1 X1 X0) \wedge ((\\ & v4_msafree2 X1 X0) \wedge (l3_msualg_1 X1 X0))) \Rightarrow (\forall X2. (m1_subset_1 \\ & X2 (k4_card_3 (u3_msualg_1 X0 X1))) \Rightarrow ((v1_circcmb3 X2 X0 X1) \Leftrightarrow (\exists X3. \\ & (m1_subset_1 X3 k5_numbers) \wedge (v1_circuit2 (k5_facirc_1 X0 X1 X2 \\ & X3) X0 X1)))))) \end{aligned} \tag{3}$$

Theorem 1

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v11_struct_0 X0) \wedge ((v2_msafree2 \\ X0) \wedge (l1_msualg_1 X0)))) \Rightarrow (\forall X1.((v4_msualg_1 X1 X0) \wedge ((\\ v4_msafree2 X1 X0) \wedge (l3_msualg_1 X1 X0))) \Rightarrow (\forall X2.(m1_subset_1 \\ X2 (k4_card_3 (u3_msualg_1 X0 X1))) \Rightarrow (\forall X3.(m1_subset_1 \\ X3 k5_numbers) \Rightarrow ((v1_circuit2 (k5_facirc_1 X0 X1 X2 X3) X0 X1) \Rightarrow (\\ r1_xxreal_0 (k2_circcmb3 X0 X1 X2) X3)))))) \end{aligned}$$