

t16_facirc_1

(TMN4ydfUU8apsuET4bbqyWQrwSmrXcfEJcA)

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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 $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k5_facirc_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k6_circuit2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0. ((\neg v2_struct_0 X0) \wedge ((\neg v11_struct_0 X0) \wedge ((v2_msafree2 \\ X0) \wedge (l1_msualg_1 X0)))) \Rightarrow (\forall X1. ((v4_msualg_1 X1 X0) \wedge ((\\ v4_msafree2 X1 X0) \wedge (l3_msualg_1 X1 X0))) \Rightarrow (\forall X2. (m1_subset_1 \\ X2 (k4_card_3 (u3_msualg_1 X0 X1))) \Rightarrow (k5_facirc_1 X0 X1 X2 np_1 = \\ k6_circuit2 X0 X1 X2))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} \forall X0. ((\neg v2_struct_0 X0) \wedge ((\neg v11_struct_0 X0) \wedge ((v2_msafree2 \\ X0) \wedge (l1_msualg_1 X0)))) \Rightarrow (\forall X1. ((v4_msualg_1 X1 X0) \wedge ((\\ v4_msafree2 X1 X0) \wedge (l3_msualg_1 X1 X0))) \Rightarrow (\forall X2. (m1_subset_1 \\ X2 (k4_card_3 (u3_msualg_1 X0 X1))) \Rightarrow (\forall X3. (v7_ordinal1 \\ X3) \Rightarrow (\forall X4. (v7_ordinal1 X4) \Rightarrow (k5_facirc_1 X0 X1 X2 (k2_xcmplx_0 \\ X3 X4) = k5_facirc_1 X0 X1 (k5_facirc_1 X0 X1 X2 X3) X4)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} ((v2_xxreal_0 np_1) \wedge (m2_subset_1 np_1 k1_numbers k5_numbers)) \wedge \\ ((m1_subset_1 np_1 k5_numbers) \wedge (m1_subset_1 np_1 k1_numbers)) \end{aligned} \tag{3}$$

Assume the following.

$$k5_numbers = k4_ordinal1 \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1\ X0)\wedge(m1_subset_1\ X1\ k5_numbers))\Rightarrow (k1_nat_1\ X0\ X1 = k2_xcmplx_0\ X0\ X1) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0\ X0)\wedge(v1_xcmplx_0\ X1))\Rightarrow (k2_xcmplx_0\ X0\ X1 = k2_xcmplx_0\ X1\ X0) \quad (6)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ k4_ordinal1)\Rightarrow(v7_ordinal1\ X0) \quad (7)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow(v1_xcmplx_0\ X0) \quad (8)$$

Theorem 1

$$\begin{aligned} &\forall X0.((\neg v2_struct_0\ X0)\wedge((\neg v11_struct_0\ X0)\wedge((v2_msafree2 \\ &\quad X0)\wedge(l1_msualg_1\ X0))))\Rightarrow(\forall X1.((v4_msualg_1\ X1\ X0)\wedge((\\ &\quad v4_msafree2\ X1\ X0)\wedge(l3_msualg_1\ X1\ X0)))\Rightarrow(\forall X2.(m1_subset_1 \\ &\quad X2\ (k4_card_3\ (u3_msualg_1\ X0\ X1)))\Rightarrow(\forall X3.(v7_ordinal1 \\ &\quad X3)\Rightarrow(k5_facirc_1\ X0\ X1\ X2\ (k1_nat_1\ X3\ np_1) = k5_facirc_1\ X0\ X1 \\ &\quad (k6_circuit2\ X0\ X1\ X2)\ X3)))) \end{aligned}$$