

t2_gfacirc1
(TMP4RU8pft587B15TsrdeHhSvYzHL8A8HLz)

October 27, 2020

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 $k2_gfacirc1 : \iota$ be given. Let $k10_binarith : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_twoscomp : \iota$ be given. Let $k10_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k6_numbers : \iota$ be given. Let $np_1 : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ 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 $np_0 : \iota$ be given. Let $k8_margrel1 : \iota$ be given. Let $k2_xboolean : \iota$ be given. Let $k7_margrel1 : \iota$ be given. Let $k1_xboolean : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k5_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k10_margrel1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ 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 $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (1)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 np_1) \wedge (m2_subset_1 np_1 k1_numbers k5_numbers)) \wedge \\ & ((m1_subset_1 np_1 k5_numbers) \wedge (m1_subset_1 np_1 k1_numbers)) \end{aligned} \quad (2)$$

Assume the following.

$$(m2_subset_1 np_0 k1_numbers k5_numbers) \wedge ((m1_subset_1 np_0 k5_numbers) \wedge (m1_subset_1 np_0 k1_numbers)) \quad (3)$$

Assume the following.

$$v1_xboole_0 np_0 \quad (4)$$

Assume the following.

$$k8_margrel1 = k2_xboolean \quad (5)$$

Assume the following.

$$k7_margrel1 = k1_xboolean \quad (6)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (7)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge(m1_subset_1 X1 X0))\Rightarrow (k10_binarith X0 X1 = k5_finseq_1 X1) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k6_margrel1)\wedge(m1_subset_1 X1 k6_margrel1))\Rightarrow(k10_margrel1 X0 X0 = X0) \quad (10)$$

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1)\wedge(v3_ordinal1 k4_ordinal1) \quad (11)$$

Assume the following.

$$\neg v1_xboole_0 k6_margrel1 \quad (12)$$

Assume the following.

$$m1_subset_1 k8_margrel1 k6_margrel1 \quad (13)$$

Assume the following.

$$m1_subset_1 k7_margrel1 k6_margrel1 \quad (14)$$

Assume the following.

$$(v1_funct_1 k2_twoscomp)\wedge((v1_funct_2 k2_twoscomp (k4_finseq_2 np_2 k6_margrel1) k6_margrel1)\wedge(m1_subset_1 k2_twoscomp (k1_zfmisc_1 (k2_zfmisc_1 (k4_finseq_2 np_2 k6_margrel1) k6_margrel1)))) \quad (15)$$

Assume the following.

$$(v1_funct_1 k2_gfacirc1)\wedge((v1_funct_2 k2_gfacirc1 (k4_finseq_2 np_1 k6_margrel1) k6_margrel1)\wedge(m1_subset_1 k2_gfacirc1 (k1_zfmisc_1 (k2_zfmisc_1 (k4_finseq_2 np_1 k6_margrel1) k6_margrel1)))) \quad (16)$$

Assume the following.

$$k2_xboolean = np_1 \quad (17)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 (k4_finseq_2 np_1 \\ k6_margrel1) k6_margrel1) \wedge (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 \\ (k4_finseq_2 np_1 k6_margrel1) k6_margrel1)))))) \Rightarrow ((X0 = k2_gfacirc1) \Leftrightarrow \\ (\forall X1.(m1_subset_1 X1 k6_margrel1) \Rightarrow (k1_funct_1 X0 (k10_binarith \\ k6_margrel1 X1) = X1))) \end{aligned} \quad (18)$$

Assume the following.

$$k1_xboolean = k6_numbers \quad (19)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 (k4_finseq_2 np_2 \\ k6_margrel1) k6_margrel1) \wedge (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 \\ (k4_finseq_2 np_2 k6_margrel1) k6_margrel1)))))) \Rightarrow ((X0 = k2_twoscomp) \Leftrightarrow \\ (\forall X1.(m1_subset_1 X1 k6_margrel1) \Rightarrow (\forall X2.(m1_subset_1 \\ X2 k6_margrel1) \Rightarrow (k1_funct_1 X0 (k10_finseq_1 X1 X2) = k10_margrel1 \\ X1 X2)))) \end{aligned} \quad (20)$$

Theorem 1

$$\begin{aligned} \forall X0.(m1_subset_1 X0 k6_margrel1) \Rightarrow ((k1_funct_1 k2_gfacirc1 \\ (k10_binarith k6_margrel1 X0) = X0) \wedge ((k1_funct_1 k2_gfacirc1 \\ (k10_binarith k6_margrel1 X0) = k1_funct_1 k2_twoscomp (k10_finseq_1 \\ X0 X0)) \wedge ((k1_funct_1 k2_gfacirc1 (k10_binarith k5_numbers k6_numbers) = \\ k6_numbers) \wedge (k1_funct_1 k2_gfacirc1 (k10_binarith k5_numbers \\ np_1) = np_1)))) \end{aligned}$$