

t11_binari_3

(TMFq68JRf7VtQvP5CVgpzgooMREuQqrMK23)

October 27, 2020

Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k6_binarith : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_binari_2 : \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k23_binop_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_binarith : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_margrel1 : \iota$ be given. Let $k10_binarith : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_margrel1 : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $v3_card_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k15_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k5_series_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k12_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_margrel1 : \iota$ 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 $k2_xboolean : \iota$ be given. Let $k1_xboolean : \iota$ be given. Let $k14_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_finseq_1 : \iota \Rightarrow \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v1_xboole_0 X0) \wedge (v7_ordinal1 X0)) \Rightarrow (k1_binari_2 \\ & (k23_binop_2 X0 np_1) = k9_binarith X0 np_1 k6_margrel1 (k1_binari_2 \\ & X0) (k10_binarith k6_margrel1 k7_margrel1)) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. \neg (X0 \in X1) \wedge ((m1_subset_1 X1 (k1_zfmisc_1 X2)) \wedge (v1_xboole_0 X2)) \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v1_xboole_0 X0) \wedge (v7_ordinal1 X0)) \Rightarrow (\forall X1. \\ & ((v3_card_1 X1 X0) \wedge (m2_finseq_1 X1 k6_margrel1)) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 k6_margrel1) \Rightarrow (k6_binarith (k1_nat_1 X0 np_1) \\ & (k9_binarith X0 np_1 k6_margrel1 X1 (k10_binarith k6_margrel1 \\ & X2)) = k2_nat_1 (k6_binarith X0 X1) (k15_funcop_1 k5_numbers X2 \\ & k7_margrel1 k6_numbers (k5_series_1 np_2 X0)))) \end{aligned} \quad (4)$$

Assume the following.

$$m1_subset_1 k1_xboole_0 k4_ordinal1 \quad (5)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k2_xcmplx_0 X0 k6_numbers = X0) \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v3_card_1 X0 np_1) \wedge (m2_finseq_1 X0 k6_margrel1)) \Rightarrow \\ & ((X0 = k12_finseq_1 k6_margrel1 k8_margrel1) \Rightarrow (k6_binarith np_1 \\ & X0 = np_1)) \end{aligned} \quad (7)$$

Assume the following.

$$k1_binari_2 np_1 = k10_binarith k6_margrel1 k8_margrel1 \quad (8)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 np_2) \wedge (m2_subset_1 np_2 k1_numbers k5_numbers)) \wedge \\ & ((m1_subset_1 np_2 k5_numbers) \wedge (m1_subset_1 np_2 k1_numbers)) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 np_1) \wedge (m2_subset_1 np_1 k1_numbers k5_numbers)) \wedge \\ & ((m1_subset_1 np_1 k5_numbers) \wedge (m1_subset_1 np_1 k1_numbers)) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0 : \iota \Rightarrow o.((X0 np_1) \wedge (\forall X1.((\neg v1_xboole_0 \\ & X1) \wedge (v7_ordinal1 X1)) \Rightarrow ((X0 X1) \Rightarrow (X0 (k1_nat_1 X1 np_1)))))) \Rightarrow (\\ & \forall X1.((\neg v1_xboole_0 X1) \wedge (v7_ordinal1 X1)) \Rightarrow (X0 X1)) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1.((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2.(m2_subset_1 \\ & X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \end{aligned} \quad (12)$$

Assume the following.

$$k8_margrel1 = k2_xboolean \quad (13)$$

Assume the following.

$$k7_margrel1 = k1_xboolean \quad (14)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (15)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k5_numbers)\wedge(v7_ordinal1 X1))\Rightarrow(k2_nat_1 X0 X1 = k2_xcmplx_0 X0 X1) \quad (17)$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1 X0)\wedge(v7_ordinal1 X1))\Rightarrow(k23_binop_2 X0 X1 = k2_xcmplx_0 X0 X1) \quad (18)$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1 X0)\wedge(m1_subset_1 X1 k5_numbers))\Rightarrow(k1_nat_1 X0 X1 = k2_xcmplx_0 X0 X1) \quad (19)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.((m1_subset_1 X3 X0)\wedge(m1_subset_1 X4 X0))\Rightarrow(k15_funcop_1 X0 X1 X2 X3 X4 = k14_funcop_1 X1 X2 X3 X4) \quad (20)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge(m1_subset_1 X1 X0))\Rightarrow(k12_finseq_1 X0 X1 = k5_finseq_1 X1) \quad (21)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge(m1_subset_1 X1 X0))\Rightarrow(k10_binarith X0 X1 = k5_finseq_1 X1) \quad (22)$$

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1)\wedge(v3_ordinal1 k4_ordinal1) \quad (23)$$

Assume the following.

$$\neg v1_xboole_0 \ k6_margrel1 \quad (24)$$

Assume the following.

$$m1_subset_1 \ k8_margrel1 \ k6_margrel1 \quad (25)$$

Assume the following.

$$m1_subset_1 \ k7_margrel1 \ k6_margrel1 \quad (26)$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1 \ X0)\wedge(v7_ordinal1 \ X1))\Rightarrow(\quad (27)$$

$$m2_subset_1 \ (k5_series_1 \ X0 \ X1) \ k1_numbers \ k5_numbers)$$

Assume the following.

$$m1_subset_1 \ k5_numbers \ (k1_zfmisc_1 \ k1_numbers) \quad (28)$$

Assume the following.

$$\forall X0.(v7_ordinal1 \ X0)\Rightarrow((v3_card_1 \ (k1_binari_2 \ X0) \ X0)\wedge \quad (29)$$

$$(m2_finseq_1 \ (k1_binari_2 \ X0) \ k6_margrel1))$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 \ X0)\wedge(m1_subset_1 \ X1 \ X0))\Rightarrow \quad (30)$$

$$((v3_card_1 \ (k10_binarith \ X0 \ X1) \ np_1)\wedge(m2_finseq_1 \ (k10_binarith \ X0 \ X1) \ X0))$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((X0 = X1)\Rightarrow(k14_funcop_1 \quad (31)$$

$$X0 \ X1 \ X2 \ X3 = X2))\wedge((X0\neq X1)\Rightarrow(k14_funcop_1 \ X0 \ X1 \ X2 \ X3 = X3))$$

Assume the following.

$$k2_xboolean = np_1 \quad (32)$$

Assume the following.

$$k1_xboolean = k6_numbers \quad (33)$$

Assume the following.

$$\forall X0.(m1_subset_1 \ X0 \ k4_ordinal1)\Rightarrow(v7_ordinal1 \ X0) \quad (34)$$

Assume the following.

$$\forall X0.(v1_xreal_0 \ X0)\Rightarrow(v1_xcmplx_0 \ X0) \quad (35)$$

Assume the following.

$$\forall X0.(m1_subset_1 \ X0 \ k1_numbers)\Rightarrow(v1_xreal_0 \ X0) \quad (36)$$

Theorem 1

$$\forall X0.((\neg v1_xboole_0 \ X0)\wedge(v7_ordinal1 \ X0))\Rightarrow(k6_binarith \quad (37)$$

$$X0 \ (k1_binari_2 \ X0) = np_1)$$