

t13_binom

(TMMd517ASZz6zNw2u42KV6BABDsPVJagh7A)

October 27, 2020

Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v4_rlvect_1 : \iota \Rightarrow o$ be given. Let $l2_algstr_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k5_binom : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k5_numbers : \iota$ be given. Let $np_0 : \iota$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $k3_binom : \iota \Rightarrow \iota$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_binop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ 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.

$$k2_xcmplx_0 np_1 np_0 = np_1 \quad (5)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k5_numbers)\wedge(v7_ordinal1 X1))\Rightarrow(k2_nat_1 X0 X1 = k2_xcmplx_0 X0 X1) \quad (7)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0)\wedge(l2_algstr_0 X0))\Rightarrow((v1_funct_1 (k3_binom X0))\wedge((v1_funct_2 (k3_binom X0) (k2_zfmisc_1 k5_numbers (u1_struct_0 X0)) (u1_struct_0 X0))\wedge(m1_subset_1 (k3_binom X0) (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 k5_numbers (u1_struct_0 X0)) (u1_struct_0 X0)))))) \quad (8)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0)\wedge(l2_algstr_0 X0))\Rightarrow(\forall X1.(m1_subset_1 X1 (u1_struct_0 X0))\Rightarrow(\forall X2.(m1_subset_1 X2 k5_numbers)\Rightarrow(k5_binom X0 X1 X2 = k2_binop_1 k5_numbers (u1_struct_0 X0) (u1_struct_0 X0) (k3_binom X0) X2 X1))) \quad (9)$$

Assume the following.

$$\forall X0.(l2_algstr_0 X0)\Rightarrow((v4_rlvect_1 X0)\Leftrightarrow(\forall X1.(m1_subset_1 X1 (u1_struct_0 X0))\Rightarrow(k1_algstr_0 X0 X1 (k4_struct_0 X0) = X1))) \quad (10)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0)\wedge(l2_algstr_0 X0))\Rightarrow(\forall X1.(((v1_funct_1 X1)\wedge((v1_funct_2 X1 (k2_zfmisc_1 k5_numbers (u1_struct_0 X0)) (u1_struct_0 X0))\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 k5_numbers (u1_struct_0 X0)) (u1_struct_0 X0))))))\Rightarrow((X1 = k3_binom X0)\Leftrightarrow(\forall X2.(m1_subset_1 X2 (u1_struct_0 X0))\Rightarrow((k2_binop_1 k5_numbers (u1_struct_0 X0) (u1_struct_0 X0) X1 k6_numbers X2 = k4_struct_0 X0)\wedge(\forall X3.(m1_subset_1 X3 k5_numbers)\Rightarrow(k2_binop_1 k5_numbers (u1_struct_0 X0) (u1_struct_0 X0) X1 (k2_nat_1 X3 np_1) X2 = k1_algstr_0 X0 X2 (k2_binop_1 k5_numbers (u1_struct_0 X0) (u1_struct_0 X0) X1 X3 X2)))))) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k5_numbers)\wedge(v7_ordinal1 X1))\Rightarrow(k2_nat_1 X0 X1 = k2_nat_1 X1 X0) \quad (12)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0)\Rightarrow(v7_ordinal1 X0) \quad (13)$$

Theorem 1

$$\forall X0.((\neg v2_struct_0 X0) \wedge (v4_rlvect_1 X0) \wedge (l2_algstr_0 X0)) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (k5_binom X0 X1 np_1 = X1))$$