

t7_chain_1

(TMF7Uwo97ykh2naHcCdESnig9NJHQyfUaVB)

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Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $r1_xboole_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_abian : \iota \Rightarrow o$ be given. Let $k5_card_1 : \iota \Rightarrow \iota$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_int_1 : \iota \Rightarrow o$ be given. Let $v6_membered : \iota \Rightarrow o$ be given. Let $v5_membered : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_finset_1 X0) \Rightarrow (\forall X1.(v1_finset_1 X1) \Rightarrow ((r1_xboole_0 X0 X1) \Rightarrow (k5_card_1 (k2_xboole_0 X0 X1) = k2_nat_1 (k5_card_1 X0) (k5_card_1 X1)))) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.(r1_xboole_0 X0 X1) \Rightarrow (r1_xboole_0 X1 X0) \quad (2)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k5_numbers) \wedge (v7_ordinal1 X1)) \Rightarrow (k2_nat_1 X0 X1 = k2_xcmplx_0 X0 X1) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(((v1_int_1 X0) \wedge (v1_abian X0)) \wedge ((v1_int_1 X1) \wedge (v1_abian X1))) \Rightarrow (v1_abian (k2_xcmplx_0 X0 X1)) \quad (5)$$

Assume the following.

$$v6_membered k4_ordinal1 \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.(((v1_int_1 X0) \wedge (\neg v1_abian X0)) \wedge ((v1_int_1 X1) \wedge (\neg v1_abian X1))) \Rightarrow (v1_abian (k2_xcmplx_0 X0 X1)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(((v1_int_1 X0)\wedge(v1_abian X0))\wedge((v1_int_1 X1)\wedge(\neg v1_abian X1)))\Rightarrow(\neg v1_abian (k2_xcmplx_0 X0 X1)) \quad (8)$$

Assume the following.

$$\forall X0.(v1_finset_1 X0)\Rightarrow(m1_subset_1 (k5_card_1 X0) k4_ordinal1) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.k2_xboole_0 X0 X1 = k2_xboole_0 X1 X0 \quad (10)$$

Assume the following.

$$\forall X0.(v6_membered X0)\Rightarrow(v5_membered X0) \quad (11)$$

Assume the following.

$$\forall X0.(v6_membered X0)\Rightarrow(\forall X1.(m1_subset_1 X1 X0)\Rightarrow(v7_ordinal1 X1)) \quad (12)$$

Assume the following.

$$\forall X0.(v5_membered X0)\Rightarrow(\forall X1.(m1_subset_1 X1 X0)\Rightarrow(v1_int_1 X1)) \quad (13)$$

Theorem 1

$$\forall X0.(v1_finset_1 X0)\Rightarrow(\forall X1.(v1_finset_1 X1)\Rightarrow(((r1_xboole_0 X0 X1)\Rightarrow(((v1_abian (k5_card_1 X0))\Leftrightarrow(v1_abian (k5_card_1 X1)))\Leftrightarrow(v1_abian (k5_card_1 (k2_xboole_0 X0 X1)))))))$$