

t16_nat_2
(TMdQH1t2qqC96jsE54EZa3UmjyxYdAa94x4)

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Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_nat_d : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_power : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $k7_nat_d : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_1 : \iota$ be given. Let $np_0 : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v6_membered : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow (\neg(\neg r1_xxreal_0 X0 k6_numbers) \wedge (r1_xxreal_0 (k3_power X0 X1) k6_numbers))) \quad (1)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow ((X0 \neq k6_numbers) \Rightarrow (k3_nat_d (k3_xcmplx_0 X0 X1) X0 = X1))) \quad (2)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow ((r1_xxreal_0 X0 X1) \Rightarrow (k3_power np_2 X1 = k3_xcmplx_0 (k3_power np_2 X0) (k3_power np_2 (k7_nat_d X1 X0))))) \quad (3)$$

Assume the following.

$$((v2_xxreal_0 np_2) \wedge (m2_subset_1 np_2 k1_numbers k5_numbers)) \wedge ((m1_subset_1 np_2 k5_numbers) \wedge (m1_subset_1 np_2 k1_numbers)) \quad (4)$$

Assume the following.

$$((v2_xxreal_0 np_1) \wedge (m2_subset_1 np_1 k1_numbers k5_numbers)) \wedge ((m1_subset_1 np_1 k5_numbers) \wedge (m1_subset_1 np_1 k1_numbers)) \quad (5)$$

Assume the following.

$$(m2_subset_1 np_0 k1_numbers k5_numbers) \wedge ((m1_subset_1 np_0 k5_numbers) \wedge (m1_subset_1 np_0 k1_numbers)) \quad (6)$$

Assume the following.

$$k3_xcmplx_0 \ np_0 \ np_1 = np_0 \quad (7)$$

Assume the following.

$$k3_xcmplx_0 \ np_0 \ np_0 = np_0 \quad (8)$$

Assume the following.

$$\neg r1_xxreal_0 \ np_2 \ np_0 \quad (9)$$

Assume the following.

$$r1_xxreal_0 \ np_0 \ np_0 \quad (10)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (11)$$

Assume the following.

$$v6_membered \ k4_ordinal1 \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1 \ X0)\wedge(v7_ordinal1 \ X1))\Rightarrow(\\ (v7_ordinal1 \ (k3_power \ X0 \ X1))\wedge(v1_xreal_0 \ (k3_power \ X0 \ X1))) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1 \ X0)\wedge(v7_ordinal1 \ X1))\Rightarrow(\\ m1_subset_1 \ (k7_nat_d \ X0 \ X1) \ k5_numbers) \quad (14)$$

Assume the following.

$$\forall X0.(v7_ordinal1 \ X0)\Rightarrow(v1_xreal_0 \ X0) \quad (15)$$

Assume the following.

$$\forall X0.(v6_membered \ X0)\Rightarrow(\forall X1.(m1_subset_1 \ X1 \ X0)\Rightarrow \\ (v7_ordinal1 \ X1)) \quad (16)$$

Theorem 1

$$\forall X0.(v7_ordinal1 \ X0)\Rightarrow(\forall X1.(v7_ordinal1 \ X1)\Rightarrow((\\ r1_xxreal_0 \ X0 \ X1)\Rightarrow(k3_nat_d \ (k3_power \ np_2 \ X1) \ (k3_power \ np_2 \\ X0) = k3_power \ np_2 \ (k7_nat_d \ X1 \ X0))))$$