

t4_pre_ff
(TMQdwxVgJndjqg2xXs1SPkwxeJ3aQ59ZWL6)

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Let $v1_int_1 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $k5_int_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_real_1 : \iota \Rightarrow \iota$ 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 $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $v3_xxreal_0 : \iota \Rightarrow o$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $k5_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k3_nat_d : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $np_0 : \iota$ be given. Let $k4_xcmplx_0 : \iota \Rightarrow \iota$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $c5_xreal_0 : \iota$ be given. Let $k1_arytm_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $c3_xreal_0 : \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k16_complex1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(v1_int_1 X0) \Rightarrow ((\neg r1_xxreal_0 k6_numbers X0) \Rightarrow (r1_xxreal_0 X0 (k1_real_1 np_1))) \quad (1)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (2)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow ((r1_xxreal_0 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee ((v3_xxreal_0 X0) \vee (v2_xxreal_0 X1)))))) \quad (3)$$

Assume the following.

$$\forall X0.(v1_int_1 X0) \Rightarrow (\forall X1.(v1_int_1 X1) \Rightarrow ((\neg r1_xxreal_0 X1 X0) \Rightarrow (r1_xxreal_0 X0 (k5_real_1 X1 np_1)))) \quad (4)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2.(v1_xreal_0 X2) \Rightarrow (\neg (r1_xxreal_0 k6_numbers X0) \wedge ((\neg r1_xxreal_0 X2 X1) \wedge (r1_xxreal_0 X2 (k6_xcmplx_0 X1 X0)))))) \quad (5)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\neg(r1_xxreal_0 X0 X1) \wedge ((\neg v3_xxreal_0 X0) \wedge (v3_xxreal_0 X1)))) \quad (6)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow ((\neg r1_xxreal_0 X1 X0) \Rightarrow (k3_nat_d X0 X1 = k6_numbers))) \quad (7)$$

Assume the following.

$$((v2_xxreal_0 np_1) \wedge (m2_subset_1 np_1 k1_numbers k5_numbers)) \wedge ((m1_subset_1 np_1 k5_numbers) \wedge (m1_subset_1 np_1 k1_numbers)) \quad (8)$$

Assume the following.

$$\neg v1_xboole_0 np_1 \quad (9)$$

Assume the following.

$$(m2_subset_1 np_0 k1_numbers k5_numbers) \wedge ((m1_subset_1 np_0 k5_numbers) \wedge (m1_subset_1 np_0 k1_numbers)) \quad (10)$$

Assume the following.

$$k4_xcmplx_0 (k4_xcmplx_0 np_1) = np_1 \quad (11)$$

Assume the following.

$$k2_xcmplx_0 np_1 (k4_xcmplx_0 np_1) = np_0 \quad (12)$$

Assume the following.

$$r1_xxreal_0 np_0 np_1 \quad (13)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0 X0) \wedge (m1_subset_1 X1 k1_numbers)) \Rightarrow (k5_real_1 X0 X1 = k6_xcmplx_0 X0 X1) \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1 X0) \wedge (v7_ordinal1 X1)) \Rightarrow (k3_nat_d X0 X1 = k5_int_1 X0 X1) \quad (16)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (k1_real_1 X0 = k4_xcmplx_0 X0) \quad (17)$$

Assume the following.

$$\exists X0.(v1_xboole_0 X0)\wedge(v1_xxreal_0 X0) \quad (18)$$

Assume the following.

$$(c5_xxreal_0 = k4_xcmplx_0 np_1)\wedge(k1_arytm_0 c3_xxreal_0 c5_xxreal_0 = k6_numbers) \quad (19)$$

Assume the following.

$$k2_xcmplx_0 np_1 (k4_xcmplx_0 np_1) = k6_numbers \quad (20)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0)\Rightarrow(k4_xcmplx_0 (k4_xcmplx_0 X0) = X0) \quad (21)$$

Assume the following.

$$\forall X0.((\neg v1_xboole_0 X0)\wedge(v1_xcmplx_0 X0))\Rightarrow((\neg v1_xboole_0 (k4_xcmplx_0 X0))\wedge(v1_xcmplx_0 (k4_xcmplx_0 X0))) \quad (22)$$

Assume the following.

$$\forall X0.(v1_int_1 X0)\Rightarrow((v7_ordinal1 (k16_complex1 X0))\wedge(v1_xxreal_0 (k16_complex1 X0))) \quad (23)$$

Assume the following.

$$\forall X0.\forall X1.(((v2_xxreal_0 X0)\wedge(v1_xxreal_0 X0))\wedge(\neg v3_xxreal_0 X1)\wedge(v1_xxreal_0 X1))\Rightarrow(v2_xxreal_0 (k2_xcmplx_0 X1 X0)) \quad (24)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0)\Rightarrow(v1_xcmplx_0 (k4_xcmplx_0 X0)) \quad (25)$$

Assume the following.

$$m1_subset_1 c5_xxreal_0 k1_numbers \quad (26)$$

Assume the following.

$$\forall X0.(v1_xxreal_0 X0)\Rightarrow(((r1_xxreal_0 k6_numbers X0)\Rightarrow(k16_complex1 X0 = X0))\wedge((\neg r1_xxreal_0 k6_numbers X0)\Rightarrow(k16_complex1 X0 = k4_xcmplx_0 X0))) \quad (27)$$

Assume the following.

$$\forall X0.((v1_xxreal_0 X0)\wedge(v2_xxreal_0 X0))\Rightarrow((\neg v1_xboole_0 X0)\wedge((v1_xxreal_0 X0)\wedge(\neg v3_xxreal_0 X0))) \quad (28)$$

Assume the following.

$$\forall X0.(v1_int_1 X0) \Rightarrow (v1_xreal_0 X0) \quad (29)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\neg v3_xxreal_0 X0) \quad (30)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xreal_0 X0) \quad (31)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xcmplx_0 X0) \quad (32)$$

Theorem 1

$$\forall X0.(v1_int_1 X0) \Rightarrow (\forall X1.(v1_int_1 X1) \Rightarrow ((r1_xxreal_0 k6_numbers X0) \Rightarrow ((r1_xxreal_0 X1 X0) \vee (k5_int_1 X0 X1 = k6_numbers))))$$