

t1_lpspace2 (TMP- bLDoo38h5QmemBbvAYGpKRuugoVu2BzD)

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Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k7_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $k7_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k4_xcmplx_0 : \iota \Rightarrow \iota$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k18_complex1 : \iota \Rightarrow \iota$ be given. Let $k17_complex1 : \iota \Rightarrow \iota$ be given. Let $v1_int_1 : \iota \Rightarrow o$ be given. Let $k5_prepower : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_prepower : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_square_1 : \iota \Rightarrow \iota$ be given. Let $v3_xxreal_0 : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k1_newton : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_prepower : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $k6_square_1 : \iota \Rightarrow \iota$ be given. Let $k6_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xreal_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_xcmplx_0 : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $k7_binop_2 : \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k2_real_1 : \iota \Rightarrow \iota$ be given. Let $k1_real_1 : \iota \Rightarrow \iota$ be given. Let $k16_complex1 : \iota \Rightarrow \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $v6_membered : \iota \Rightarrow o$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $c4_toprealb : \iota$ be given. Let $v5_membered : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (\forall X1.(v1_xcmplx_0 X1) \Rightarrow ((X0 \neq k6_numbers) \Rightarrow (X1 = k7_xcmplx_0 (k3_xcmplx_0 X1 X0) X0))) \quad (1)$$

Assume the following.

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

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (r1_xxreal_0 k6_numbers (k3_xcmplx_0 X0 X0)) \quad (3)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\neg(\neg r1_xxreal_0 X1 (k4_xcmplx_0 X0)) \wedge (r1_xxreal_0 (k2_xcmplx_0 X1 X0) k6_numbers))) \quad (4)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (((r1_xxreal_0 (k4_xcmplx_0 X0) X1) \wedge (r1_xxreal_0 X1 X0)) \Leftrightarrow (r1_xxreal_0 (k18_complex1 X1) X0))) \quad (5)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\neg(r1_xxreal_0 X0 X1) \wedge ((\neg v2_xxreal_0 X1) \wedge (v2_xxreal_0 X0)))) \quad (6)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow ((r1_xxreal_0 k6_numbers X0) \Rightarrow (k17_complex1 X0 = X0)) \quad (7)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_int_1 X1) \Rightarrow (k5_prepower (k10_real_1 np_1 X0) X1 = k10_real_1 np_1 (k4_prepower X0 X1))) \quad (8)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_int_1 X1) \Rightarrow (k4_prepower X0 (k4_xcmplx_0 X1) = k10_real_1 np_1 (k4_prepower X0 X1))) \quad (9)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k3_square_1 X0 = k3_square_1 (k4_xcmplx_0 X0)) \quad (10)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\neg(r1_xxreal_0 X0 X1) \wedge ((\neg v3_xxreal_0 X0) \wedge (v3_xxreal_0 X1)))) \quad (11)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow (k4_prepower X0 X1 = k1_newton X0 X1)) \quad (12)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow ((r1_xxreal_0 k6_numbers X0) \Rightarrow (k2_prepower np_2 X0 = k6_square_1 X0)) \quad (13)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow ((X0 = k6_numbers) \Leftrightarrow (k18_complex1 X0 = k6_numbers)) \quad (14)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (\forall X1.(v1_xcmplx_0 X1) \Rightarrow (X0 = k2_xcmplx_0 (k6_xcmplx_0 X0 X1) X1)) \quad (15)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow ((r1_xxreal_0 X0 X1) \Rightarrow (k1_xreal_0 X1 X0 = k6_xcmplx_0 X1 X0))) \quad (16)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (k1_xreal_0 X0 X0 = k6_numbers) \quad (17)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow ((r1_xxreal_0 k6_numbers X0) \Rightarrow (k6_square_1 (k3_square_1 X0) = X0)) \quad (18)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow ((r1_xxreal_0 k6_numbers X0) \Rightarrow (k2_prepower np_1 X0 = X0)) \quad (19)$$

Assume the following.

$$k5_xcmplx_0 k6_numbers = k6_numbers \quad (20)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow ((k1_newton X0 np_2 = k3_xcmplx_0 X0 X0) \wedge (k1_newton (k4_xcmplx_0 X0) np_2 = k1_newton X0 np_2)) \quad (21)$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \quad (22)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow (((r1_xxreal_0 k6_numbers X0) \wedge (r1_xxreal_0 np_1 X1)) \Rightarrow ((k1_newton (k2_prepower X1 X0) X1 = X0) \wedge (k2_prepower X1 (k1_newton X0 X1) = X0)))) \quad (23)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow ((r1_xxreal_0 \\ X0 X1) \Rightarrow ((r1_xxreal_0 X0 k6_numbers) \vee (r1_xxreal_0 np_1 (k7_xcmplx_0 \\ X1 X0)))))) \end{aligned} \quad (24)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\neg(\neg \\ r1_xxreal_0 X0 k6_numbers) \wedge ((\neg r1_xxreal_0 k6_numbers X1) \wedge (r1_xxreal_0 \\ k6_numbers (k3_xcmplx_0 X0 X1)))))) \end{aligned} \quad (25)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k7_xcmplx_0 np_1 X0 = k5_xcmplx_0 X0) \quad (26)$$

Assume the following.

$$\begin{aligned} ((v2_xxreal_0 np_2) \wedge (m2_subset_1 np_2 k1_numbers k5_numbers)) \wedge \\ ((m1_subset_1 np_2 k5_numbers) \wedge (m1_subset_1 np_2 k1_numbers)) \end{aligned} \quad (27)$$

Assume the following.

$$\begin{aligned} ((v2_xxreal_0 np_1) \wedge (m2_subset_1 np_1 k1_numbers k5_numbers)) \wedge \\ ((m1_subset_1 np_1 k5_numbers) \wedge (m1_subset_1 np_1 k1_numbers)) \end{aligned} \quad (28)$$

Assume the following.

$$\begin{aligned} (m2_subset_1 np_0 k1_numbers k5_numbers) \wedge ((m1_subset_1 np_0 \\ k5_numbers) \wedge (m1_subset_1 np_0 k1_numbers)) \end{aligned} \quad (29)$$

Assume the following.

$$r1_xxreal_0 np_1 np_2 \quad (30)$$

Assume the following.

$$r1_xxreal_0 np_1 np_1 \quad (31)$$

Assume the following.

$$\neg r1_xxreal_0 np_1 np_0 \quad (32)$$

Assume the following.

$$r1_xxreal_0 np_0 np_0 \quad (33)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((m1_subset_1 X0 k1_numbers) \wedge (v1_xreal_0 \\ X1)) \Rightarrow (k7_real_1 X0 X1 = k2_xcmplx_0 X0 X1) \end{aligned} \quad (34)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (k7_binop_2 X0 = k4_xcmplx_0 X0) \quad (35)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (36)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (37)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (k2_real_1 X0 = k5_xcmplx_0 X0) \quad (38)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (k1_real_1 X0 = k4_xcmplx_0 X0) \quad (39)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k18_complex1 X0 = k16_complex1 X0) \quad (40)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k17_complex1 X0 = k16_complex1 X0) \quad (41)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k1_numbers) \wedge (v1_xreal_0 X1)) \Rightarrow (k10_real_1 X0 X1 = k7_xcmplx_0 X0 X1) \quad (42)$$

Assume the following.

$$\exists X0.(v1_xboole_0 X0) \wedge ((v1_xcmplx_0 X0) \wedge ((v1_xxreal_0 X0) \wedge (v1_xreal_0 X0))) \quad (43)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\neg(\neg r1_xxreal_0 X0 k6_numbers) \wedge (r1_xxreal_0 (k2_xcmplx_0 X1 X0) X1))) \quad (44)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow ((r1_xxreal_0 (k1_real_1 (k17_complex1 X0)) X0) \wedge (r1_xxreal_0 X0 (k17_complex1 X0))) \quad (45)$$

Assume the following.

$$(v1_xreal_0 np_1) \wedge (v2_xxreal_0 np_1) \quad (46)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (k3_square_1 X0 = k1_newton X0 np_2) \quad (47)$$

Assume the following.

$$\forall X0.(m2_subset_1 X0 k1_numbers k5_numbers) \Rightarrow ((\neg r1_xreal_0 \quad np_1 X0) \Rightarrow (X0 = k6_numbers)) \quad (48)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (k1_real_1 (k1_real_1 X0) = X0) \quad (49)$$

Assume the following.

$$v6_membered k4_ordinal1 \quad (50)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow ((v1_xcmplx_0 (k5_xcmplx_0 X0)) \wedge (v1_xreal_0 (k5_xcmplx_0 X0))) \quad (51)$$

Assume the following.

$$v3_membered k1_numbers \quad (52)$$

Assume the following.

$$(v1_xboole_0 (k16_complex1 k6_numbers)) \wedge (v1_xreal_0 (k16_complex1 k6_numbers)) \quad (53)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (v1_xreal_0 (k3_square_1 X0)) \quad (54)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0 X0) \wedge (v1_int_1 X1)) \Rightarrow (v1_xreal_0 (k4_prepower X0 X1)) \quad (55)$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2_xreal_0 X0) \wedge (v1_xreal_0 X0)) \wedge ((\neg v3_xreal_0 X1) \wedge (v1_xreal_0 X1))) \Rightarrow (\neg v2_xreal_0 (k3_xcmplx_0 X1 X0)) \quad (56)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow ((v1_xreal_0 (k16_complex1 X0)) \wedge (\neg v3_xreal_0 (k16_complex1 X0))) \quad (57)$$

Assume the following.

$$\forall X0.((\neg v3_xreal_0 X0) \wedge (v1_xreal_0 X0)) \Rightarrow ((v1_xcmplx_0 (k4_xcmplx_0 X0)) \wedge (\neg v2_xreal_0 (k4_xcmplx_0 X0))) \quad (58)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (m1_subset_1 (k7_binop_2 X0) k1_numbers) \quad (59)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (m1_subset_1 (k2_real_1 X0) k1_numbers) \quad (60)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (m1_subset_1 (k17_complex1 X0) k1_numbers) \quad (61)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k1_numbers) \wedge (v1_xreal_0 X1)) \Rightarrow (m1_subset_1 (k10_real_1 X0 X1) k1_numbers) \quad (62)$$

Assume the following.

$$c4_toprealb = k1_real_1 np_1 \quad (63)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (\forall X1.(v1_xcmplx_0 X1) \Rightarrow (k7_xcmplx_0 X0 X1 = k3_xcmplx_0 X0 (k5_xcmplx_0 X1))) \quad (64)$$

Assume the following.

$$\forall X0.(v1_xxreal_0 X0) \Rightarrow ((v2_xxreal_0 X0) \Leftrightarrow (\neg r1_xxreal_0 X0 k6_numbers)) \quad (65)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Leftrightarrow (X0 \in k1_numbers) \quad (66)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1) \Rightarrow (v7_ordinal1 X0) \quad (67)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (v1_xcmplx_0 X0) \quad (68)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\neg v3_xxreal_0 X0) \quad (69)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (v1_int_1 X0) \quad (70)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xreal_0 X0) \quad (71)$$

Assume the following.

$$\forall X0.(v6_membered X0) \Rightarrow (v5_membered X0) \quad (72)$$

Assume the following.

$$\forall X0.(v5_membered X0) \Rightarrow (\forall X1.(m1_subset_1 X1 X0) \Rightarrow (v1_int_1 X1)) \quad (73)$$

Assume the following.

$$\forall X0.(v3_membered X0) \Rightarrow (\forall X1.(m1_subset_1 X1 X0) \Rightarrow (v1_xreal_0 X1)) \quad (74)$$

Theorem 1

$$\forall X0.((v2_xxreal_0 X0) \wedge (v1_xreal_0 X0)) \Rightarrow (\forall X1.((v2_xxreal_0 X1) \wedge (v1_xreal_0 X1)) \Rightarrow (\neg(k7_real_1 (k10_real_1 np_1 X0) (k10_real_1 np_1 X1) = np_1) \wedge (r1_xxreal_0 X0 np_1))))$$