

t2_goboard7

(TMThGVSpCkZA3ARYvYP1xfM8q8TNGskbd8e)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k18_complex1 : \iota \Rightarrow \iota$ be given. Let $k9_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k17_complex1 : \iota \Rightarrow \iota$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_xcmplx_0 : \iota \Rightarrow \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $k7_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k16_complex1 : \iota \Rightarrow \iota$ be given. Let $k11_arytm_3 : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xxreal_0 : \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2. \\ & (v1_xreal_0 X2) \Rightarrow ((r1_xxreal_0 X0 X1) \Leftrightarrow (r1_xxreal_0 (k6_xcmplx_0 \\ & X0 X2) (k6_xcmplx_0 X1 X2)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (r1_xxreal_0 k6_numbers (k17_complex1 X0)) \quad (2)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (\forall X1.(v1_xcmplx_0 X1) \Rightarrow (X0 = k2_xcmplx_0 (k6_xcmplx_0 X0 X1) X1)) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (((\neg \\ & r1_xxreal_0 X1 (k4_xcmplx_0 X0)) \wedge (\neg r1_xxreal_0 X0 X1)) \Leftrightarrow (\neg r1_xxreal_0 \\ & X0 (k18_complex1 X1)))) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k2_xcmplx_0 X0 k6_numbers = X0) \quad (5)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (\forall X1.(v1_xcmplx_0 X1) \Rightarrow (k6_xcmplx_0 X0 (k6_xcmplx_0 X0 X1) = X1)) \quad (6)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k6_xcmplx_0 X0 X0 = k6_numbers) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0) \wedge (v1_xxreal_0 X1)) \Rightarrow (r1_xxreal_0 X0 X0) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k1_numbers) \wedge (v1_xreal_0 X1)) \Rightarrow (k9_real_1 X0 X1 = k6_xcmplx_0 X0 X1) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k1_numbers) \wedge (v1_xreal_0 X1)) \Rightarrow (k7_real_1 X0 X1 = k2_xcmplx_0 X0 X1) \quad (10)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (11)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k18_complex1 X0 = k16_complex1 X0) \quad (12)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k17_complex1 X0 = k16_complex1 X0) \quad (13)$$

Assume the following.

$$k11_arytm_3 = k1_xboole_0 \quad (14)$$

Assume the following.

$$\exists X0.(v1_xboole_0 X0) \wedge ((v1_xcmplx_0 X0) \wedge ((v1_xxreal_0 X0) \wedge (v1_xreal_0 X0))) \quad (15)$$

Assume the following.

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

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow ((r1_xxreal_0 (k4_xcmplx_0 X0) (k4_xcmplx_0 X1)) \Rightarrow (r1_xxreal_0 X1 X0))) \quad (17)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (18)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k4_xcmplx_0 (k4_xcmplx_0 X0) = X0) \quad (19)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 X0) \wedge (v1_xcmplx_0 X1)) \Rightarrow (v1_xcmplx_0 (k6_xcmplx_0 X0 X1)) \quad (20)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow ((v1_xcmplx_0 (k4_xcmplx_0 X0)) \wedge (v1_xreal_0 (k4_xcmplx_0 X0))) \quad (21)$$

Assume the following.

$$(v1_xboole_0 (k16_complex1 k6_numbers)) \wedge (v1_xreal_0 (k16_complex1 k6_numbers)) \quad (22)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 X0) \wedge (v1_xcmplx_0 X1)) \Rightarrow (v1_xcmplx_0 (k2_xcmplx_0 X0 X1)) \quad (23)$$

Assume the following.

$$\neg v1_xboole_0 k1_numbers \quad (24)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k1_numbers) \wedge (v1_xreal_0 X1)) \Rightarrow (m1_subset_1 (k9_real_1 X0 X1) k1_numbers) \quad (25)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (v1_xcmplx_0 (k4_xcmplx_0 X0)) \quad (26)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (v1_xreal_0 (k16_complex1 X0)) \quad (27)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (\forall X1.(v1_xcmplx_0 X1) \Rightarrow (k6_xcmplx_0 X0 X1 = k2_xcmplx_0 X0 (k4_xcmplx_0 X1))) \quad (28)$$

Assume the following.

$$k1_xreal_0 = k1_numbers \quad (29)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Leftrightarrow (X0 \in k1_numbers) \quad (30)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((\neg v1_xboole_0 X0)\Rightarrow((m1_subset_1 X1 X0)\Leftrightarrow \\ (X1 \in X0)))\wedge((v1_xboole_0 X0)\Rightarrow((m1_subset_1 X1 X0)\Leftrightarrow(v1_xboole_0 \\ X1))) \end{aligned} \quad (31)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_xreal_0 X0)\Rightarrow(((r1_xxreal_0 k6_numbers X0)\Rightarrow(k16_complex1 \\ X0 = X0))\wedge((\neg r1_xxreal_0 k6_numbers X0)\Rightarrow(k16_complex1 X0 = k4_xcmplx_0 \\ X0))) \end{aligned} \quad (32)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((v1_xxreal_0 X0)\wedge(v1_xxreal_0 X1))\Rightarrow(\\ (r1_xxreal_0 X0 X1)\vee(r1_xxreal_0 X1 X0)) \end{aligned} \quad (33)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((v1_xcmplx_0 X0)\wedge(v1_xcmplx_0 X1))\Rightarrow(\\ k2_xcmplx_0 X0 X1 = k2_xcmplx_0 X1 X0) \end{aligned} \quad (34)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0)\Rightarrow(v1_xxreal_0 X0) \quad (35)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0)\Rightarrow(v1_xcmplx_0 X0) \quad (36)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers)\Rightarrow(v1_xreal_0 X0) \quad (37)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers)\Rightarrow(v1_xcmplx_0 X0) \quad (38)$$

Theorem 1

$$\begin{aligned} \forall X0.(m1_subset_1 X0 k1_numbers)\Rightarrow(\forall X1.(m1_subset_1 \\ X1 k1_numbers)\Rightarrow((k18_complex1 (k9_real_1 X0 X1) = k6_numbers)\Leftrightarrow \\ (X0 = X1))) \end{aligned}$$