

t24_complex2 (TMHP- PZnG4CQL9QXrBHGNGDy3TZP8G1W3o3W)

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Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_comptrig : \iota \Rightarrow \iota$ be given. Let $k32_sin_cos : \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k4_complex1 : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $k4_xxreal_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $k2_rcomp_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_membered : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow (\forall X2. \\ (v1_xxreal_0 X2) \Rightarrow ((X0 \in k4_xxreal_1 X1 X2) \Leftrightarrow ((\neg r1_xxreal_0 X0 X1) \wedge \\ (\neg r1_xxreal_0 X2 X0)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow ((r1_xxreal_0 k6_numbers (k1_comptrig X0)) \wedge (\neg r1_xxreal_0 (k8_real_1 np_2 k32_sin_cos) (k1_comptrig X0))) \quad (3)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow ((k4_complex1 X0 = k6_numbers) \Leftrightarrow ((k1_comptrig X0 = k6_numbers) \vee (k1_comptrig X0 = k32_sin_cos))) \quad (4)$$

Assume the following.

$$\forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow ((r1_xxreal_0 X0 X1) \wedge (r1_xxreal_0 X1 X0)) \Rightarrow (X0 = X1)) \quad (5)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow ((k1_comptrig X0 \in k2_rcomp_1 k6_numbers k32_sin_cos) \Leftrightarrow (\neg r1_xxreal_0 (k4_complex1 X0) k6_numbers)) \quad (6)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (7)$$

Assume the following.

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

$$k2_rcomp_1 X0 X1 = k4_xxreal_1 X0 X1)$$

Assume the following.

$$\exists X0.(v1_xboole_0 X0)\wedge(v1_xxreal_0 X0) \quad (9)$$

Assume the following.

$$v3_membered k1_numbers \quad (10)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0)\Rightarrow(m1_subset_1 (k4_complex1 X0) k1_numbers) \quad (11)$$

Assume the following.

$$m1_subset_1 k32_sin_cos k1_numbers \quad (12)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0)\Rightarrow(m1_subset_1 (k1_comptrig X0) k1_numbers) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0)\wedge(v1_xxreal_0 X1))\Rightarrow(\quad (14)$$

$$(r1_xxreal_0 X0 X1)\vee(r1_xxreal_0 X1 X0))$$

Assume the following.

$$\forall X0.(v3_membered X0)\Rightarrow(v2_membered X0) \quad (15)$$

Assume the following.

$$\forall X0.(v2_membered X0)\Rightarrow(\forall X1.(m1_subset_1 X1 X0)\Rightarrow \quad (16)$$

$$(v1_xxreal_0 X1))$$

Theorem 1

$$\forall X0.(v1_xcmplx_0 X0)\Rightarrow((r1_xxreal_0 (k1_comptrig X0) k32_sin_cos)\Rightarrow \quad (16)$$

$$(r1_xxreal_0 k6_numbers (k4_complex1 X0)))$$