

t61_complex2

(TMayfg3zLBDNTjNE11accjHNmEZe6g3zrJr)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $k3_complex2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_comptrig : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k6_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k17_complex1 : \iota \Rightarrow \iota$ be given. Let $k21_sin_cos : \iota \Rightarrow \iota$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k18_sin_cos : \iota \Rightarrow \iota$ be given. Let $k7_complex1 : \iota$ be given. Let $k4_xcmplx_0 : \iota \Rightarrow \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k7_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k1_real_1 : \iota \Rightarrow \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $v3_xxreal_0 : \iota \Rightarrow o$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $k2_complex2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $k32_sin_cos : \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \neg(v1_xboole_0 X0) \wedge ((X0 \neq X1) \wedge (v1_xboole_0 X1)) \quad (1)$$

Assume the following.

$$\forall X0. (v1_xcmplx_0 X0) \Rightarrow (k6_xcmplx_0 X0 \ k6_numbers = X0) \quad (2)$$

Assume the following.

$$\forall X0. (v1_xcmplx_0 X0) \Rightarrow (k2_xcmplx_0 X0 \ k6_numbers = X0) \quad (3)$$

Assume the following.

$$\forall X0. (m1_subset_1 X0 \ k1_numbers) \Rightarrow ((r1_xxreal_0 \ k6_numbers X0) \Rightarrow (k1_comptrig X0 = k6_numbers)) \quad (4)$$

Assume the following.

$$\forall X0. (v1_xcmplx_0 X0) \Rightarrow (X0 = k2_xcmplx_0 (k8_real_1 (k17_complex1 X0) (k21_sin_cos (k1_comptrig X0))) (k3_xcmplx_0 (k8_real_1 (k17_complex1 X0) (k18_sin_cos (k1_comptrig X0))) k7_complex1)) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 X0)\wedge(v1_xcmplx_0 X1))\Rightarrow(k2_xcmplx_0 X0 (k4_xcmplx_0 X1) = k6_xcmplx_0 X0 X1) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k1_numbers)\wedge(v1_xreal_0 X1))\Rightarrow(k7_real_1 X0 X1 = k2_xcmplx_0 X0 X1) \quad (7)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (8)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers)\Rightarrow(k1_real_1 X0 = k4_xcmplx_0 X0) \quad (9)$$

Assume the following.

$$\exists X0.(v1_xboole_0 X0)\wedge((v1_xcmplx_0 X0)\wedge((v1_xxreal_0 X0)\wedge(v1_xreal_0 X0))) \quad (10)$$

Assume the following.

$$v1_xboole_0 k1_xboole_0 \quad (11)$$

Assume the following.

$$\forall X0.((\neg v3_xxreal_0 X0)\wedge(v1_xreal_0 X0))\Rightarrow((v1_xcmplx_0 (k4_xcmplx_0 X0))\wedge(\neg v2_xxreal_0 (k4_xcmplx_0 X0))) \quad (12)$$

Assume the following.

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

Assume the following.

$$\begin{aligned} \forall X0.(v1_xcmplx_0 X0)\Rightarrow(\forall X1.(v1_xcmplx_0 X1)\Rightarrow((\\ (\neg(k1_comptrig X0\neq k6_numbers)\wedge(X1 = k6_numbers))\Rightarrow(k3_complex2 \\ X0 X1 = k1_comptrig (k2_complex2 X1 (k1_real_1 (k1_comptrig X0))))))\wedge \\ (\neg(k1_comptrig X0\neq k6_numbers)\wedge((X1 = k6_numbers)\wedge(k3_complex2 \\ X0 X1\neq k9_real_1 (k8_real_1 np_2 k32_sin_cos) (k1_comptrig X0)))))) \end{aligned} \quad (14)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_xcmplx_0 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 k1_numbers)\Rightarrow \\ (k2_complex2 X0 X1 = k2_xcmplx_0 (k8_real_1 (k17_complex1 X0) (\\ k21_sin_cos (k7_real_1 X1 (k1_comptrig X0)))) (k3_xcmplx_0 (k8_real_1 \\ (k17_complex1 X0) (k18_sin_cos (k7_real_1 X1 (k1_comptrig X0)))) \\ k7_complex1))) \end{aligned} \quad (15)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_xcmplx_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 k1_numbers) \Rightarrow \\ & (((X0 \neq k6_numbers) \Rightarrow ((X1 = k1_comptrig X0) \Leftrightarrow ((X0 = k2_xcmplx_0 (\\ & k8_real_1 (k17_complex1 X0) (k21_sin_cos X1)) (k3_xcmplx_0 (k8_real_1 \\ & (k17_complex1 X0) (k18_sin_cos X1)) k7_complex1)) \wedge ((r1_xxreal_0 \\ & k6_numbers X1) \wedge (\neg r1_xxreal_0 (k8_real_1 np_2 k32_sin_cos X1)))))) \wedge \\ & ((X0 = k6_numbers) \Rightarrow ((X1 = k1_comptrig X0) \Leftrightarrow (X1 = k6_numbers)))) \end{aligned} \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 X0) \wedge (v1_xcmplx_0 X1)) \Rightarrow (k2_xcmplx_0 X0 X1 = k2_xcmplx_0 X1 X0) \quad (17)$$

Assume the following.

$$\forall X0.((v1_xxreal_0 X0) \wedge (v3_xxreal_0 X0)) \Rightarrow ((\neg v1_xboole_0 X0) \wedge ((v1_xxreal_0 X0) \wedge (\neg v2_xxreal_0 X0))) \quad (18)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xxreal_0 X0) \quad (19)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xcmplx_0 X0) \quad (20)$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.(v1_xcmplx_0 \\ & X1) \Rightarrow ((r1_xxreal_0 k6_numbers X0) \Rightarrow (k3_complex2 X0 X1 = k1_comptrig \\ & X1))) \end{aligned}$$