

t64_complex1 (TMXtG- wCktu8DGdMiuQZBC1C4RTMB6tazihK)

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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 $k17_complex1 : \iota \Rightarrow \iota$ be given. Let $k9_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k4_xcmplx_0 : \iota \Rightarrow \iota$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k16_complex1 : \iota \Rightarrow \iota$ be given. Let $v3_xreal_0 : \iota \Rightarrow o$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (\forall X1.(v1_xcmplx_0 X1) \Rightarrow (k17_complex1 (k6_xcmplx_0 X0 X1) = k17_complex1 (k6_xcmplx_0 X1 X0))) \quad (1)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (\forall X1.(v1_xcmplx_0 X1) \Rightarrow (r1_xxreal_0 (k9_real_1 (k17_complex1 X0) (k17_complex1 X1)) (k17_complex1 (k6_xcmplx_0 X0 X1)))) \quad (2)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow ((r1_xxreal_0 X0 X1) \Leftrightarrow (r1_xxreal_0 (k4_xcmplx_0 X1) (k4_xcmplx_0 X0)))) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 X0) \wedge (v1_xcmplx_0 X1)) \Rightarrow (k2_xcmplx_0 (k4_xcmplx_0 X0) (k4_xcmplx_0 X1) = k4_xcmplx_0 (k2_xcmplx_0 X0 X1)) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 X0) \wedge (v1_xcmplx_0 X1)) \Rightarrow (k2_xcmplx_0 X0 (k4_xcmplx_0 X1) = k6_xcmplx_0 X0 X1) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k1_numbers) \wedge (v1_xreal_0 X1)) \Rightarrow (k9_real_1 X0 X1 = k6_xcmplx_0 X0 X1) \quad (6)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k17_complex1 X0 = k16_complex1 X0) \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (((r1_xxreal_0 \\ (k4_xcmplx_0 X0) X1) \wedge (r1_xxreal_0 X1 X0)) \Leftrightarrow (r1_xxreal_0 (k17_complex1 \\ X1) X0)))) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k4_xcmplx_0 (k4_xcmplx_0 X0) = X0) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0 X0) \wedge (v1_xreal_0 X1)) \Rightarrow (v1_xreal_0 \\ (k6_xcmplx_0 X0 X1)) \quad (10)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow ((v1_xreal_0 (k16_complex1 X0)) \wedge \\ (\neg v3_xxreal_0 (k16_complex1 X0))) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 X0) \wedge (v1_xcmplx_0 X1)) \Rightarrow (\\ v1_xcmplx_0 (k6_xcmplx_0 X0 X1)) \quad (12)$$

Assume the following.

$$\forall X0.((\neg v3_xxreal_0 X0) \wedge (v1_xreal_0 X0)) \Rightarrow ((v1_xcmplx_0 \\ (k4_xcmplx_0 X0)) \wedge (\neg v2_xxreal_0 (k4_xcmplx_0 X0))) \quad (13)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (m1_subset_1 (k17_complex1 X0) k1_numbers) \quad (14)$$

Assume the following.

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

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (v1_xcmplx_0 X0) \quad (16)$$

Theorem 1

$$\begin{aligned} \forall X0.(v1_xcmplx_0 X0) \Rightarrow (\forall X1.(v1_xcmplx_0 X1) \Rightarrow (r1_xxreal_0 \\ (k17_complex1 (k9_real_1 (k17_complex1 X0) (k17_complex1 X1))) \\ (k17_complex1 (k6_xcmplx_0 X0 X1)))) \end{aligned}$$