

t21_complex2

(TMTTPafLVFjrbgaYGN9hoPe9QoDfM8cZedL)

October 27, 2020

Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k1_comptrig : \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_complex1 : \iota \Rightarrow \iota$ be given. Let $k4_complex1 : \iota \Rightarrow \iota$ be given. Let $k17_complex1 : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k4_xcmplx_0 : \iota \Rightarrow \iota$ be given. Let $np_0 : \iota$ be given. Let $k2_complex1 : \iota \Rightarrow \iota$ be given. Let $k1_complex1 : \iota \Rightarrow \iota$ be given. Let $k16_complex1 : \iota \Rightarrow \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_2 : \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (r1_xxreal_0 k6_numbers (k17_complex1 X0)) \quad (1)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (\forall X1.(v1_xcmplx_0 X1) \Rightarrow ((k3_complex1 X0 = k3_complex1 X1) \wedge (k4_complex1 X0 = k4_complex1 X1)) \Rightarrow (X0 = X1)) \quad (2)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow ((r1_xxreal_0 k6_numbers X0) \Rightarrow (k1_comptrig X0 = k6_numbers)) \quad (3)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow ((k1_comptrig X0 = k6_numbers) \Leftrightarrow (X0 = k17_complex1 X0)) \quad (4)$$

Assume the following.

$$k2_xcmplx_0 np_1 (k4_xcmplx_0 np_1) = np_0 \quad (5)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k4_complex1 X0 = k2_complex1 X0) \quad (6)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k3_complex1 X0 = k1_complex1 X0) \quad (7)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k17_complex1 X0 = k16_complex1 X0) \quad (8)$$

Assume the following.

$$k2_xcmplx_0 \ np_1 (k4_xcmplx_0 \ np_1) = k6_numbers \quad (9)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (v1_xreal_0 (k1_complex1 X0)) \quad (10)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (m1_subset_1 (k3_complex1 X0) k1_numbers) \quad (11)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (v1_xreal_0 (k16_complex1 X0)) \quad (12)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_xcmplx_0 X0) \Rightarrow (\forall X1.((X0 \in k1_numbers) \Rightarrow (\\ (X1 = k2_complex1 X0) \Leftrightarrow (X1 = k6_numbers))) \wedge ((\neg X0 \in k1_numbers) \Rightarrow (\\ ((X1 = k2_complex1 X0) \Leftrightarrow (\exists X2.((v1_funct_1 X2) \wedge ((v1_funct_2 \\ X2 \ np_2 \ k1_numbers) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ np_2 \ k1_numbers)))))) \wedge ((X0 = X2) \wedge (X1 = k1_funct_1 X2 \ np_1)))))) \end{aligned} \quad (13)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Leftrightarrow (X0 \in k1_numbers) \quad (14)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_xcmplx_0 X0) \Rightarrow (\forall X1.((X0 \in k1_numbers) \Rightarrow (\\ (X1 = k1_complex1 X0) \Leftrightarrow (X1 = X0))) \wedge ((\neg X0 \in k1_numbers) \Rightarrow ((X1 = k1_complex1 \\ X0) \Leftrightarrow (\exists X2.((v1_funct_1 X2) \wedge ((v1_funct_2 X2 \ np_2 \ k1_numbers) \wedge \\ (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \ np_2 \ k1_numbers)))))) \wedge \\ ((X0 = X2) \wedge (X1 = k1_funct_1 X2 \ k6_numbers)))))) \end{aligned} \quad (15)$$

Assume the following.

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

Theorem 1

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow ((k1_comptrig X0 = k6_numbers) \Leftrightarrow (\\ (r1_xxreal_0 \ k6_numbers \ (k3_complex1 X0)) \wedge (k4_complex1 X0 = k6_numbers)))$$