

t43_complex2 (TMUovD- SXrJM2ttDC5Ci8bMMuxCtNb7nrbEN)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_numbers : \iota$ be given. Let $k1_complex2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_complex1 : \iota \Rightarrow \iota$ be given. Let $k9_complex1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_xcmplx_0 : \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k15_complex1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.(m1_subset_1 X0 k2_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\ X1 k2_numbers) \Rightarrow (k1_complex2 (k10_complex1 X0) X1 = k1_complex2 \\ X0 (k10_complex1 X1))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_subset_1 X0 k2_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\ X1 k2_numbers) \Rightarrow (\forall X2.(m1_subset_1 X2 k2_numbers) \Rightarrow (k1_complex2 \\ (k9_complex1 X0 X1) X2 = k9_complex1 X0 (k1_complex2 X1 X2)))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k3_xcmplx_0 X0 (k4_xcmplx_0 np_1) = k4_xcmplx_0 X0) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k2_numbers) \wedge (m1_subset_1 X1 k2_numbers)) \Rightarrow (k9_complex1 X0 X1 = k3_xcmplx_0 X0 X1) \tag{4}$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k2_numbers) \Rightarrow (k10_complex1 X0 = k4_xcmplx_0 X0) \tag{5}$$

Assume the following.

$$m1_subset_1 np_1 k2_numbers \tag{6}$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k15_complex1 (k15_complex1 X0) = X0) \quad (7)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k2_numbers) \Rightarrow (k10_complex1 (k10_complex1 X0) = X0) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 X0) \wedge (v1_xcmplx_0 X1)) \Rightarrow (m1_subset_1 (k1_complex2 X0 X1) k2_numbers) \quad (9)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (m1_subset_1 (k15_complex1 X0) k2_numbers) \quad (10)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k2_numbers) \Rightarrow (m1_subset_1 (k10_complex1 X0) k2_numbers) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k2_numbers) \wedge (m1_subset_1 X1 k2_numbers)) \Rightarrow (k9_complex1 X0 X1 = k9_complex1 X1 X0) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 X0) \wedge (v1_xcmplx_0 X1)) \Rightarrow (k3_xcmplx_0 X0 X1 = k3_xcmplx_0 X1 X0) \quad (13)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k2_numbers) \Rightarrow (v1_xcmplx_0 X0) \quad (14)$$

Theorem 1

$$\forall X0.(m1_subset_1 X0 k2_numbers) \Rightarrow (\forall X1.(m1_subset_1 X1 k2_numbers) \Rightarrow (k1_complex2 (k10_complex1 X0) X1 = k10_complex1 (k1_complex2 X0 X1)))$$