

t38_complex2 (TMY- bzG8EaEqCxxkkKNAaEoxonzjSP79CMJt)

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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 $k9_complex1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k15_complex1 : \iota \Rightarrow \iota$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1\ X0\ k2_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1\ k2_numbers) \Rightarrow (\forall X2.(m1_subset_1\ X2\ k2_numbers) \Rightarrow (k1_complex2 \\ & (k9_complex1\ X0\ X1)\ X2 = k9_complex1\ X0\ (k1_complex2\ X1\ X2)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1\ X0\ k2_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1\ k2_numbers) \Rightarrow (k1_complex2\ X0\ X1 = k15_complex1\ (k1_complex2 \\ & X1\ X0))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((m1_subset_1\ X0\ k2_numbers) \wedge (m1_subset_1 \\ & X1\ k2_numbers)) \Rightarrow (k9_complex1\ X0\ X1 = k3_xcmplx_0\ X0\ X1) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0\ X0) \Rightarrow (k15_complex1\ (k15_complex1\ X0) = X0) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((m1_subset_1\ X0\ k2_numbers) \wedge (m1_subset_1 \\ & X1\ k2_numbers)) \Rightarrow (m1_subset_1\ (k9_complex1\ X0\ X1)\ k2_numbers) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0\ X0) \Rightarrow (m1_subset_1\ (k15_complex1\ X0)\ k2_numbers) \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_xcmplx_0\ X0) \Rightarrow (\forall X1.(v1_xcmplx_0\ X1) \Rightarrow (k1_complex2 \\ & X0\ X1 = k3_xcmplx_0\ X0\ (k15_complex1\ X1))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1\ X0\ k2_numbers)\wedge(m1_subset_1\ X1\ k2_numbers))\Rightarrow(k9_complex1\ X0\ X1 = k9_complex1\ X1\ X0) \quad (8)$$

Assume the following.

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

Theorem 1

$$\begin{aligned} &\forall X0.(m1_subset_1\ X0\ k2_numbers)\Rightarrow(\forall X1.(m1_subset_1\ X1\ k2_numbers)\Rightarrow(\forall X2.(m1_subset_1\ X2\ k2_numbers)\Rightarrow(k1_complex2\ X0\ (k9_complex1\ X1\ X2) = k9_complex1\ (k15_complex1\ X1)\ (k1_complex2\ X0\ X2)))) \end{aligned}$$