

## t36\_complex2

(TMGKgD4rjfNnr63wZ15nbXQjSkeYWT EW9iU)

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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  $k8\_complex1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k15\_complex1 : \iota \Rightarrow \iota$  be given. Let  $v1\_xcmplx\_0 : \iota \Rightarrow o$  be given. Let  $k2\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k8\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_complex1 : \iota \Rightarrow \iota$  be given. Let  $k4\_complex1 : \iota \Rightarrow \iota$  be given. Let  $k3\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_real\_1 : \iota \Rightarrow \iota$  be given. Let  $k7\_complex1 : \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 k2\_numbers) \Rightarrow (\forall X1.(m1\_subset\_1 \\ & X1 k2\_numbers) \Rightarrow (\forall X2.(m1\_subset\_1 X2 k2\_numbers) \Rightarrow (k1\_complex2 \\ & (k8\_complex1 X0 X1) X2 = k8\_complex1 (k1\_complex2 X0 X2) (k1\_complex2 \\ & X1 X2)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 k2\_numbers) \Rightarrow (\forall X1.(m1\_subset\_1 \\ & X1 k2\_numbers) \Rightarrow (k1\_complex2 X0 X1 = k15\_complex1 (k1\_complex2 \\ & X1 X0))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1\_xcmplx\_0 X0) \Rightarrow (\forall X1.(v1\_xcmplx\_0 X1) \Rightarrow (k15\_complex1 \\ & (k2\_xcmplx\_0 X0 X1) = k8\_complex1 (k15\_complex1 X0) (k15\_complex1 \\ & X1))) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 k2\_numbers) \Rightarrow (\forall X1.(m1\_subset\_1 \\ & X1 k2\_numbers) \Rightarrow (k1\_complex2 X0 X1 = k2\_xcmplx\_0 (k7\_real\_1 (k8\_real\_1 \\ & (k3\_complex1 X0) (k3\_complex1 X1)) (k8\_real\_1 (k4\_complex1 X0) \\ & (k4\_complex1 X1))) (k3\_xcmplx\_0 (k7\_real\_1 (k1\_real\_1 (k8\_real\_1 \\ & (k3\_complex1 X0) (k4\_complex1 X1))) (k8\_real\_1 (k4\_complex1 X0) \\ & (k3\_complex1 X1))) k7\_complex1))) \end{aligned} \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1 X0 k2\_numbers)\wedge(m1\_subset\_1 X1 k2\_numbers))\Rightarrow(k8\_complex1 X0 X1 = k2\_xcmplx\_0 X0 X1) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1 X0 k2\_numbers)\wedge(m1\_subset\_1 X1 k2\_numbers))\Rightarrow(m1\_subset\_1 (k8\_complex1 X0 X1) k2\_numbers) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xcmplx\_0 X0)\wedge(v1\_xcmplx\_0 X1))\Rightarrow(m1\_subset\_1 (k1\_complex2 X0 X1) k2\_numbers) \quad (7)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k2\_numbers)\Rightarrow(v1\_xcmplx\_0 X0) \quad (8)$$

**Theorem 1**

$$\forall X0.(m1\_subset\_1 X0 k2\_numbers)\Rightarrow(\forall X1.(m1\_subset\_1 X1 k2\_numbers)\Rightarrow(\forall X2.(m1\_subset\_1 X2 k2\_numbers)\Rightarrow(k1\_complex2 X0 (k8\_complex1 X1 X2) = k8\_complex1 (k1\_complex2 X0 X1) (k1\_complex2 X0 X2))))$$