

t41\_xcmplx\_1  
(TMcc9yWqJkFvJNFGoW4LFeXMfYTdLXeQSeV)

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Let  $v1\_xcmplx\_0 : \iota \Rightarrow o$  be given. Let  $k3\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_numbers : \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1\_xcmplx\_0 X0) \Rightarrow (\forall X1.(v1\_xcmplx\_0 X1) \Rightarrow (\forall X2. \\ & (v1\_xcmplx\_0 X2) \Rightarrow (k3\_xcmplx\_0 X0 (k6\_xcmplx\_0 X1 X2) = k6\_xcmplx\_0 \\ & (k3\_xcmplx\_0 X0 X1) (k3\_xcmplx\_0 X0 X2)))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0 X0) \Rightarrow (k3\_xcmplx\_0 X0 k6\_numbers = k6\_numbers) \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1\_xcmplx\_0 X0) \Rightarrow (\forall X1.(v1\_xcmplx\_0 X1) \Rightarrow (\forall X2. \\ & (v1\_xcmplx\_0 X2) \Rightarrow (k6\_xcmplx\_0 X0 X1 = k6\_xcmplx\_0 (k6\_xcmplx\_0 \\ & X0 X2) (k6\_xcmplx\_0 X1 X2)))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0 X0) \Rightarrow (k6\_xcmplx\_0 X0 X0 = k6\_numbers) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xcmplx\_0 X0) \wedge (v1\_xcmplx\_0 X1)) \Rightarrow (v1\_xcmplx\_0 (k6\_xcmplx\_0 X0 X1)) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xcmplx\_0 X0) \wedge (v1\_xcmplx\_0 X1)) \Rightarrow (v1\_xcmplx\_0 (k3\_xcmplx\_0 X0 X1)) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xcmplx\_0 X0) \wedge (v1\_xcmplx\_0 X1)) \Rightarrow (k3\_xcmplx\_0 X0 X1 = k3\_xcmplx\_0 X1 X0) \quad (7)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(v1\_xcmplx\_0 \ X0) \Rightarrow (\forall X1.(v1\_xcmplx\_0 \ X1) \Rightarrow (\forall X2. \\ & (v1\_xcmplx\_0 \ X2) \Rightarrow (\forall X3.(v1\_xcmplx\_0 \ X3) \Rightarrow (k3\_xcmplx\_0 \\ & (k6\_xcmplx\_0 \ X0 \ X1) \ (k6\_xcmplx\_0 \ X2 \ X3) = k3\_xcmplx\_0 \ (k6\_xcmplx\_0 \\ & \ X1 \ X0) \ (k6\_xcmplx\_0 \ X3 \ X2)))))) \end{aligned}$$