

t9\_xcplx\_1  
(TMLG44uSwQTG54Ac81jYj9VkyW3AeTovFYi)

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Let  $v1\_xcplx\_0 : \iota \Rightarrow o$  be given. Let  $k3\_xcplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_xcplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. ((v1\_xcplx\_0 X0) \wedge ((v1\_xcplx\_0 \\ X1) \wedge (v1\_xcplx\_0 X2))) \Rightarrow (k3\_xcplx\_0 (k2\_xcplx\_0 X0 X1) X2 = k2\_xcplx\_0 \\ (k3\_xcplx\_0 X0 X2) (k3\_xcplx\_0 X1 X2)) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_xcplx\_0 X0) \wedge (v1\_xcplx\_0 X1)) \Rightarrow (v1\_xcplx\_0 (k2\_xcplx\_0 X0 X1)) \tag{2}$$

**Theorem 1**

$$\begin{aligned} \forall X0. (v1\_xcplx\_0 X0) \Rightarrow (\forall X1. (v1\_xcplx\_0 X1) \Rightarrow (\forall X2. \\ (v1\_xcplx\_0 X2) \Rightarrow (\forall X3. (v1\_xcplx\_0 X3) \Rightarrow (k3\_xcplx\_0 \\ (k2\_xcplx\_0 (k2\_xcplx\_0 X0 X1) X2) X3 = k2\_xcplx\_0 (k2\_xcplx\_0 \\ (k3\_xcplx\_0 X0 X3) (k3\_xcplx\_0 X1 X3)) (k3\_xcplx\_0 X2 X3)))))) \end{aligned}$$