

## t46\_xcplx\_1

(TMQr5UMyezuAqJRpppw87WEJHZHTqxs9ewf)

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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  $k6\_xcplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_xcplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0.(v1\_xcplx\_0 X0) \Rightarrow (\forall X1.(v1\_xcplx\_0 X1) \Rightarrow (\forall X2. \\ & (v1\_xcplx\_0 X2) \Rightarrow (k3\_xcplx\_0 X0 (k6\_xcplx\_0 X1 X2) = k6\_xcplx\_0 \\ & (k3\_xcplx\_0 X0 X1) (k3\_xcplx\_0 X0 X2)))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1\_xcplx\_0 X0) \Rightarrow (\forall X1.(v1\_xcplx\_0 X1) \Rightarrow (\forall X2. \\ & (v1\_xcplx\_0 X2) \Rightarrow (k6\_xcplx\_0 X0 (k2\_xcplx\_0 X1 X2) = k6\_xcplx\_0 \\ & (k6\_xcplx\_0 X0 X1) X2))) \end{aligned} \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xcplx\_0 X0) \wedge (v1\_xcplx\_0 X1)) \Rightarrow (v1\_xcplx\_0 (k6\_xcplx\_0 X0 X1)) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xcplx\_0 X0) \wedge (v1\_xcplx\_0 X1)) \Rightarrow (v1\_xcplx\_0 (k3\_xcplx\_0 X0 X1)) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xcplx\_0 X0) \wedge (v1\_xcplx\_0 X1)) \Rightarrow (v1\_xcplx\_0 (k2\_xcplx\_0 X0 X1)) \tag{6}$$

Assume the following.

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

$$k3\_xcmplx\_0 X0 X1 = k3\_xcmplx\_0 X1 X0)$$

**Theorem 1**

$$\forall X0.(v1\_xcmplx\_0 X0)\Rightarrow(\forall X1.(v1\_xcmplx\_0 X1)\Rightarrow(\forall X2.$$

$$(v1\_xcmplx\_0 X2)\Rightarrow(\forall X3.(v1\_xcmplx\_0 X3)\Rightarrow(k3\_xcmplx\_0$$

$$(k6\_xcmplx\_0 X0 X1) (k2\_xcmplx\_0 X2 X3) = k6\_xcmplx\_0 (k6\_xcmplx\_0$$

$$(k2\_xcmplx\_0 (k3\_xcmplx\_0 X0 X2) (k3\_xcmplx\_0 X0 X3)) (k3\_xcmplx\_0$$

$$X1 X2)) (k3\_xcmplx\_0 X1 X3))))))$$