

# t156\_xcmplx\_1 (TMFJHVh- fYKgQs4ZXFVkPX2RewR.BtK2NcqVt)

October 27, 2020

Let  $v1\_xcmplx\_0 : \iota \Rightarrow o$  be given. Let  $k6\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_xcmplx\_0 : \iota \Rightarrow \iota$  be given. Let  $k2\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1\_xcmplx\_0 X0) \Rightarrow (\forall X1.(v1\_xcmplx\_0 X1) \Rightarrow (\forall X2. \\ & (v1\_xcmplx\_0 X2) \Rightarrow (k6\_xcmplx\_0 X0 (k6\_xcmplx\_0 X1 X2) = k2\_xcmplx\_0 \\ & (k6\_xcmplx\_0 X0 X1) X2))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1\_xcmplx\_0 X0) \Rightarrow (\forall X1.(v1\_xcmplx\_0 X1) \Rightarrow (k2\_xcmplx\_0 \\ & X0 X1 = k6\_xcmplx\_0 X0 (k4\_xcmplx\_0 X1))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0 X0) \Rightarrow (v1\_xcmplx\_0 (k4\_xcmplx\_0 X0)) \tag{3}$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(v1\_xcmplx\_0 X0) \Rightarrow (\forall X1.(v1\_xcmplx\_0 X1) \Rightarrow (\forall X2. \\ & (v1\_xcmplx\_0 X2) \Rightarrow (k6\_xcmplx\_0 X0 (k6\_xcmplx\_0 (k4\_xcmplx\_0 X1) \\ & X2) = k2\_xcmplx\_0 (k2\_xcmplx\_0 X0 X1) X2))) \end{aligned}$$