

t158_xcmplx_1 (TMa12YVpDEQ3ojskLA4gdHfNDqitiq5ZNue)

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Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k6_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_xcmplx_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0. (v1_xcmplx_0\ X0) \Rightarrow (\forall X1. (v1_xcmplx_0\ X1) \Rightarrow (\forall X2. \\ (v1_xcmplx_0\ X2) \Rightarrow (k6_xcmplx_0\ (k6_xcmplx_0\ X0\ X1)\ X2 = k6_xcmplx_0 \\ (k6_xcmplx_0\ X0\ X2)\ X1))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0. (v1_xcmplx_0\ X0) \Rightarrow (v1_xcmplx_0\ (k4_xcmplx_0\ X0)) \quad (2)$$

Assume the following.

$$\forall X0. (v1_xcmplx_0\ X0) \Rightarrow (\forall X1. (v1_xcmplx_0\ X1) \Rightarrow (k6_xcmplx_0\ X0\ X1 = k2_xcmplx_0\ X0\ (k4_xcmplx_0\ X1))) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_xcmplx_0\ X0) \wedge (v1_xcmplx_0\ X1)) \Rightarrow (k2_xcmplx_0\ X0\ X1 = k2_xcmplx_0\ X1\ X0) \quad (4)$$

Theorem 1

$$\begin{aligned} \forall X0. (v1_xcmplx_0\ X0) \Rightarrow (\forall X1. (v1_xcmplx_0\ X1) \Rightarrow (\forall X2. \\ (v1_xcmplx_0\ X2) \Rightarrow (k6_xcmplx_0\ (k6_xcmplx_0\ X0\ X1)\ X2 = k6_xcmplx_0 \\ (k2_xcmplx_0\ (k4_xcmplx_0\ X2)\ X0)\ X1))) \end{aligned}$$