

t47_xcplx_1

(TMd2msZLndwA8GPY5cySWsRZBP8mpKMZDNZ)

October 27, 2020

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.

$$\begin{aligned} & \forall X0.(v1_xcplx_0 X0) \Rightarrow (\forall X1.(v1_xcplx_0 X1) \Rightarrow (\forall X2. \\ & (v1_xcplx_0 X2) \Rightarrow (k3_xcplx_0 X0 (k6_xcplx_0 X1 X2) = k6_xcplx_0 \\ & (k3_xcplx_0 X0 X1) (k3_xcplx_0 X0 X2)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_xcplx_0 X0) \Rightarrow (\forall X1.(v1_xcplx_0 X1) \Rightarrow (\forall X2. \\ & (v1_xcplx_0 X2) \Rightarrow (k6_xcplx_0 X0 (k6_xcplx_0 X1 X2) = k2_xcplx_0 \\ & (k6_xcplx_0 X0 X1) X2))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcplx_0 X0) \wedge (v1_xcplx_0 X1)) \Rightarrow (v1_xcplx_0 (k6_xcplx_0 X0 X1)) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcplx_0 X0) \wedge (v1_xcplx_0 X1)) \Rightarrow (v1_xcplx_0 (k3_xcplx_0 X0 X1)) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcplx_0 X0) \wedge (v1_xcplx_0 X1)) \Rightarrow (k3_xcplx_0 X0 X1 = k3_xcplx_0 X1 X0) \tag{5}$$

Theorem 1

$$\begin{aligned} & \forall X0.(v1_xcplx_0 X0) \Rightarrow (\forall X1.(v1_xcplx_0 X1) \Rightarrow (\forall X2. \\ & (v1_xcplx_0 X2) \Rightarrow (\forall X3.(v1_xcplx_0 X3) \Rightarrow (k3_xcplx_0 \\ & (k6_xcplx_0 X0 X1) (k6_xcplx_0 X2 X3) = k2_xcplx_0 (k6_xcplx_0 \\ & (k6_xcplx_0 (k3_xcplx_0 X0 X2) (k3_xcplx_0 X0 X3)) (k3_xcplx_0 \\ & X1 X2)) (k3_xcplx_0 X1 X3)))))) \end{aligned}$$