

t8_square_1
(TMM6tq4GypYbDfgHYHAB4zjwcR1zNtGd45Z)

October 27, 2020

Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k3_square_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1_xcmplx_0 X0) \Rightarrow (\forall X1.(v1_xcmplx_0 X1) \Rightarrow (\forall X2. \\ & (v1_xcmplx_0 X2) \Rightarrow (\forall X3.(v1_xcmplx_0 X3) \Rightarrow (k3_xcmplx_0 \\ & (k6_xcmplx_0 X0 X1) (k2_xcmplx_0 X2 X3) = k6_xcmplx_0 (k6_xcmplx_0 \\ & (k2_xcmplx_0 (k3_xcmplx_0 X0 X2) (k3_xcmplx_0 X0 X3)) (k3_xcmplx_0 \\ & X1 X2)) (k3_xcmplx_0 X1 X3)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (\forall X1.(v1_xcmplx_0 X1) \Rightarrow (X0 = k6_xcmplx_0 (k2_xcmplx_0 X0 X1) X1)) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 X0) \wedge (v1_xcmplx_0 X1)) \Rightarrow (v1_xcmplx_0 (k3_xcmplx_0 X0 X1)) \quad (3)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k3_square_1 X0 = k3_xcmplx_0 X0 X0) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 X0) \wedge (v1_xcmplx_0 X1)) \Rightarrow (k3_xcmplx_0 X0 X1 = k3_xcmplx_0 X1 X0) \quad (5)$$

Theorem 1

$$\begin{aligned} & \forall X0.(v1_xcmplx_0 X0) \Rightarrow (\forall X1.(v1_xcmplx_0 X1) \Rightarrow (k3_xcmplx_0 \\ & (k6_xcmplx_0 X0 X1) (k2_xcmplx_0 X0 X1) = k6_xcmplx_0 (k3_square_1 \\ & X0) (k3_square_1 X1))) \end{aligned}$$