

t5_square_1
(TMWjGckPo9K8c8mq74mJobjrcvfl6ZXvxG4)

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Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k3_square_1 : \iota \Rightarrow \iota$ 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 $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0.(v1_xcmplx_0 X0) \Rightarrow (\forall X1.(v1_xcmplx_0 X1) \Rightarrow (\forall X2. \\ & (v1_xcmplx_0 X2) \Rightarrow (k6_xcmplx_0 X0 (k2_xcmplx_0 X1 X2) = k6_xcmplx_0 \\ & (k6_xcmplx_0 X0 X1) X2))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k3_xcmplx_0 np_2 X0 = k2_xcmplx_0 X0 X0) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((v1_xcmplx_0 X0) \wedge ((v1_xcmplx_0 \\ & X1) \wedge (v1_xcmplx_0 X2))) \Rightarrow (k3_xcmplx_0 (k2_xcmplx_0 X0 X1) X2 = k2_xcmplx_0 \\ & (k3_xcmplx_0 X0 X2) (k3_xcmplx_0 X1 X2)) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 X0) \wedge (v1_xcmplx_0 X1)) \Rightarrow (v1_xcmplx_0 (k6_xcmplx_0 X0 X1)) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 X0) \wedge (v1_xcmplx_0 X1)) \Rightarrow (v1_xcmplx_0 (k3_xcmplx_0 X0 X1)) \quad (6)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k3_square_1 X0 = k3_xcmplx_0 X0 X0) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 X0) \wedge (v1_xcmplx_0 X1)) \Rightarrow (k3_xcmplx_0 X0 X1 = k3_xcmplx_0 X1 X0) \quad (8)$$

Theorem 1

$$\begin{aligned} & \forall X0.(v1_xcmplx_0 X0) \Rightarrow (\forall X1.(v1_xcmplx_0 X1) \Rightarrow (k3_square_1 \\ & (k6_xcmplx_0 X0 X1) = k2_xcmplx_0 (k6_xcmplx_0 (k3_square_1 X0) \\ & (k3_xcmplx_0 (k3_xcmplx_0 np_2 X0) X1)) (k3_square_1 X1))) \end{aligned}$$