

t86_xcmlx_1 (TMayh-
PZYL8jnE5WJEJSAEaQgsrmmEQyGhQ4)

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Let $v1_xcmlx_0 : \iota \Rightarrow o$ be given. Let $k7_xcmlx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_xcmlx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1_xcmlx_0 X0) \Rightarrow (\forall X1.(v1_xcmlx_0 X1) \Rightarrow (\forall X2. \\ & (v1_xcmlx_0 X2) \Rightarrow (k7_xcmlx_0 X0 (k7_xcmlx_0 X1 X2) = k3_xcmlx_0 \\ & X2 (k7_xcmlx_0 X0 X1)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((v1_xcmlx_0 X0) \wedge ((v1_xcmlx_0 \\ & X1) \wedge (v1_xcmlx_0 X2))) \Rightarrow (k3_xcmlx_0 (k3_xcmlx_0 X0 X1) X2 = k3_xcmlx_0 \\ & X0 (k3_xcmlx_0 X1 X2)) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((v1_xcmlx_0 X0) \wedge ((v1_xcmlx_0 \\ & X1) \wedge (v1_xcmlx_0 X2))) \Rightarrow (k3_xcmlx_0 X0 (k7_xcmlx_0 X1 X2) = k7_xcmlx_0 \\ & (k3_xcmlx_0 X0 X1) X2) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1_xcmlx_0 X0) \wedge (v1_xcmlx_0 X1)) \Rightarrow (\\ & v1_xcmlx_0 (k7_xcmlx_0 X0 X1)) \end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1_xcmlx_0 X0) \wedge (v1_xcmlx_0 X1)) \Rightarrow (\\ & v1_xcmlx_0 (k3_xcmlx_0 X0 X1)) \end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1_xcmlx_0 X0) \wedge (v1_xcmlx_0 X1)) \Rightarrow (\\ & k3_xcmlx_0 X0 X1 = k3_xcmlx_0 X1 X0) \end{aligned} \tag{6}$$

Theorem 1

$$\begin{aligned} & \forall X0.(v1_xcmplx_0 X0) \Rightarrow (\forall X1.(v1_xcmplx_0 X1) \Rightarrow (\forall X2. \\ & (v1_xcmplx_0 X2) \Rightarrow (\forall X3.(v1_xcmplx_0 X3) \Rightarrow (\forall X4.(\\ & v1_xcmplx_0 X4) \Rightarrow (k7_xcmplx_0 X0 (k3_xcmplx_0 (k3_xcmplx_0 X1 \\ & X2) (k7_xcmplx_0 X3 X4)) = k3_xcmplx_0 (k7_xcmplx_0 X4 X2) (k7_xcmplx_0 \\ & X0 (k3_xcmplx_0 X1 X3)))))))) \end{aligned}$$