

t127_member_1
(TMNkHeESU8oQ8EbUExJrQFTSYGZoQpTa9Kf)

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Let $v1_membered : \iota \Rightarrow o$ be given. Let $k15_member_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k13_member_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_member_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1_membered X0) \Rightarrow (\forall X1.(v1_membered X1) \Rightarrow (\forall X2. \\ & (v1_membered X2) \Rightarrow (k15_member_1 (k15_member_1 X0 X1) X2 = k15_member_1 \\ & X0 (k13_member_1 X1 X2)))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.(v1_membered X0) \Rightarrow (k7_member_1 (k7_member_1 X0) = X0) \quad (2)$$

Assume the following.

$$\forall X0.(v1_membered X0) \Rightarrow (v1_membered (k7_member_1 X0)) \quad (3)$$

Assume the following.

$$\forall X0.(v1_membered X0) \Rightarrow (\forall X1.(v1_membered X1) \Rightarrow (k15_member_1 X0 X1 = k13_member_1 X0 (k7_member_1 X1))) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.((v1_membered X0) \wedge (v1_membered X1)) \Rightarrow (k13_member_1 X0 X1 = k13_member_1 X1 X0) \quad (5)$$

Theorem 1

$$\begin{aligned} & \forall X0.(v1_membered X0) \Rightarrow (\forall X1.(v1_membered X1) \Rightarrow (\forall X2. \\ & (v1_membered X2) \Rightarrow (k15_member_1 X0 (k15_member_1 X1 X2) = k15_member_1 \\ & (k13_member_1 X0 X2) X1))) \end{aligned}$$