

t123_member_1

(TMYKocWbpj2BJdt4k5bEHsyTdgE1xXp1cef)

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Let $v1_membered : \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k15_member_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11_member_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_member_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_member_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1_membered X0) \Rightarrow (\forall X1.(v1_membered X1) \Rightarrow (\forall X2. \\ & (v1_membered X2) \Rightarrow (r1_tarski (k15_member_1 (k9_member_1 X0 X1) \\ & X2) (k9_member_1 (k15_member_1 X0 X2) (k15_member_1 X1 X2)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.(v1_membered X0) \Rightarrow (\forall X1.(v1_membered X1) \Rightarrow (k15_member_1 (k5_member_1 X0) X1 = k5_member_1 (k15_member_1 X0 X1))) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.((v1_membered X0) \wedge (v1_membered X1)) \Rightarrow (v1_membered (k15_member_1 X0 X1)) \quad (3)$$

Assume the following.

$$\forall X0.(v1_membered X0) \Rightarrow (v1_membered (k5_member_1 X0)) \quad (4)$$

Assume the following.

$$\forall X0.(v1_membered X0) \Rightarrow (\forall X1.(v1_membered X1) \Rightarrow (k11_member_1 X0 X1 = k9_member_1 X0 (k5_member_1 X1))) \quad (5)$$

Theorem 1

$$\begin{aligned} & \forall X0.(v1_membered X0) \Rightarrow (\forall X1.(v1_membered X1) \Rightarrow (\forall X2. \\ & (v1_membered X2) \Rightarrow (r1_tarski (k15_member_1 (k11_member_1 X0 X1) \\ & X2) (k11_member_1 (k15_member_1 X0 X2) (k15_member_1 X1 X2)))))) \end{aligned}$$