

t179_member_1

(TMXjJ9m5rARJtKwtDYPSCVig4miMJpKtnqU)

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Let $v1_membered : \iota \Rightarrow o$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k21_member_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k19_member_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_member_1 : \iota \Rightarrow \iota$ be given. Let $k9_member_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k11_member_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1_membered X0) \Rightarrow (\forall X1.(v1_membered X1) \Rightarrow (\forall X2. \\ & (v1_xcmplx_0 X2) \Rightarrow ((r1_tarski X0 X1) \Leftrightarrow (r1_tarski (k19_member_1 \\ & X0 X2) (k19_member_1 X1 X2)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_membered X0) \Rightarrow (\forall X1.(v1_membered X1) \Rightarrow ((\\ & r1_tarski X0 X1) \Leftrightarrow (r1_tarski (k5_member_1 X0) (k5_member_1 X1)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_membered X0) \Rightarrow (\forall X1.(v1_membered X1) \Rightarrow (k5_member_1 \\ & (k9_member_1 X0 X1) = k9_member_1 (k5_member_1 X0) (k5_member_1 \\ & X1))) \end{aligned} \quad (3)$$

Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1_membered X0) \wedge (v1_xcmplx_0 X1)) \Rightarrow (\\ & v1_membered (k21_member_1 X0 X1)) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (v1_membered (k1_tarski X0)) \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v1_xboole_0 X0) \wedge (v1_membered X0)) \Rightarrow ((\neg v1_xboole_0 \\ & (k5_member_1 X0)) \wedge (v1_membered (k5_member_1 X0))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0. \neg v1_xboole_0 (k1_tarski X0) \quad (8)$$

Assume the following.

$$\forall X0.(v1_membered X0) \Rightarrow (\forall X1.(v1_membered X1) \Rightarrow (k11_member_1 X0 X1 = k9_member_1 X0 (k5_member_1 X1))) \quad (9)$$

Assume the following.

$$\forall X0.(v1_membered X0) \Rightarrow (\forall X1.(v1_xcmplx_0 X1) \Rightarrow (k21_member_1 X0 X1 = k11_member_1 X0 (k1_tarski X1))) \quad (10)$$

Assume the following.

$$\forall X0.(v1_membered X0) \Rightarrow (\forall X1.(v1_xcmplx_0 X1) \Rightarrow (k19_member_1 X0 X1 = k11_member_1 (k1_tarski X1) X0)) \quad (11)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_membered X0) \wedge (v1_membered X1)) \Rightarrow (k9_member_1 X0 X1 = k9_member_1 X1 X0) \quad (12)$$

Theorem 1

$$\forall X0.(v1_membered X0) \Rightarrow (\forall X1.(v1_membered X1) \Rightarrow (\forall X2.(v1_xcmplx_0 X2) \Rightarrow ((r1_tarski X0 X1) \Leftrightarrow (r1_tarski (k21_member_1 X0 X2) (k21_member_1 X1 X2))))))$$