

t206_member_1 (TMYznQjgmPPRrgrQrMp- drGdTRJivKK9bY9j)

October 27, 2020

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 $k23_member_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_binop_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_member_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k13_member_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1_membered X0) \Rightarrow (\forall X1.(v1_membered X1) \Rightarrow (\forall X2. \\ & (v1_membered X2) \Rightarrow (r1_tarski (k13_member_1 X0 (k9_member_1 X1 \\ & X2)) (k9_member_1 (k13_member_1 X0 X1) (k13_member_1 X0 X2)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (\forall X1.(v1_xcmplx_0 X1) \Rightarrow (k9_member_1 (k1_tarski X0) (k1_tarski X1) = k1_tarski (k3_binop_2 X0 X1))) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 X0) \wedge (v1_xcmplx_0 X1)) \Rightarrow (k3_binop_2 X0 X1 = k2_xcmplx_0 X0 X1) \quad (3)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (v1_membered (k1_tarski X0)) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 X0) \wedge (v1_xcmplx_0 X1)) \Rightarrow (v1_xcmplx_0 (k2_xcmplx_0 X0 X1)) \quad (5)$$

Assume the following.

$$\forall X0.(v1_membered X0) \Rightarrow (\forall X1.(v1_xcmplx_0 X1) \Rightarrow (k23_member_1 X0 X1 = k13_member_1 (k1_tarski X1) X0)) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((v1_membered X0) \wedge (v1_membered X1)) \Rightarrow (k13_member_1 X0 X1 = k13_member_1 X1 X0) \quad (7)$$

Theorem 1

$$\begin{aligned} & \forall X0.(v1_membered\ X0) \Rightarrow (\forall X1.(v1_xcmplx_0\ X1) \Rightarrow (\forall X2. \\ & (v1_xcmplx_0\ X2) \Rightarrow (r1_tarski\ (k23_member_1\ X0\ (k3_binop_2\ X1\ X2)) \\ & (k9_member_1\ (k23_member_1\ X0\ X1)\ (k23_member_1\ X0\ X2)))))) \end{aligned}$$