

t185_member_1
(TMc3UhYaLhFTySE8hqwcQrtT25hGUvjmAL)

October 27, 2020

Let $v1_membered : \iota \Rightarrow o$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k21_member_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_member_1 : \iota \Rightarrow \iota$ be given. Let $k19_member_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k11_member_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_member_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.(v1_membered X0) \Rightarrow (\forall X1.(v1_membered X1) \Rightarrow (k5_member_1 \\ (k5_xboole_0 X0 X1) = k5_xboole_0 (k5_member_1 X0) (k5_member_1 \\ X1))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0.(v1_membered X0) \Rightarrow (\forall X1.(v1_xcmplx_0 X1) \Rightarrow (k19_member_1 \\ X0 X1 = k5_member_1 (k21_member_1 X0 X1))) \tag{2}$$

Assume the following.

$$\forall X0.(v1_membered X0) \Rightarrow (\forall X1.(v1_xcmplx_0 X1) \Rightarrow (k21_member_1 \\ X0 X1 = k5_member_1 (k19_member_1 X0 X1))) \tag{3}$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_membered X0) \Rightarrow (\forall X1.(v1_membered X1) \Rightarrow (\forall X2. \\ (v1_xcmplx_0 X2) \Rightarrow ((k21_member_1 X0 X2 = k21_member_1 X1 X2) \Rightarrow (X0 = \\ X1)))) \end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_membered X0) \Rightarrow (\forall X1.(v1_membered X1) \Rightarrow (\forall X2. \\ (v1_xcmplx_0 X2) \Rightarrow (k19_member_1 (k5_xboole_0 X0 X1) X2 = k5_xboole_0 \\ (k19_member_1 X0 X2) (k19_member_1 X1 X2)))) \end{aligned} \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.((v1_membered X0) \wedge (v1_xcmplx_0 X1)) \Rightarrow (\\ v1_membered (k21_member_1 X0 X1)) \tag{6}$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (v1_membered (k1_tarski X0)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((v1_membered X0) \wedge (v1_membered X1)) \Rightarrow (v1_membered (k5_xboole_0 X0 X1)) \quad (8)$$

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.

$$\forall X0.\forall X1.k5_xboole_0 X0 X1 = k5_xboole_0 X1 X0 \quad (12)$$

Theorem 1

$$\forall X0.(v1_membered X0) \Rightarrow (\forall X1.(v1_membered X1) \Rightarrow (\forall X2.(v1_xcmplx_0 X2) \Rightarrow (k21_member_1 (k5_xboole_0 X0 X1) X2 = k5_xboole_0 (k21_member_1 X0 X2) (k21_member_1 X1 X2))))$$