# t183_member_1 (TM-SZkux9K277QYtsjRymmXqdaNEvXdKqHHw)

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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 $k3\_xboole\_0 : \iota{\Rightarrow}\iota{\Rightarrow}\iota$ be given. Let $k5\_member\_1 : \iota{\Rightarrow}\iota$ be given. Let $k19\_member\_1 : \iota{\Rightarrow}\iota{\Rightarrow}\iota$ be given. Assume the following.

$$\forall X0.(v1\_membered\ X0){\Rightarrow}(\forall X1.(v1\_xcmplx\_0\ X1){\Rightarrow}(k21\_member\_1 \\ X0\ X1 = k5\_member\_1\ (k19\_member\_1\ X0\ X1))) \tag{1}$$

Assume the following.

$$\forall X0.(v1\_membered\ X0){\Rightarrow}(\forall X1.(v1\_membered\ X1){\Rightarrow}(k5\_member\_1 \\ (k3\_xboole\_0\ X0\ X1) = k3\_xboole\_0\ (k5\_member\_1\ X0)\ (k5\_member\_1 \\ X1))) \tag{2}$$

Assume the following.

$$\forall X0.(v1\_membered\ X0){\Rightarrow}(\forall X1.(v1\_membered\ X1){\Rightarrow}(\forall X2. \\ (v1\_xcmplx\_0\ X2){\Rightarrow}(k19\_member\_1\ (k3\_xboole\_0\ X0\ X1)\ X2 = k3\_xboole\_0 \\ (k19\_member\_1\ X0\ X2)\ (k19\_member\_1\ X1\ X2)))) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_membered\ X0){\wedge}(v1\_xcmplx\_0\ X1)){\Rightarrow}( \\ v1\_membered\ (k19\_member\_1\ X0\ X1)) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.(v1\_membered\ X0){\Rightarrow}(v1\_membered\ (k3\_xboole\_0 \\ X1\ X0)) \tag{5}$$

**Theorem 1**

$$\forall X0.(v1\_membered\ X0){\Rightarrow}(\forall X1.(v1\_membered\ X1){\Rightarrow}(\forall X2. \\ (v1\_xcmplx\_0\ X2){\Rightarrow}(k21\_member\_1\ (k3\_xboole\_0\ X0\ X1)\ X2 = k3\_xboole\_0 \\ (k21\_member\_1\ X0\ X2)\ (k21\_member\_1\ X1\ X2))))$$