# t159_member_1
# (TMLPf3oS6Ej1AnnUsoqVQaLwpYUjAxJvxZy)

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Let $v2\_membered : \iota{\Rightarrow}o$ be given. Let $v1\_xreal\_0 : \iota{\Rightarrow}o$ be given. Let $k18\_member\_1 : \iota{\Rightarrow}\iota{\Rightarrow}\iota$ be given. Let $k5\_xboole\_0 : \iota{\Rightarrow}\iota{\Rightarrow}\iota$ be given. Let $k4\_member\_1 : \iota{\Rightarrow}\iota$ be given. Let $k16\_member\_1 : \iota{\Rightarrow}\iota{\Rightarrow}\iota$ be given. Let $v1\_xxreal\_0 : \iota{\Rightarrow}o$ be given. Let $k1\_tarski : \iota{\Rightarrow}\iota$ be given. Let $k10\_member\_1 : \iota{\Rightarrow}\iota{\Rightarrow}\iota$ be given. Let $k8\_member\_1 : \iota{\Rightarrow}\iota{\Rightarrow}\iota$ be given. Let $k2\_xboole\_0 : \iota{\Rightarrow}\iota{\Rightarrow}\iota$ be given. Let $k4\_xboole\_0 : \iota{\Rightarrow}\iota{\Rightarrow}\iota$ be given. Assume the following.

$$\forall X0.(v2\_membered\ X0){\Rightarrow}(\forall X1.(v2\_membered\ X1){\Rightarrow}(k4\_member\_1$$
$$(k5\_xboole\_0\ X0\ X1) = k5\_xboole\_0\ (k4\_member\_1\ X0)\ (k4\_member\_1$$
$$X1)))$$

(1)

Assume the following.

$$\forall X0.(v2\_membered\ X0){\Rightarrow}(\forall X1.(v2\_membered\ X1){\Rightarrow}(\forall X2.$$
$$(v1\_xreal\_0\ X2){\Rightarrow}(k16\_member\_1\ (k5\_xboole\_0\ X0\ X1)\ X2 = k5\_xboole\_0$$
$$(k16\_member\_1\ X0\ X2)\ (k16\_member\_1\ X1\ X2))))$$

(2)

Assume the following.

$$\forall X0.(v1\_xxreal\_0\ X0){\Rightarrow}(v2\_membered\ (k1\_tarski\ X0)) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.((v2\_membered\ X0){\wedge}(v2\_membered\ X1)){\Rightarrow}($$
$$v2\_membered\ (k5\_xboole\_0\ X0\ X1)) \tag{4}$$

Assume the following.

$$\forall X0.(v2\_membered\ X0){\Rightarrow}(v2\_membered\ (k4\_member\_1\ X0)) \tag{5}$$

Assume the following.

$$\forall X0.(v2\_membered\ X0){\Rightarrow}(\forall X1.(v2\_membered\ X1){\Rightarrow}(k10\_member\_1$$
$$X0\ X1 = k8\_member\_1\ X0\ (k4\_member\_1\ X1))) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.k5\_xboole\_0\ X0\ X1 = k2\_xboole\_0\ (k4\_xboole\_0 \\ X0\ X1)\ (k4\_xboole\_0\ X1\ X0) \tag{7}$$

Assume the following.

$$\forall X0.(v2\_membered\ X0){\Rightarrow}(\forall X1.(v1\_xxreal\_0\ X1){\Rightarrow}(k18\_member\_1 \\ X0\ X1 = k10\_member\_1\ (k1\_tarski\ X1)\ X0)) \tag{8}$$

Assume the following.

$$\forall X0.(v2\_membered\ X0){\Rightarrow}(\forall X1.(v1\_xxreal\_0\ X1){\Rightarrow}(k16\_member\_1 \\ X0\ X1 = k8\_member\_1\ (k1\_tarski\ X1)\ X0)) \tag{9}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0){\Rightarrow}(v1\_xxreal\_0\ X0) \tag{10}$$

**Theorem 1**

$$\forall X0.(v2\_membered\ X0){\Rightarrow}(\forall X1.(v2\_membered\ X1){\Rightarrow}(\forall X2. \\ (v1\_xreal\_0\ X2){\Rightarrow}(k18\_member\_1\ (k5\_xboole\_0\ X0\ X1)\ X2 = k5\_xboole\_0 \\ (k18\_member\_1\ X0\ X2)\ (k18\_member\_1\ X1\ X2))))$$