t175_member_1 (TMcBem6oDfcALVERiqcBF3eVQiSgpXeq9RH)

October 27, 2020

Let $v2\_membered : \iota \Rightarrow o$ be given. Let $v1\_xreal\_0 : \iota \Rightarrow o$ be given. Let $k20\_member\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_member\_1 : \iota \Rightarrow \iota$ be given. Let $v1\_xxreal\_0 : \iota \Rightarrow o$ be given. Let $k18\_member\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(v2\_membered\ X0) \Rightarrow (\forall X1.(v2\_membered\ X1) \Rightarrow (k4\_member\_1\ (k5\_xboole\_0\ X0\ X1) = k5\_xboole\_0\ (k4\_member\_1\ X0)\ (k4\_member\_1\ X1))) \tag{1}$$

Assume the following.

$$\forall X0.(v2\_membered\ X0) \Rightarrow (\forall X1.(v1\_xxreal\_0\ X1) \Rightarrow (k20\_member\_1\ X0\ X1 = k4\_member\_1\ (k18\_member\_1\ X0\ X1))) \tag{2}$$

Assume the following.

$$\forall X0.(v2\_membered\ X0) \Rightarrow (\forall X1.(v2\_membered\ X1) \Rightarrow (\forall X2.(v1\_xreal\_0\ X2) \Rightarrow (k18\_member\_1\ (k5\_xboole\_0\ X0\ X1)\ X2 = k5\_xboole\_0\ (k18\_member\_1\ X0\ X2)\ (k18\_member\_1\ X1\ X2)))) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.((v2\_membered\ X0) \wedge (v1\_xxreal\_0\ X1)) \Rightarrow (v2\_membered\ (k18\_member\_1\ X0\ X1)) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.((v2\_membered\ X0) \wedge (v2\_membered\ X1)) \Rightarrow (v2\_membered\ (k5\_xboole\_0\ X0\ X1)) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.k5\_xboole\_0\ X0\ X1 = k5\_xboole\_0\ X1\ X0 \tag{6}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0) \Rightarrow (v1\_xxreal\_0\ X0) \tag{7}$$

Theorem 1

$$\forall X0.(v2\_membered\ X0) \Rightarrow (\forall X1.(v2\_membered\ X1) \Rightarrow (\forall X2.\ (v1\_xreal\_0\ X2) \Rightarrow (k20\_member\_1\ (k5\_xboole\_0\ X0\ X1)\ X2 = k5\_xboole\_0\ (k20\_member\_1\ X0\ X2)\ (k20\_member\_1\ X1\ X2))))$$