t3_supinf_1 (TMKZ-FUqk8U3r2fLDMjb3ji8DWVAHFys7BSB)

October 27, 2020

Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $v2\_membered : \iota \Rightarrow o$ be given. Let $k1\_xxreal\_2 : \iota \Rightarrow \iota$ be given. Let $k2\_xxreal\_2 : \iota \Rightarrow \iota$ be given. Let $k3\_supinf\_1 : \iota \Rightarrow \iota$ be given. Let $k4\_supinf\_1 : \iota \Rightarrow \iota$ be given. Let $m2\_xxreal\_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1\_xxreal\_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_xxreal\_0 : \iota \Rightarrow o$ be given. Let $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.\forall X1.\neg(X0 \in X1) \wedge (v1\_xboole\_0\ X1) \tag{1}$$

Assume the following.

$$\forall X0.((v2\_membered\ X0) \wedge (\neg v1\_xboole\_0\ X0)) \Rightarrow (\forall X1.\ (m2\_xxreal\_2\ X1\ X0) \Rightarrow ((X1 \in X0) \Rightarrow (X1 = k2\_xxreal\_2\ X0))) \tag{2}$$

Assume the following.

$$\forall X0.((v2\_membered\ X0) \wedge (\neg v1\_xboole\_0\ X0)) \Rightarrow (\forall X1.\ (m1\_xxreal\_2\ X1\ X0) \Rightarrow ((X1 \in X0) \Rightarrow (X1 = k1\_xxreal\_2\ X0))) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (m1\_subset\_1\ X0\ X1) \tag{4}$$

Assume the following.

$$\forall X0.(v2\_membered\ X0) \Rightarrow (\forall X1.(m2\_xxreal\_2\ X1\ X0) \Rightarrow (v1\_xxreal\_0\ X1)) \tag{5}$$

Assume the following.

$$\forall X0.(v2\_membered\ X0) \Rightarrow (\forall X1.(m1\_xxreal\_2\ X1\ X0) \Rightarrow (v1\_xxreal\_0\ X1)) \tag{6}$$

Assume the following.

$$\forall X0.(v2\_membered\ X0) \Rightarrow (v2\_membered\ (k4\_supinf\_1\ X0)) \tag{7}$$

Assume the following.

$$\forall X0.(v2\_membered\ X0)\Rightarrow(v2\_membered\ (k3\_supinf\_1\ X0)) \tag{8}$$

Assume the following.

$$\forall X0.(v2\_membered\ X0)\Rightarrow(v1\_xxreal\_0\ (k2\_xxreal\_2\ X0)) \tag{9}$$

Assume the following.

$$\forall X0.(v2\_membered\ X0)\Rightarrow(v1\_xxreal\_0\ (k1\_xxreal\_2\ X0)) \tag{10}$$

Assume the following.

$$\forall X0.(v2\_membered\ X0)\Rightarrow(\forall X1.(v1\_xxreal\_0\ X1)\Rightarrow((X1 = k2\_xxreal\_2\ X0)\Leftrightarrow((m2\_xxreal\_2\ X1\ X0)\wedge(\forall X2.(m2\_xxreal\_2\ X2\ X0)\Rightarrow(r1\_xxreal\_0\ X2\ X1))))) \tag{11}$$

Assume the following.

$$\forall X0.(v2\_membered\ X0)\Rightarrow(\forall X1.(v1\_xxreal\_0\ X1)\Rightarrow((X1 = k1\_xxreal\_2\ X0)\Leftrightarrow((m1\_xxreal\_2\ X1\ X0)\wedge(\forall X2.(m1\_xxreal\_2\ X2\ X0)\Rightarrow(r1\_xxreal\_0\ X1\ X2))))) \tag{12}$$

Assume the following.

$$\forall X0.(v2\_membered\ X0)\Rightarrow(\forall X1.(v1\_xxreal\_0\ X1)\Rightarrow((m2\_xxreal\_2\ X1\ X0)\Leftrightarrow(\forall X2.(v1\_xxreal\_0\ X2)\Rightarrow((X2 \in X0)\Rightarrow(r1\_xxreal\_0\ X1\ X2))))) \tag{13}$$

Assume the following.

$$\forall X0.(v2\_membered\ X0)\Rightarrow(\forall X1.(v2\_membered\ X1)\Rightarrow((X1 = k4\_supinf\_1\ X0)\Leftrightarrow(\forall X2.(v1\_xxreal\_0\ X2)\Rightarrow((X2 \in X1)\Leftrightarrow(m2\_xxreal\_2\ X2\ X0))))) \tag{14}$$

Assume the following.

$$\forall X0.(v2\_membered\ X0)\Rightarrow(\forall X1.(v1\_xxreal\_0\ X1)\Rightarrow((m1\_xxreal\_2\ X1\ X0)\Leftrightarrow(\forall X2.(v1\_xxreal\_0\ X2)\Rightarrow((X2 \in X0)\Rightarrow(r1\_xxreal\_0\ X2\ X1))))) \tag{15}$$

Assume the following.

$$\forall X0.(v2\_membered\ X0)\Rightarrow(\forall X1.(v2\_membered\ X1)\Rightarrow((X1 = k3\_supinf\_1\ X0)\Leftrightarrow(\forall X2.(v1\_xxreal\_0\ X2)\Rightarrow((X2 \in X1)\Leftrightarrow(m1\_xxreal\_2\ X2\ X0))))) \tag{16}$$

Assume the following.

$$\forall X0.(v2\_membered\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ X0)\Rightarrow (v1\_xxreal\_0\ X1)) \tag{17}$$

Theorem 1

$$\forall X0.((\neg v1\_xboole\_0\ X0)\wedge(v2\_membered\ X0))\Rightarrow((k1\_xxreal\_2\ X0 = k2\_xxreal\_2\ (k3\_supinf\_1\ X0))\wedge(k2\_xxreal\_2\ X0 = k1\_xxreal\_2\ (k4\_supinf\_1\ X0)))$$