

t190_xxreal_1

(TMU2d9h6yBPNzqTbYXRWRoCq6fMtD53ziue)

October 27, 2020

Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xxreal_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xxreal_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_membered : \iota \Rightarrow o$ be given. Let $k7_numbers : \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow (\forall X2. \\ (v1_xxreal_0 X2) \Rightarrow ((X0 \in k2_xxreal_1 X1 X2) \Leftrightarrow ((r1_xxreal_0 X1 X0) \wedge \\ (\neg r1_xxreal_0 X2 X0)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow (\forall X2. \\ (v1_xxreal_0 X2) \Rightarrow ((r1_xxreal_0 X0 X1) \wedge (r1_xxreal_0 X1 X2)) \Rightarrow \\ (r1_xxreal_0 X0 X2)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow (\forall X2. \\ (v1_xxreal_0 X2) \Rightarrow ((X0 \in k1_xxreal_1 X1 X2) \Leftrightarrow ((r1_xxreal_0 X1 X0) \wedge \\ (r1_xxreal_0 X0 X2)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0) \wedge (v1_xxreal_0 X1)) \Rightarrow (r1_xxreal_0 X0 X0) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.k6_subset_1 X0 X1 = k4_xboole_0 X0 X1 \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0)\wedge(v1_xxreal_0 X1))\Rightarrow(v2_membered (k2_xxreal_1 X0 X1)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0)\wedge(v1_xxreal_0 X1))\Rightarrow(v2_membered (k1_xxreal_1 X0 X1)) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(X2 = k4_xboole_0 X0 X1)\Leftrightarrow(\forall X3.(X3 \in X2)\Leftrightarrow((X3 \in X0)\wedge(\neg X3 \in X1))) \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_xxreal_0 X0)\Rightarrow(\forall X1.(v1_xxreal_0 X1)\Rightarrow(k2_xxreal_1 \\ X0 X1 = ReplSep (toset (\lambda X2 : \iota.m1_subset_1 X2 k7_numbers)) \\ (\lambda X2 : \iota.(r1_xxreal_0 X0 X2)\wedge(\neg r1_xxreal_0 X1 X2)) (\lambda X2 : \\ \iota.X2))) \end{aligned} \quad (10)$$

Assume the following.

$$\forall X0.(v2_membered X0)\Rightarrow(\forall X1.(v2_membered X1)\Rightarrow((X0 = X1)\Leftrightarrow(\forall X2.(v1_xxreal_0 X2)\Rightarrow((X2 \in X0)\Leftrightarrow(X2 \in X1))))) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0)\wedge(v1_xxreal_0 X1))\Rightarrow((r1_xxreal_0 X0 X1)\vee(r1_xxreal_0 X1 X0)) \quad (12)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k7_numbers)\Rightarrow(v1_xxreal_0 X0) \quad (13)$$

Assume the following.

$$\forall X0.(v2_membered X0)\Rightarrow(\forall X1.(m1_subset_1 X1 X0)\Rightarrow(v1_xxreal_0 X1)) \quad (14)$$

Theorem 1

$$\begin{aligned} \forall X0.(v1_xxreal_0 X0)\Rightarrow(\forall X1.(v1_xxreal_0 X1)\Rightarrow(\forall X2. \\ (v1_xxreal_0 X2)\Rightarrow((r1_xxreal_0 X0 X1)\Rightarrow(k6_subset_1 (k1_xxreal_1 \\ X2 X1) (k1_xxreal_1 X0 X1) = k2_xxreal_1 X2 X0)))) \end{aligned}$$