

t26_xxreal_2
(TMFgi9GjB64rJzepmuHzy5iAXdNb5NrjEjQ)

October 27, 2020

Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_xxreal_2 : \iota \Rightarrow \iota$ be given. Let $k2_xxreal_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_membered : \iota \Rightarrow o$ be given. Let $m2_xxreal_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

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

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0) \wedge (v1_xxreal_0 X1)) \Rightarrow (r1_xxreal_0 X0 X0) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0) \wedge (v1_xxreal_0 X1)) \Rightarrow (v2_membered (k2_xxreal_1 X0 X1)) \tag{3}$$

Assume the following.

$$\forall X0.(v2_membered X0) \Rightarrow (\forall X1.(m2_xxreal_2 X1 X0) \Rightarrow (v1_xxreal_0 X1)) \tag{4}$$

Assume the following.

$$\begin{aligned} \forall X0.(v2_membered X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow ((\\ X1 = k2_xxreal_2 X0) \Leftrightarrow ((m2_xxreal_2 X1 X0) \wedge (\forall X2.(m2_xxreal_2 \\ X2 X0) \Rightarrow (r1_xxreal_0 X2 X1)))))) \end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned} \forall X0.(v2_membered X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow ((\\ m2_xxreal_2 X1 X0) \Leftrightarrow (\forall X2.(v1_xxreal_0 X2) \Rightarrow ((X2 \in X0) \Rightarrow (r1_xxreal_0 \\ X1 X2)))))) \end{aligned} \tag{6}$$

Theorem 1

$$\begin{aligned} \forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow ((\\ \neg r1_xxreal_0 X1 X0) \Rightarrow (k2_xxreal_2 (k2_xxreal_1 X0 X1) = X0))) \end{aligned}$$