

t85_xxreal_2

(TMYdsczPCct9pzWJjDDhXVH1Eec4uusCnEo)

October 27, 2020

Let $v2_membered : \iota \Rightarrow o$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_xxreal_2 : \iota \Rightarrow \iota$ be given. Let $v6_xxreal_2 : \iota \Rightarrow o$ be given. Let $m1_xxreal_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.(v2_membered X0) \Rightarrow & ((\forall X1.(v1_xxreal_0 X1) \Rightarrow (\\ & \forall X2.(v1_xxreal_0 X2) \Rightarrow (\forall X3.(v1_xxreal_0 X3) \Rightarrow (\\ (X1 \in X0) \wedge (X2 \in X0) \Rightarrow & ((r1_xxreal_0 X3 X1) \vee ((r1_xxreal_0 X2 X3) \vee \\ & (X3 \in X0)))))) \Rightarrow (v6_xxreal_2 X0)) \end{aligned} \quad (1)$$

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.

$$\forall X0.(v2_membered X0) \Rightarrow (v1_xxreal_0 (k1_xxreal_2 X0)) \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.(v2_membered X0) \Rightarrow & (\forall X1.(v1_xxreal_0 X1) \Rightarrow (\\ X1 = k1_xxreal_2 X0) \Leftrightarrow & ((m1_xxreal_2 X1 X0) \wedge (\forall X2.(m1_xxreal_2 \\ X2 X0) \Rightarrow & (r1_xxreal_0 X1 X2)))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.(v2_membered X0) \Rightarrow & (\forall X1.(v1_xxreal_0 X1) \Rightarrow (\\ m1_xxreal_2 X1 X0) \Leftrightarrow & (\forall X2.(v1_xxreal_0 X2) \Rightarrow ((X2 \in X0) \Rightarrow (r1_xxreal_0 \\ X2 X1)))) \end{aligned} \quad (5)$$

Theorem 1

$$\begin{aligned} \forall X0.(v2_membered X0) \Rightarrow & ((\forall X1.(v1_xxreal_0 X1) \Rightarrow (\\ \forall X2.(v1_xxreal_0 X2) \Rightarrow & ((X1 \in X0) \Rightarrow ((r1_xxreal_0 X2 X1) \vee \\ (r1_xxreal_0 (k1_xxreal_2 X0) & X2) \vee (X2 \in X0)))))) \Rightarrow (v6_xxreal_2 \\ X0)) \end{aligned}$$