

t80_xxreal_2

(TMYaw4mnuSf4AiwNHqUxrGVn1j2ELcGFGLM)

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Let $v2_membered : \iota \Rightarrow o$ be given. Let $v6_xxreal_2 : \iota \Rightarrow o$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_xxreal_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow (\forall X2. \\ (v1_xxreal_0 X2) \Rightarrow ((X0 \in k1_xxreal_1 X1 X2) \Leftrightarrow ((r1_xxreal_0 X1 X0) \wedge \\ (r1_xxreal_0 X0 X2)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.(r1_tarski X0 X1) \Leftrightarrow (\forall X2.(X2 \in X0) \Rightarrow (X2 \in X1)) \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.(v2_membered X0) \Rightarrow ((v6_xxreal_2 X0) \Leftrightarrow (\forall X1.(\\ v1_xxreal_0 X1) \Rightarrow (\forall X2.(v1_xxreal_0 X2) \Rightarrow (((X1 \in X0) \wedge (X2 \in \\ X0)) \Rightarrow (r1_tarski (k1_xxreal_1 X1 X2) X0)))))) \end{aligned} \quad (3)$$

Theorem 1

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