

t86_xxreal_2

(TMNSrpd88uap6meLkXZ5CV7cFJpGw5ji1om)

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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 $k2_xxreal_2 : \iota \Rightarrow \iota$ be given. Let $v6_xxreal_2 : \iota \Rightarrow o$ 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.

$$\forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v2_membered X1) \Rightarrow ((X0 \in X1) \Rightarrow (r1_xxreal_0 (k2_xxreal_2 X1) X0))) \quad (2)$$

Assume the following.

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

Assume the following.

$$\forall X0.(v2_membered X0) \Rightarrow (v1_xxreal_0 (k2_xxreal_2 X0)) \quad (4)$$

Assume the following.

$$\forall X0.(v2_membered X0) \Leftrightarrow (\forall X1.(X1 \in X0) \Rightarrow (v1_xxreal_0 X1)) \quad (5)$$

Theorem 1

$$\begin{aligned} \forall X0.(v2_membered X0) \Rightarrow (& (\forall X1.(v1_xxreal_0 X1) \Rightarrow (\\ \forall X2.(v1_xxreal_0 X2) \Rightarrow ((X1 \in X0) \Rightarrow & ((r1_xxreal_0 X2 (k2_xxreal_2 \\ X0)) \vee ((r1_xxreal_0 X1 X2) \vee (X2 \in X0)))))) \Rightarrow (v6_xxreal_2 X0)) \end{aligned}$$