

t27_xxreal_2 (TMWCB- WSnHYRadtT7JeCEjuJnC6dFcKeHXrN)

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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 $k3_xxreal_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m2_xxreal_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_membered : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow (\forall X2. \\ & (v1_xxreal_0 X2) \Rightarrow ((X0 \in k3_xxreal_1 X1 X2) \Leftrightarrow ((\neg r1_xxreal_0 X0 X1) \wedge \\ & (r1_xxreal_0 X0 X2)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow (\forall X2. \\ & (v1_xxreal_0 X2) \Rightarrow ((\forall X3.(v1_xxreal_0 X3) \Rightarrow (\neg(\neg r1_xxreal_0 \\ & X3 X0) \wedge ((\neg r1_xxreal_0 X1 X3) \wedge (\neg r1_xxreal_0 X2 X3)))) \Rightarrow ((r1_xxreal_0 \\ & X1 X0) \vee (r1_xxreal_0 X2 X0)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow (m2_xxreal_2 X0 (k3_xxreal_1 X0 X1))) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0) \wedge (v1_xxreal_0 X1)) \Rightarrow (v2_membered (k3_xxreal_1 X0 X1)) \tag{4}$$

Assume the following.

$$\forall X0.(v2_membered X0) \Rightarrow (\forall X1.(m2_xxreal_2 X1 X0) \Rightarrow (v1_xxreal_0 X1)) \tag{5}$$

Assume the following.

$$\begin{aligned} & \forall X0.(v2_membered X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow ((\\ & X1 = k2_xxreal_2 X0) \Leftrightarrow ((m2_xxreal_2 X1 X0) \wedge (\forall X2.(m2_xxreal_2 \\ & X2 X0) \Rightarrow (r1_xxreal_0 X2 X1)))))) \end{aligned} \tag{6}$$

Assume the following.

$$\forall X0.(v2_membered\ X0)\Rightarrow(\forall X1.(v1_xxreal_0\ X1)\Rightarrow((m2_xxreal_2\ X1\ X0)\Leftrightarrow(\forall X2.(v1_xxreal_0\ X2)\Rightarrow((X2 \in X0)\Rightarrow(r1_xxreal_0\ X1\ X2)))))) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0\ X0)\wedge(v1_xxreal_0\ X1))\Rightarrow(r1_xxreal_0\ X0\ X1)\vee(r1_xxreal_0\ X1\ X0) \quad (8)$$

Theorem 1

$$\forall X0.(v1_xxreal_0\ X0)\Rightarrow(\forall X1.(v1_xxreal_0\ X1)\Rightarrow(\neg r1_xxreal_0\ X1\ X0)\Rightarrow(k2_xxreal_2\ (k3_xxreal_1\ X0\ X1) = X0)))$$